



KINGDOM OF CAMBODIA

The Cambodian Government's Achievements and Future Direction in Sustainable Development



**National Report for Rio+20
United Nations Conference on Sustainable Development**

2012

FOREWORD



On behalf of the Royal Government of Cambodia and the Ministry of Environment, I would like to highly appreciate the National Green Growth Secretariat, Inter-Ministerial Working Group on Green Growth, the National Sustainable Consumption and Production Team, the Rio+20 Focal Point of Cambodia and all hard-working staff of the Ministry for cooperating and coordinating the National Preparations of the Rio+20 National Report on Sustainable Development, with the United Nations Department of Social and Economic Affairs, and the team of the United Nations Development Programme. My heart-felt thanks also go to all relevant stakeholders, i.e. Global Green Growth Institute (GGGI), European Union, the UN Agencies and all concerned development partners, well as the civil society for their constructive engagement in providing the inputs to our Rio+20 National Report.

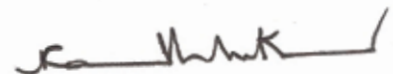
In fact, the Rio+20 National Report reflects the Seven Accesses as defined in the National Roadmap on Green Growth, as well as inclusive and equitable growth. It also shows the progress of the Cambodia Millennium Development Goals (CMDG), and the right path as indicated in the Rectangular Strategic Policy of the Government under a smart and intelligent leadership of Samdech Prime Minister.

Through intimate good cooperation with the Global Green Growth Institute (GGGI), Cambodia is preparing the right integrated institutional framework through the Establishment of National Council on Green Growth (NCGG), and National Green Growth Secretariat (NGGS) and we are pleased to become a member country of the newly established international GGGI organization to be legitimized in the Rio+20 Summit, Rio de Janeiro, Brazil on June 20, 2012.

In short, the Rio+20 National Report lays out multi-disciplinary and focused chapters covering a wide range of issues, including economic growth, energy, education, transport infrastructure, health, Poverty and Equity, Agriculture and Food Security, Water Resource Management and Sanitation, Sustainable Forest and Land Use, etc., in achieving the Broader Social Protection Framework (Social Safety Nets, Social Development, Economic Development and Disaster Management). It, of course, reflects the development of the country and emphasizes progress made in the past 20 years with regards to poverty reduction and sustainable development of Cambodia. It also stresses the challenges and impacts from climate change for rural livelihoods, but raises the potentials for building resilient green economy.

Phnom Penh, June 11, 2012

Senior Minister, Minister of Environment 



Dr. MOK Mareth

PREFACE



In June 2012, heads of state, world leaders, academicians, researchers, NGOs, activists and indigenous groups will gather in Brazil for the Rio+20 United Nations Conference on Sustainable Development (UNCSD). The Rio+20 Summit marks the New World Economic Order towards a New Developmental Paradigm, centering on inclusive and equitable **GREEN ECONOMY/GREEN GROWTH** for poverty eradication worldwide and global resource efficiency. This also provides a "potential opportunity to direct the world economy to a safer, more equitable, cleaner, greener, more ecological and more prosperous world for all on the Planet Earth".

The Rio+20 UNCSD Summit targets at priority areas, such as decent green jobs, energy, sustainable cities, food security and sustainable agriculture, water, oceans and disaster management, all of which they help achieve sustainable development, in particular "economic development, social development and environmental protection."

The Rio+20 Summit not only reflects overall progress achieved over the past two decades since the 1992 Rio Earth Summit, but also identifies gaps and challenges and defines means for the implementation. The Earth Summit in 1992 resulted in three major United Nations Conventions, such as Convention on Biological Diversity, the United Nations Framework Convention on Climate Change and Convention to Combat Desertification. Note that the main outcomes from the Earth Summit were the Rio Principles and Agenda 21, taken as a global guiding framework for sustainable development, which promotes environmentally sustainable and socially equitable development. In 2002, Johannesburg Plan of Action adopted by the World Summit on Sustainable Development (WSSD) was to accelerate the achievements of the Millennium Development Goals and the Agenda 21, as well as the Rio Principles.

The Rio+20 Report of Cambodia, called the Rio+20 National Report on Sustainable Development, has been prepared by the Royal Government of Cambodia represented by the Ministry of Environment in close collaboration with the United Nations Department of Economic and Social Affairs (UNDESA), United Nations Development Programmes (UNDP), National Green Growth Secretariat, the Inter-ministerial working group on Green Growth and relevant line ministries, institutions and development partners. The Report outcome is a by-product of a multi-stakeholder process from consultations, dialogues to meetings engaging the public institutions, the private sector, the United Nations Agencies, the International Monetary Funds, the World Bank, the Asian Development Bank and local and international Non-Governmental Organizations. Public-Private engagement process in the sustainable development of Cambodia well prepares the country for a way forward towards a Green New

Deal, and the readiness to implement the expected the United Nations Rio+20 outcome document to be adopted in the Rio+20 Summit, Rio de Janeiro, Brazil.

The National Report is a focused policy document for policy makers, development partners, civil society, students and academic elites and politicians. The Green Visionary outputs derived from this report will be carried out in a concerted effort to bridge a gap for sustainable development of Cambodia. This also provides a basis for sustained and informed learning and dialogue on sustainable development in Cambodia for all stakeholders.

Working together, we actively seek to enhance development as set out in the recommendations for achieving our Cambodia Millennium Development Goals (CMDGs) and the Government's Rectangular Strategic Policy targets. We hope that all Cambodian people and foreign development partners will become more engaged throughout the country, and will work together more and more in a good and friendly cooperation, thus increasing opportunities that strengthen and contribute to sustainable development.

We shall use the Rio+20 National Report as an opportunity to move away from "*business as usual*", but shift to resource efficiency and a **GREEN GROWTH Paradigm** for the sustainable development of Cambodia. We shall act together urgently and take action now to abolish poverty, promote equitable growth, address our immediate environmental challenges and concerns, and build a bridge to the future towards a green economy. We look forward to hearing from all stakeholders on how to achieve sustainable development for our country.



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ACCRONYMS



| | |
|----------------|---|
| ADB | Asian Development Bank |
| CCO | Climate Change Office |
| CDRI | Cambodia Development Research Institute |
| CMDGs | Cambodia Millennium Development Goals |
| CSES | Cambodia Socio Economic Survey |
| D&D | Decentralization and Deconcentration |
| DPs | Development Partners |
| FA | Forest Administration |
| FiA | Fisheries Administration |
| EAC | The Electricity Authority of Cambodia |
| EDC | Electricite' du Cambodge |
| EIA | Environmental Impact Assessment |
| EMP | Environmental Management Plans |
| ERW | Explosive Remnants of War |
| EU | European Union |
| FDI | Foreign Direct Investment |
| GGI | Green Growth Institute |
| GDP | Gross Domestic Product |
| GMS | Greater Mekong Sub-Region |
| ICT | Information Communication Technology |
| IUCN | International Union for Conservation of Nature |
| IWRM | Integrated Water Resource Management |
| KHR | Khmer riel |
| KW | Kilo-Watt |
| MAFF | Ministry of Agriculture, Forestry and Fisheries |
| MDG | Millennium Development goals |
| MoC | Ministry of Commerce |
| MoE | Ministry of Environment |
| MoEYS | Ministry of Education, Youth and Sport |
| Mol | Ministry of Interior |
| MoInf | Ministry of Information |
| MoWRAM | Ministry of Water Resources and Meteorology |
| MoP | Ministry of Planning |
| MoSVY | Ministry of Social Affairs, Veterans and Youth Rehabilitation |
| MoT | Ministry of Tourism |
| MoWA | Ministry of Women's Affairs |
| MPWT | Ministry of Public Works and Transport |
| MTEF | Medium-Term Expenditure Framework |
| MW | Mega Watt |
| NAPA | National Adaptation Action Plan |

| | |
|----------------|--|
| NBC | National Bank of Cambodia |
| NCCC | National Climate Change Committee |
| NCDD | National Committee for Democratic Development |
| NGOs | Non Governmental Organizations |
| NPRD | National Program to Rehabilitate and Develop Cambodia |
| NP-SNDD | National Program for Sub-National Democratic Development |
| NSDP | National Strategic Development Plan |
| NSRWSSH | National Strategy for Rural Water Supply, Sanitation and Hygiene |
| PPP | Public-Private Partnership |
| RGC | Royal Government of Cambodia |
| REEs | Rural Electricity Enterprises |
| SNEC | Supreme National Economic Council |
| TWG | Technical Working Group |
| UNCDF | United Nations Capital Development Fund |
| UNDP | United Nations Development Program |
| UNEP | United Nations Environment Program |
| UNICEF | United Nations Children's Fund |
| UXO | Unexploded ordnance |
| WB | World Bank |
| WHO | World Health Organization |
| WatSan | Water and Sanitation |
| WSSD | World Summit on Sustainable Development |

EXECUTIVE SUMMARY



The National Report for Rio+20, The Cambodian Government's Achievements and Future Directions in Sustainable Development, was prepared for the United Nations Rio+20 Conference on Sustainable Development. The conference marked 20 years since the historic Earth Summit that was instrumental in laying the foundations and charting the course for contemporary sustainable development. This report, based on an analysis of data from at least 87 references, looks at the issues pertaining to Economic Growth, Energy, Information and Communication Technology, Transport Infrastructure, Tourism, Poverty and Equity, Health, Education, Mine Action, Cultural Diversity, Water Resources and Sanitation, Agriculture and Food Security, Sustainable Forest and Land Use, Climate Change and Disaster Risk Reduction.

The report emphasizes the overall growth the country has made in: economic growth and development; social development; and environment and natural resource management, in the past 20 years. There is growing recognition that achieving sustainability requires truly 'greening' our economies.

Economic Growth & Development

Cambodia's GDP has quadrupled, increasing from \$216 per capita in 1992 to \$909 per capita in 2011. From 1994 to 2011, Cambodia experienced an average growth rate of 7.7 percent. Between 2004 and 2007, the economy grew above 10 percent annually. While the industrial base is not yet deep, being largely restricted to garment manufacture which thrives on low wages, during the decade to 2008, the garment industry alone accounted for 22 percent of growth. Agriculture has grown at 4-5 percent annually from 2002 to 2010 and still has high potential in rice, as well as other crops, if effective irrigation systems are improved and expanded. Both the industry and construction sectors experienced a dip due to the economic downturn in 2008-2009. The garment sector alone is estimated to have lost a total of 70,000 jobs, and 60,000 jobs are estimated to have been lost in the construction sector.

Electricity production generated was 168.39 Gwh in 1993 compared to 2164.40 million Kwh in 2010, and 2488.945 million Kwh in 2011. Production will be increased to 3291.629 million Kwh in 2013. Hydropower is a cornerstone of Cambodia's energy policy. More than 10,000 MW is under development; 50 percent in the Mekong mainstream, 40 percent in its tributaries and 10 percent in the south-western coastal area outside the Mekong basin. Wood and wood charcoal accounts for approximately 80 percent of total national energy consumption.

According to the Ministry of Information registry, there are 396 Khmer-language newspapers, 74 radio broadcasters (36 in Phnom Penh) and 10 national broadcaster channels. 2010 figures show that there are 72 FM frequencies and 2 AM frequencies countrywide. By 2010, there were 358,850 fixed telephone lines and 8,155,652 mobile subscriptions, demonstrating a high ratio of mobile subscriptions to fixed lines.

Regarding infrastructure development, the length of paved roads in Cambodia doubled between 2005 and 2010. In 2010, Cambodia's road network measured approximately 44,919 km, including 11,914 km of primary and secondary roads, and 33,005 km of tertiary roads. One thousand kilometers of road were constructed between 2009 and 2011, which is about 1.4 km per day. The Government awarded a contract to Toll Holdings to manage the rail service once the construction of the tracks is completed. Both the northern and southern lines, from Poi Pet to Sihanoukville will be re-opened in 2013. Civil aviation has expanded in Cambodia to respond to the growing needs of the tourism sector. Cambodia has three international airports and nine local airports, including the Phnom Penh International Airport, the country's largest, and Siem Reap Airport, the gateway to Angkor Wat. Cambodia has two major international ports, Phnom Penh and Sihanoukville.

Revenues from tourism increased seventeen-fold, from US \$100 million in 1995 to US \$1.786 billion in 2010. The number of international tourists to Cambodia has increased twenty-fold in the past 17 years, from 118,183 in 1993 to 2.5 million in 2010.

Social Development

The proportion of poor people has been reduced by 33 percent in 20 years, from 47 percent in 1992 to an estimated 26.1 percent in 2009. It will be further reduced to 19 percent by 2015. Cambodia's Human Development Index increased by 29 percent between 1995 and 2011, which is well above the global average of 14 percent, and above the regional average of 23 percent. A similar performance can be seen for overall MDG progress, where Cambodia ranks among the fifth best performing countries in the world.

Child mortality is the Cambodia Millennium Development Goal (CMDG) where most progress has been achieved, dropping 56 percent, from 124 for every 1,000 live births in 2000, to 54 for every 1,000 live births in 2010. Cambodia has made considerable progress in reducing the spread of HIV, with a decrease in HIV prevalence to 0.7 percent in 2010. The malaria fatality rate was reduced to 0.76 percent in 2010. Dengue fatality was also low at 0.3 percent of the population in 2010.

Cambodia has seen a significant increase in its net enrolment rates in primary education over the last decade. Between 2001 and 2010, the rate increased from 87 percent to 95.2 percent. Significant progress has been achieved by Cambodia in increasing enrolment in lower secondary education, the gross enrolment rate having increased by 121 percent since 1998. Only 5 percent of those in the tertiary education age range are enrolled in tertiary education in Cambodia.

Casualties from landmines have dropped by 91 percent in the past 18 years, from 2,427 in 1991 to 211 in 2011. The 1998 Cambodian Population Census identified 17 different indigenous groups. The largest ethnic group in Cambodia is the Khmers. Cambodia has a diverse media including TV, radio and newspapers. At present, beside the Khmer language, the country has TV channels run in English, French, Mandarin and Vietnamese.

Environment and Natural Resource Management

Significant progress has been achieved in access to urban sanitation, where coverage increased from 56 percent in 1998 to 82 percent in 2009, well exceeding the 2015 target of 74 percent. The most significant expansion has been in rural sanitation, where coverage quadrupled from 6 percent in 1998 to 26 percent in 2011. The total surface of arable land under irrigation has expanded to 25,000 ha/year. Cambodia has one of the lowest proportions of arable land under irrigation in the region (20 percent).

Fisheries provide full- or part-time employment for two million to four million people, and contribute significantly to domestic food security. Wild fish capture production is stabilized and sustained at not more than 500,000 tonnes per year. Rice field fish production is increasing by 15 percent annually, to reach 500,000 tonnes per year by 2019, and aquaculture production is increasing by 15 percent to 50,000 tonnes annually, to reach 185,000 tonnes per year by 2019.

Protected areas in 2010 represented around 3.1 million hectares, a decrease from the 1993 baseline of 3.3 million hectares. Cambodia has established 11 protected forests and wildlife conservation areas, managed by the Forestry Administration, MAFF. In 2010, forest cover was 57.07 percent of Cambodia's land area. In the 1960s, it is believed that 73 percent of Cambodia's land area was covered by forests.

The government has developed and is implementing climate change programmes and projects worth some US \$110 million to strengthen Cambodia's ability to adapt to climate change in 2010-2015. In late 2010, 430 Community Forests (CFs) had been established in 20 provinces, equalling 380,976 hectares. The Cambodia REDD+ Roadmap has been developed and being implemented. A 2010 study shows a total of 2.96Gt of carbon is stored in Cambodia's forest ecosystems, with 30 percent of forest carbon stock estimated to be in Forestry Concessions. REDD+ presents significant opportunities for emissions reductions in Cambodia and has strong

Government support. REDD+ could play an important part in sink creation.

Agriculture is a key sector in economic development, with 28.4 percent of GDP in 2011. Cultivated land for corn reached 174,257 ha in 2011, while cassava was 391,714 ha in 2011. In total for four crops, the cultivated land yielded 704,666 tonnes in 2011. Poultry production reached 21.62 million head in 2011. Cambodia produced more than 3.36 million head of cattle in 2007, compared to 3.4 million head in 2011. There were 772,780 head of buffalo in 2007, compared to 689,829 head in 2011. Pigs numbered 2.38 million head in 2007, compared to 2.09 million head in 2011. Cambodia's inland fisheries produced 395,000 tonnes in 2007, compared to 445,000 tonnes in 2011, indicating a steady increase. Marine fisheries production was 63,500 tonnes in 2007, compared to 91,000 tonnes in 2011. Aquaculture production was 35,260 tonnes in 2007 compared to 72,000 tonnes in 2011.

Floods and droughts are regarded as the main natural disaster. The government approved the Strategic National Action Plan for Disaster Risk Reduction (DRR) 2008-2013. This action plan is to reduce the vulnerability of its people, especially the poor, to the effects of natural, environmental and human-induced hazards. This can best be achieved by strengthening the disaster management system in Cambodia and by incorporating a disaster risk reduction perspective into the policies, strategies and plans of government, in all sectors and at all levels. The Action Plan was formulated to serve as the "road map" or guide for strengthening and undertaking disaster risk reduction in Cambodia.

Policy Recommendations

The National Report forms policy recommendations to address key challenges including:

- Promotion of integrated planning and prioritization between different sectors to ensure that environmental, social and economic goals are being harmonized.
- Investment in strengthening human resources and skills - and competitiveness - through additional investment in secondary education, a reform of tertiary education and targeted vocational and technical training.
- Strengthening of data and M&E systems across all sectors to support planning and rational decision making.
- Strengthening law enforcement, especially with regard to the social and environmental impact of economic land concessions.
- Promotion of public-private partnerships for green growth, including infrastructure development and institutional coordination framework.
- Implementation of targeted policies to address urban-rural disparities.
- Need for a national targeted anti-poverty programme to provide a safety net for the poor and near-poor from economic and other shocks.
- Stronger commitment of all stakeholders is needed to promote rights to health, education and gender equality, and to universal access to HIV prevention, treatment and care.
- Put more concrete efforts into promoting climate change mainstreaming, disaster risk reduction, protecting biodiversity and ecosystems, effectively managing forests and protected areas, managing critical watershed areas and promoting REDD+.
- Accelerate progress toward nationally tailored sustainable energy for supporting all development objectives, based on the country's own action plans and programmes.

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Section 1

Context, Objectives and Consultative Process







Context, Objectives and Consultative Process

1.1. Introduction

In June 2012, the Earth Summit will mark its 20th anniversary. The World Summit on Sustainable Development (WSSD) will be held in Rio de Janeiro, Brazil in July 2012 to review 20 years of progress in the implementation of Agenda 21 – the global guiding framework of sustainable development adopted by 178 countries at the Earth Summit in 1992.

Along with other countries around the world, the Royal Government of Cambodia (RGC) is using WSSD preparations as an opportunity to review the progress made since the last stocktaking exercise in 2002, and to define its long-term strategic vision for sustainable development. This report, which represents the Cambodian Government's input to the 2012 WSSD ("Rio+20 Summit") is an outcome of this stocktaking and strategic exercise.

The report outlines the key sustainable development issues facing Cambodia, the Government's key achievements and progress in this area, the remaining challenges, and future directions for Cambodia's sustainable development agenda.

1.2. Historical context

After the Khmer Rouge regime ended in 1979, Cambodia continued to experience internal conflict until the 1991 Paris Peace Agreement. However, it was not until 1999 that full peace was restored with the final collapse of the Khmer Rouge insurgency.

The human, physical and spiritual destruction that Cambodia witnessed during the years of war, internal conflict and insurgency, was massive. The changes experienced in the past 20 years have been colossal. Indeed, the economic and social transformation the country has witnessed, especially in the past decade, has placed Cambodia on the world map as one of the countries with the most rapid rate of change among developing economies. Thanks to sustained economic growth, a significant reduction in poverty, increased access to basic services, coupled with its strategic geographical position at the centre of the Greater Mekong Sub-

Region and the dynamic economy of broader South-East Asia, Cambodia is now well on its way to becoming a middle income country. This report provides an overview of this transformation, an analysis of remaining challenges and strategic options for moving forward on a sustainable development path.

1.3. Green Growth Roadmap

The commitment of the RGC to sustainable development is exemplified in its Green Growth Roadmap, which was endorsed in 2009, and of which a Master Plan is currently being developed. The Roadmap outlines a framework for environmentally sustainable and socially inclusive development and growth in Cambodia. This report is based on the core areas of the Green Growth Roadmap, while focusing on inclusive green growth, poverty, equity and cultural diversity to further strengthen the social dimensions of the Green Growth Roadmap.

1.4. The national consultation process for Rio +20

This report is based on a desk review of official Government and donor reports, as well as an extensive national consultation process with key Government stakeholders, development partners, the private sector and NGOs in Phnom Penh, Cambodia, in March and April 2012. To build on existing national mechanisms, the consultations were led by the Inter-Ministerial Working Group for Green Growth, set up to oversee the development of the Green Growth Master Plan and its implementation. These consultations enabled stakeholders to agree on the Government's key achievements since the Rio+10 summit, as well as outlining the remaining challenges and future directions of the sustainable development agenda in Cambodia.

The consultative process consisted of a preparatory workshop held on 12 March 2012, with key Government, private sector, donors and civil society



stakeholders to agree on the scope and structure of the report. A National Dialogue was then held on 27 and 28 March 2012, to assess Cambodia's progress in achieving sustainable development, discuss remaining challenges and devise policy recommendations post-2012, as inputs for the Rio+20 Summit. This report has incorporated the

analysis and recommendations made during the National Dialogue.

An extensive peer review process was held in May 2012, to technically review the thematic chapters of the report. Finally, a validation workshop was on 08 June 2012, to review and endorse the final National Report for Rio+20.



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Section 2

Achievements in the policy, planning and institutional framework for Sustainable Development in Cambodia



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Achievements in the policy, planning and institutional framework for Sustainable Development in Cambodia

"... development with environmental sustainability is the key goal of Cambodia and (other) countries in the region"¹ (Prime Minister Hun Sen's opening speech at the third Greater Mekong Sub-Region Environment Ministers' meeting, July 28, 2011, Phnom Penh).

Although a formal National Agenda 21 does not exist, the Royal Government of Cambodia (RGC) has signed several multilateral conventions and agreements and made significant achievements in the formulation and implementation of a policy, planning and institutional framework for sustainable development. This section provides an overview of these achievements looking at how sustainable development has been integrated across a variety of sectors and issue areas, and across national laws, policies and plans.

Signatory to multilateral agreements

The Royal Government of Cambodia is party to a number of international conventions and regional agreements related to sustainable development, covering environmental protection, human development and regional cooperation. For a full list of these agreements, refer to the Annex.

Sustainable development principles in the Constitution

In 1993, the Cambodian Government approved a new Constitution and established a constitutional monarchy. The sustainable development principles in the 1993 Constitution mainly refer to the environmental dimensions of sustainable development.

Article 59 of the Constitution states, "The State shall protect the environment and balance of abundant natural resources and establish a precise plan of management of land, water, air, wind, geology, ecological system, mines, energy, petrol and gas, rock and sand, gems, forests and forestry products, wildlife, fish and aquatic resources"².

Sustainable development in the Cambodia Millennium Development Goals (CMDGs)

In 2003, the Royal Government of Cambodia (RGC) adapted the eight universally agreed Millennium Development Goals (MDGs) to better suit the realities of the country. Recognizing that one major constraint to development is the continued contamination of mines and explosive remnants of war (ERW), the RGC added de-mining, ERW and victim assistance as the ninth major development goal. Sustainable development goals are reflected throughout all CMDGs, especially CMDG 1 (poverty and hunger), CMDG 2 (education), CMDG 3 (gender equality), CMDG 4 (child mortality), CMDG 5 (maternal health), CMDG 6 (HIV/AIDS, malaria and other diseases), CMDG 7 (environmental sustainability) and CMDG 9 (demining).

Sustainable development goals in national development plans

Instead of developing a national Agenda 21, national development plans have, over the past 20 years, increasingly integrated the three strands of sustainable development (economic development, social development and sustainable management of natural resources). Cambodia's past national development plans include: the National Program to Rehabilitate and Develop Cambodia (NPRD) (1994-1996), which focused on rehabilitation and restoration of national development. The first five-year Socio-Economic Development Plan (SEDP-I, 1996-2000) retained a focus on rehabilitation, coupled with emphasis on macroeconomic stability, social development and poverty reduction. The second Socio-Economic Development Plan (SEDP II 2001- 2005) focused on building peace, restoring stability and maintaining security; integrating Cambodia into the region and normalizing relationships with the international community; and promoting economic and social development. The third five-year plan (2006-2010), termed the National Strategic Development Plan (NSDP), ended prematurely in 2008, giving way to a new planning cycle to match with the term of the Legislative Assembly.

¹Quote taken from CMDG 2011 report, quoted from NSDP MTR 2011.

²From Rio+10 Report.



The current national strategy is the Rectangular Strategy Phase II³ which represents the Government's long-term development vision and economic policy agenda for the Fourth Legislature (2008-2013) of its National Assembly (parliament). The National Strategic Development Plan (NSDP 2009 to 2013 update) is the national development plan and the roadmap for the implementation of the Rectangular Strategy. The NSDP fully integrates the Cambodia Millennium Development Goals (CMDGs).

By integrating the core dimensions of sustainable development, the Rectangular Strategy and the NSDP provide a solid foundation for integrating sustainable development principles and processes in planning and implementation. The Rectangular Strategy aims to develop Cambodian society by strengthening peace, stability and social order, promoting sustainable and equitable development and entrenching democracy and respect for human rights and dignity.

The national strategy and plan are built around the following four pillars (with good governance as an overarching objective): i) agricultural development (enhancing agricultural productivity, promoting land reform and fishery and forestry reform), (ii) infrastructure rehabilitation and development (transport, water resources, energy, information and communication technology), (iii) private sector development and employment creation, and (iv) capacity building and human resource development (education, health, gender population)⁴.

Other national policies and laws that reflect sustainable development principles

Green Growth Roadmap

The Green Growth Roadmap was adopted in 2009 with the aim of contributing an emphasis on 'green' dimensions to the implementation of Cambodia's national policy platform, the Rectangular Strategy and the NSDP (2009-2013), which is intended to ultimately achieve national poverty reduction objectives, as well as the Cambodia Millennium Development Goals (CMDGs).

Green Growth is defined by ESCAP as a policy focus for Asia and the Pacific that emphasizes ecologically

sustainable economic progress to foster low-carbon, socially inclusive development.

The Ministry of Environment (MoE) has developed the Green Growth Roadmap to integrate ideas and projects on green growth into national strategic development. This roadmap will create the basis for environmentally sound economic development through promotion of sustainable consumption and production, greening the market and green business, development of sustainable infrastructure, green tax and budget reform, and monitoring eco-efficiency indicators. The roadmap also aims to align all relevant Ministries, institutions, NGOs, IOs, DPs and Academia to cooperate in addressing current challenges to sustainable development⁵. The Green Growth Master Plan is currently being developed with the aim of making the roadmap operational. Ultimately, the goal is to integrate the Green Growth Roadmap and Master Plan into the national development plan.

Sectoral laws and policies

In addition to the Green Growth Roadmap, the RGC has promulgated a number of laws related to sustainable development, in relation to economic management, social development and environmental sustainability, providing a solid legal and policy framework for promoting sustainable development in Cambodia (see thematic chapters for an overview of the legal, policy and planning documents for each sector). However, participants in the National Dialogue agreed that while providing an important basis for sustainable development, this legal and policy framework does not translate into a coherent and integrated planning process, which clearly coordinates, integrates and prioritizes different sectoral goals and targets, with the aim of promoting sustainable development. This therefore remains a pending task.

Governance, laws and policies

The RGC has also made significant advances in the governance arena, promulgating key laws as bases for an extensive decentralization and deconcentration (D&D) process that has taken place since 2001. The strategic framework for D&D is key for promoting green growth at the provincial level⁶.

³The Rectangular Strategy was first launched in 2004, and updated in 2008.

⁴NSDP Update 2009-2013.

⁵Green Growth Roadmap 2009.

⁶Green Growth Roadmap 2009.



In 2001, the RGC promulgated the Law on Administration and Management of Commune Councils, paving the way for the democratic election of Commune/Sangkat Councils in February 2002. In 2005, the RGC endorsed a Strategic Framework for Decentralization and Deconcentration reforms. In 2008, the RGC established the National Committee for Democratic inter-ministerial mechanism for promoting D&D reforms in Cambodia. The NCDD has drafted Development at Sub-National Level (NCDD) as the several laws, decrees, sub-decrees and other regulations to ensure the effective functioning of sub-national administrations (Capital, Provinces, Municipalities, Districts and Khans). In 2010, a 10-year National Program on Sub-National Democratic Development (NP-SNDD) was launched to be implemented in three phases between 2009

and 2019. The program aims to strengthen the governance and service delivery capacity of sub-national administrations. The reform aims for commune councils to plan and manage the construction of roads, the renovation of schools, and the establishment of sanitation infrastructure.

In the area of anti-corruption, the RGC promulgated a comprehensive Anti-corruption Law in 2010. The law focuses on prevention (including public education and seeking the cause of crime); strengthening accountability and institutional capacity of the implementing agencies; seeking participation of different sections in society including the private sector and citizens; and strengthening law enforcement⁷.



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⁷NSDP MTR 2011.



Section 3



Thematic Chapters



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Thematic 3.1

Economic Growth & Development

Progress

Progress on policy and institutional framework

Given the openness of Cambodia's economy and its growth strategy, financial stability is critical to attract foreign direct investment and ensure an inclusive growth agenda. A solid macro-economic and fiscal framework has been put in place by the RGC, underpinning the sustained growth Cambodia has experienced for more than a decade. A number of fiscal frameworks have been prepared and adopted, including a 3-year Medium-Term Expenditure Framework (MTEF), which has been in place since 2002, a Public-Debt Management Strategy, adopted in 2012, and a Revenue Strategy which has been drafted and will be submitted for adoption this year.

Progress on national indicators

GDP Growth

Cambodia has witnessed significant economic progress in the last twenty years, and changes have been particularly rapid in the past decade. From 1994 to 2011, Cambodia experienced an average growth rate of 7.7 percent. Between 2004 and 2007, the economy grew above 10 percent annually⁸. Cambodia's growth performance for 1998–2007 ranks 6th in the world and 15th in the world for the decade 2000–2010⁹. Moreover, Cambodia is one of only 46 countries to achieve 7 percent average annual growth for 14 years in a row¹⁰. The growth rate has maintained itself at around 6 percent since 2008, with a sharp downturn in 2009 (0.1 percent) due to the global financial crisis¹¹.

GDP per capita

Thanks to the sustained levels of economic growth experienced in the past 20 years, Cambodia's GDP per capita has quadrupled, increasing from \$216 per capita in 1992 to \$909 in 2011. Against the backdrop of this stellar growth record, the CSES 2008 have measured a rise in real per capita consumption across all quintiles¹². However, the growth in per capita GDP since 2008 has been relatively low at about 1.7 percent annual trend rate increase, due to relatively high population growth (Total Fertility Rate is 3) and the impact of the financial crisis.

Foreign direct investment

Thanks to its sustained levels of economic growth and macro-economic stability, Foreign Direct Investment (FDI) flows to Cambodia have grown steadily in the past 17 years. Between 1993 and 2010, FDI share of GDP increased from 2 percent of GDP in 1993 to 12.9 percent of GDP in 2010¹³. The inflow of FDI rose until 2007/2008, and then fell sharply in 2009 due to the international economic downturn. However, FDI flows rose again in 2010, demonstrating investor confidence in the Cambodian economy^{14,15}.

Trade

Cambodia has pursued an open economy policy since the 1990s, allowing opportunities for accessing technologies and overseas markets. As a result, the share of trade of GDP increased from 50 percent of GDP in 1993 to a trade deficit of 12 percent of GDP in 2011¹⁶. The current export volumes from Cambodia (agriculture, mining, manufacturing and services, combined with other contributions to current account balance) are not large enough to meet the import bill. However, because of sustained levels of official development assistance inflows, the fiscal balance was positive in 2010.

⁸ MoF 2011 presentation in National Dialogue on Rio+20, 27 March 2012, Phnom Penh.

⁹ World Bank 2012.

¹⁰ ADB Country Poverty Analysis 2011.

¹¹ MoF presentation in National Dialogue on Rio+20, 27 March 2012, Phnom Penh.

¹² ADB Country Poverty Analysis 2011.

¹³ NSDP MTR 2011.

¹⁴ MoF presentation in National Dialogue on Rio+20.

¹⁵ NSDP MTR 2011.

¹⁶ Identified as a key constraint by UNICEF in National Dialogue on Rio+20.

¹⁷ NSDP MTR 2011.



Structure of economy

The structure of the Cambodian economy has seen a small, but gradual shift in the past 17 years, with industry increasing its share from 18 percent in 1998 to 22 percent in 2008, services increasing from 35 percent to 38 percent, while agriculture has seen its share decrease (from 42 percent to 34 percent) in 1993.

The Cambodian economy is based upon four main pillars of growth: agriculture, industry (garments), tourism and construction.

The industrial base is not deep yet, being largely restricted to garment manufacture which is thriving on low wages. However, during the decade to 2008, the garment industry alone accounted for 22 percent of growth¹⁸.

Agriculture has grown at 4-5 percent annually from 2002 to 2010 and still has high potential in rice as well as other crops, if effective irrigation systems are improved and expanded¹⁹.

Both the industry and construction sectors experienced a dip due to the economic downturn in 2008-2009. The garment sector alone is estimated to have lost a total of 70,000 jobs and 60,000 jobs are

estimated to have been lost in the construction sector²⁰.

Employment

Industry and services have significantly increased their share of employment from 2 percent in 1994 to 18 percent in 2009. Agriculture's share of employment decreased from 81 percent in 1994 to 72 percent in 1998 and 55 percent in 2010. Because of the loss of jobs in the garment industry, the share of employment in industry fell from 20 percent in 2004 to 25 percent in 2009. Because garment factories hire mainly female labour, the share of female employment in the industry sector is slightly higher than for male (16.2 percent versus 15.5 percent²¹). The share of male employment in the service sector is one percentage point higher than for female, while there is gender balance between male and female employment in the agriculture sector.

The country witnessed a growing interest of foreign investors in the non-textile manufacturing sector, which could support inclusive growth through job creation.



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¹⁸ADB Country Poverty Analysis 2011.

¹⁹NSDP MTR 2011.

²⁰ADB Country Poverty Analysis 2011.

²¹NSDP MTR 2011.

**Table 1: Percent share of GDP 1998 and 2010**

| | 1998 | 2010 |
|----------------------|---------------------|--|
| Agriculture % of GDP | 42% ²² | 34% ²³ |
| Share of employment | 72% | 58% ²⁴ (NSDP MTR 2011) |
| | 81% ²⁵ | 72% (NSDP MTR 2011 + adb.org/stats) |
| Services % of GDP | 35% | 38% |
| Share of employment | 20% | 20% ²⁶ |
| | 18.6% ²⁷ | 18.6% ²⁸ |
| Industry % of GDP | 18% | 22% |
| Share of employment | | 25% ²⁹ |
| | 7% ³⁰ | 9% ³¹ |

Table 2: Key economic indicators 1992-1993 and 2011

| | 1992-1993 | 2011 |
|-------------------|---------------------------------|------------------------|
| GDP growth | Average growth of 7.7% per year | |
| GDP per capita | 216 | 909 |
| FDI as % of GDP | 2% | 11% |
| Trade as % of GDP | 50% | Trade deficit of 12.4% |

²² cdc-crdb.gov.kh/cdc/7cg_meeting/dcr_english_2003/dcr_eng_eco_perform

²³NSDP MTR 2011.

²⁴In 2009, NSDP MTR 2011.

²⁵1995 figure in adb.org/stats.

²⁶NSDP MTR 2011.

²⁷1998 figure in adb.org/stats.

²⁸2010 figure in adb.org/stats.

²⁹NSDP MTR 2011.

³⁰2000 figure in adb.org/stats.

³¹Adb.org/stats.



Key issues and challenges

- **Vulnerability to external economic shocks.**

The global economic downturn in 2008-2009, severely affected all the three major non-farm sectors in Cambodia: garment, tourism and construction, demonstrating the high vulnerability of the Cambodian economy to external shocks. The global economic downturn reduced the demand for manufactured goods from Cambodia (mainly garments) and a decrease in investment in the construction sector, leading to a significant loss of jobs in both sectors. This reduced production and hence the share of industry in the GDP by about one percentage point in the years 2009-2011. The share of services has stayed essentially unchanged – it is believed that services did not grow because the global economic downturn adversely affected both tourism and real estate.

- **Narrow production base.** Cambodia's production base remains relatively narrow, being based on four main sectors: garments, tourism, construction and agriculture. The first three are highly vulnerable to external shocks, as witnessed in 2008-2009. Garment production depends on raw materials from overseas, and is subject to price increases.

- **Narrow industrial base.** Garment manufacturing, which thrives on low wages, constitutes about 42 percent of the industrial sector and about 64 percent of total manufacturing activities. The industrial base is therefore not yet deep. The garment sector is highly vulnerable to external shocks, as witnessed in 2008-2009, when more than 70,000 jobs were lost.

- **Non-availability of appropriately skilled workers for the industry sector.** To shift towards a better skilled manufacturing sector the skills of the workforce will need to be increased.

- **Low productivity of agriculture.** In agriculture, much of the activity is rice production, concentrated in the subsistence sector, which has low productivity. Irrigation systems are not widely used, covering only 20 percent of arable land³². Non-

irrigated wet season rice accounts for more than 75 percent of total rice production, and average rice yields are below those of neighbouring countries. Despite this, rapid growth in rice production has turned Cambodia from a net rice importer to an exporter. However, only a small portion of rice production goes to foreign markets, substantially below the export level reached by Vietnam and Thailand³³.

- **Structure of the economy.** Although the share of agriculture of GDP reduced by about ten percentage points between 1992 and 2011, and the share of industry and services increased, through the two-and-a-half to three years of the NSDP 2009-2013, the structure of the GDP—measured in terms of sectoral shares—essentially stayed unchanged.

- **Negative balance of trade.** The balance of trade continues to be negative, pointing towards the need to increasingly produce and export value-adding products.

- **Inclusive and sustainable growth.** Cambodia has witnessed sustained and high levels of economic growth in the last decade, which has also led to an increase in living standards and a gradual reduction in poverty. However, this economic growth has sometimes come at an environmental and social cost. This is seen in the increased rate of deforestation and an increase in land grabbing and land evictions of poor people, for the benefit of economic land concessions. It can also be seen in the little progress achieved in terms of reducing inequalities. Going forward, the RGC must devise a strategy to pursue environmentally and socially sustainable inclusive economic growth, to provide a solid base for its future growth and development.

Policy recommendations

- **Deepening diversification and increased value-added.** A deepening of economic activities, diversification and increased value-added across all sectors is required to deepen Cambodia's economic base. This requires a more aggressive industrial policy for generating larger value-added and retaining it in the country. Steps like promoting spatially diversified

³²2005 figures in CDR 2011.

³³CDRI 2011.



SMEs, acquiring and disseminating food/agro-processing technologies, linking farms with industries through contract farming, and ensuring a specified off-take at defined prices, are some prerequisites³⁴.

- **Promote vocational training.** Continue enhancing worker skills through vocational training.

- **Promote agricultural productivity and growth.** To promote growth and exports in agricultural products, key actions include expanding *effective* irrigation, using improved seed varieties and soil nutrients, intensifying land reforms, promoting marketing facilities and price information systems, disseminating weather forecast information to farmers, and strengthening

extension systems. A similar approach could be followed in livestock and fisheries. Increase rice production.

- **Promote green economy.** Strengthen the competitiveness of national SMEs exporting environmental goods and services from Cambodia³⁵ and promote public-private partnerships in green technology.

- **Macro-economic** indicators to measure inclusive growth. An additional variable proposed is 'inclusive growth'. An indicator needs to be generated to assess whether economic growth is accompanied by a distribution of gains and employment generation³⁶.



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³⁴NSDP MTR 2011.

³⁵Green Growth Roadmap 2009.

³⁶NSDP MTR 2011.



Summary of Opportunities and Challenges

| Opportunities/Strengths | Challenges/Weaknesses |
|--|--|
| <ul style="list-style-type: none"> • Sustained high levels of economic growth in the past decade. • Increasing capacity to promote inclusive growth, as witnessed in gradual reduction of poverty levels and increased access to basic services, especially in urban areas. • High capacity of economy to rebound from external economic shocks. • Niche sectors: garments and tourism. • Good location in South East Asia. • Open economy. • Abundant land and agricultural resources. | <ul style="list-style-type: none"> • Narrow production base of the economy. • Trade deficit. • The open character of the economy makes Cambodia vulnerable to international shocks. • The productivity of the agricultural sector is not fully utilized. • High cost of promoting green growth. |

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Thematic 3.2

Energy

Progress

Progress on policy and institutional framework

The three main government institutions responsible for energy in Cambodia are: the Ministry of Industry, Mines and Energy (MIME), overseeing energy planning and policy development; the Electricity Authority of Cambodia (EAC), responsible for regulating the electricity industry; the Ministry of Environment, responsible for reviewing and approving Environmental Assessments and Environmental Management Plans (EMP) of energy projects; and Electricite du Cambodge (EdC), a government-owned power utility responsible for the generation, transmission and distribution of power in nine areas of the country. In addition, an estimated 600 privately-owned Rural Electricity Enterprises (REEs) supply an estimated 5 percent of the country's electricity consumption to 115,000 customers in rural areas and small towns. The REEs provide a wide range of services, from recharging

batteries to distribution to houses, and officially operate under one-year approvals granted by MIME. Small diesel-based generators (owned on a municipal basis, non-commercially) under the responsibility of MIME account for the remaining 5 percent of total electricity consumption through small, isolated grids. These enterprises provide a possible private sector-led framework for developing local systems³⁷.

Progress on national indicators

Access to sustainable energy services is included in the CMDGs and the NSDP Update 2009-2013. It is seen as an important element for reducing fuel-wood dependency and poverty. The NSDP seeks to increase the electricity-generating capacity and expand the distribution network in urban and rural areas to provide energy at a reasonable rate to the Cambodian population. The Master Plan Study on Rural Electrification by Renewable Energy sets specific targets for rural electrification.

Table 3: Key laws and policies related to sustainable development

| Year | Laws and policies related to sustainable development | Planning for sustainable development |
|------|---|--|
| 1998 | National power development plan | |
| 1999 | Cambodia power sector strategy | |
| 2001 | Approval of electricity law | |
| 2002 | | Renewable Electricity Action Plan 2002–2012 |
| 2005 | Sub-decree on electricity tariffs | |
| 2006 | Rural Electrification by Renewable Energy Policy | |
| 2008 | | Master Plan Study on Rural Electrification by Renewable Energy |
| 2008 | Strategic Plan For Rural Electrification Fund Project and Beyond based on adoption in 11th REF Board Meeting. | |

³⁷ www.reeep.org.



Energy production and imports

The energy demands of Cambodia have seen a dramatic increase due to the country's levels of rapid economic growth in the last decade. The per capita growth in power generation has trebled in five years, increasing from 54 Kwh in 2005 to 157 Kwh in 2010. Energy imports have almost trebled in only two years (from 2008 to 2010). However, electricity power consumption per capita remains among the lowest in the region³⁸. Domestically generated electricity has decreased by 214,438 million Kwh since 2008 and remains insufficient, with 2012 levels far from the NSDP target for 2013. Hence, domestic power generation coupled with imports may not be sufficient to sustain the total energy demands of the country if current levels of economic growth are sustained. Electricity production generated was 168.39 Gwh in 1993 compared to 2164.40 million Kwh in 2010, and 2488.945 million Kwh in 2011. The production will be increased to 3291.629 million Kwh in 2013.

Electrification

Despite increasing electrification, albeit slowly, over the past 20 years, Cambodia's electrification rate remains low. It is one of the lowest in Asia, with only 17.2 percent of the population connected to a power supply. Most electrification is concentrated in Phnom Penh and a few cities, while outside provincial towns, power supply is scarce. Only about 6 percent of Cambodia's rural households have access to the electricity grid, while another 3 percent own some type of individual power generating unit³⁹. In rural areas, most of the energy supplied is supported by small-scale private diesel generators, at a high cost (3,000 Riel/Kwh)⁴⁰. This remains far from the goal of reaching 100 percent electrification in rural areas by 2020. Per capita consumption of electricity was 14.96 Kwhs/year in 1993 compared to 139Kwhs/year in 2008, and increased to 197Kwhs/year in 2012.

Renewable energy

There are both macro and micro sources of renewable energy in Cambodia. As a macro source, hydropower is a cornerstone of Cambodia's energy policy. More than 10,000 MW is under development,

50 percent in the Mekong mainstream, 40 percent in its tributaries and 10 percent in the south-western coastal area outside the Mekong basin. However, hydropower remains controversial with regard to potential impacts on people's livelihoods, food security, environmental sustainability and forest degradation. There are also concerns about net carbon emissions from hydropower reservoirs⁴¹.

Within the framework of the Renewable Electricity Action Plan 2002–2012 there has also been an increase in the implementation of small-scale energy production to meet energy demand in rural and remote areas. These include small-scale biomass and household biogas from animal waste⁴². Moreover, some upland areas have potential for wind power and there are some locations where micro-hydroelectric power would be feasible⁴³.

The use of solar power in the country is low. Total installed capacity between 1997 and 2002 reached 205 kW and increased to over 300 kW by the beginning of 2004. However, solar power is mainly reserved for the richer quintiles of the population as it remains an expensive source of renewable energy⁴⁴.

Biofuel options are being explored in Cambodia. The *Jatropha Curcas* and Cassava species appear to be a particularly suitable source of biofuel as it already grows commonly in Cambodia and has no other commercial value. One study suggests that the biofuel could be produced in Cambodia from *Jatropha* on a commercial basis for around US\$0.53 per litre. This compares favourably with the current price of fossil fuel diesel at US\$0.64 per litre. And the production cost of biofuel is not likely to follow the rising trend of the international oil price⁴⁵.

Wood and charcoal fuel

One of the main pressures on Cambodian forests is the continuing high level of firewood dependency, especially for cooking. While the dependence on firewood has been reduced by 12 percent from 1998 to 2010 (from 90.4 percent in 1998 to 79.5 percent in 2010), the current levels remain far from the 52 percent target for 2015.

³⁸Cambodia HDR 2011.

³⁹NIS 2008 in Cambodia HDR 2011.

⁴⁰Cambodia HDR 2011.

⁴¹Cambodia HDR 2011.

⁴²Cambodia HDR 2011.

⁴³UNCDF 2010.

⁴⁴Reeep.org.

⁴⁵Reeep.org.



Charcoal production is also on the rise, as a substitute for fuel-wood. However, since charcoal is a wood derivative, it too contributes to forest destruction, albeit on a smaller scale⁴⁶. Wood and wood charcoal accounts for approximately 80 percent of total national energy consumption⁴⁷.

- **High costs.** As a result of the small size of generation units, high input costs, dependence on oil-based generation and large losses in distribution, the unit cost of electricity, as well as electricity tariffs, are among the highest in the region, making electricity unaffordable for a large part of the population and contributing to rendering local

Table 4: Energy indicators 2005-2010

| Indicator | Baseline year | 2010 | Target 2013 |
|--|-------------------------|---------------------|-------------------|
| Domestically generated electricity ⁴⁸ (in million Kwh) | 1,468,108 ⁴⁹ | 1,253,670 | 1,721,467 |
| Imported electricity ⁵⁰ (in million Kwh) | 390,256 ⁵¹ | 907,830 | 1,147,644 |
| Per capita use of electricity in Kwh ⁵² | 54 ⁵³ | 157 | 224 |
| Rural electrification (% of households) ⁵⁴ | | 9% ⁵⁵ | 100% by 2020 |
| % of household electrification with grid quality electricity ⁵⁶ | 12.4% ⁵⁷ | | 70% by 2030 |
| Reduce the use of wood fuel for cooking (% of population) | 90.4% ⁵⁸ | 79.5% ⁵⁹ | 52% ⁶⁰ |

Key issues and challenges⁶¹

- **Insufficient growth rate.** The per capita growth rate in power generation is not sufficiently high for a rapidly growing economy, which has many geographical regions not yet connected to the power grid.

- **Insufficient capacity of state electricity companies.** State electricity companies alone cannot meet the increasing electricity demand, especially for the rural population.

industries less competitive. Some environmentally sound technologies, such as solar panels, are expensive as they have high import tariffs, reducing potential use for the rural poor or as a basis for eco-tourism⁶².

- **Low levels of rural electrification.** Electrification rates, especially in rural areas remain low and are among the lowest in Asia.

- **Attracting investments in renewable energies.** There are challenges attracting investment in non-hydropower renewable energies, due to the high revenue potential of hydropower and the high cost of some other renewable energies⁶³.

- **Continued dependency on fuel-wood.**

⁴⁶Reeep.org.

⁴⁷UNCDF 2010.

⁴⁸Additional NSDP 2009-2013 indicator.

⁴⁹2008 figure in NSDP MTR 2011.

⁵⁰Cambodia HDR 2011.

⁵¹2008 figure in NSDP MTR 2011.

⁵²Core indicator of the NSDP.

⁵³ 2005 figure from NSDP Update 2009-2013.

⁵⁴In Master Plan Study on Rural Electrification by Renewable Energy.

⁵⁵Of which, 6% are connected to the electricity grid, while 3% own some type of individual power generating unit.

⁵⁶Cambodia HDR 2011.

⁵⁷From Cambodia Poverty Assessment, World Bank, 1999.

⁵⁸1998 figure from 1998 Census.

⁵⁹CDHS 2010 in CMDG 2011 Report.

⁶⁰CMDG 7 target for 2015.

⁶¹From NSDP Update 2009-2013, NSDP MTR 2011 and Cambodia HDR 2011.

⁶²Cambodia HDR 2011.

⁶³National Dialogue on Rio+20.



Policy recommendations⁶⁴

- **Policies to promote investments.** Develop policies to foster investment in energy resources⁶⁵.

- **Increase efficiency.** Increase efficiency of the distribution system, setting up efficient transmission and distribution lines and transformers, and tariff collection systems⁶⁶.

- **Regional discussion on energy supply.** Hold regional discussions on how to fill Cambodia's energy gaps⁶⁷. This could include securing firm commitments for power imports from neighbouring countries, e.g. Lao PDR, as it is likely to have surplus power for some time⁶⁸.

- **Regional integration.** Gradually integrate Cambodia's electricity energy system into the networks of the Greater Mekong Sub-region (GMS) countries and ASEAN⁶⁹.

- **Capacity building.** Continue building capacities in the energy sector⁷⁰.

- **Substitute wood fuel.** Maximum effort must be made to expand modern cooking fuels (electricity or gas) to far-flung areas to substitute for wood fuel⁷¹.

- **Construction of electricity transmission lines.** Efforts to encourage construction of electricity transmission lines to cover all parts of the country must be continued⁷².

- **Electricity tariff reduction.** Reducing tariffs would help make the domestic energy industry more competitive and would make energy more affordable to consumers.

- **Reduction of import tariffs.** The MoC, MEF, MoP, MIME, and MoEYS can aid and facilitate the

mainstreaming of renewable energy options by reducing import tariffs on Environmentally Sound Technologies (ESTs)⁷³.

- **Energy efficiency regulations.** Introduction of laws and regulations on energy efficiency, especially for buildings⁷⁴.

- **Renewable energy for rural electrification.** While more hydropower stations are already under construction, other renewable sources like mini/micro-hydro, wind and solar need further exploration and expansion to ensure environmentally sustainable and affordable alternatives for rural electrification, where demands cannot be met by state electricity companies⁷⁵.

- **Private sector participation in renewable energy.** Promote private sector participation and public-private partnerships to supply renewable energy electricity services (solar power, wind power and biogas/biomass)⁷⁶ at an affordable cost for poor rural communities⁷⁷.

- Strengthen the demand and supply chain to reduce the demand of wood energy on natural forest.

- Accelerate progress toward national-tailored sustainable energy for all development objectives, based on country's own action plans and programmes.

⁶⁴From NSDP MTR 2011.

⁶⁵From NSDP MTR 2011.

⁶⁶From NSDP MTR 2011.

⁶⁷MoF during National Dialogue on Rio+20.

⁶⁸From NSDP MTR 2011.

⁶⁹From NSDP MTR 2011.

⁷⁰From NSDP MTR 2011.

⁷¹From NSDP MTR 2011.

⁷²From NSDP MTR 2011.

⁷³Green Growth Roadmap; recommendation by participants during National Dialogue on Rio+20.

⁷⁴Recommendation presented by GGI as recommendation of the Committee for Green Growth Master Plan during National Dialogue on Rio+20.

⁷⁵Green Growth Roadmap.

⁷⁶From NSDP MTR 2011.

⁷⁷Green Growth Roadmap 2009.



Summary of Opportunities and Challenges

| Opportunities/Strengths | Challenges/Weaknesses |
|--|---|
| <ul style="list-style-type: none"> • High potential for development of renewable energies, from biomass, wind and solar energy⁷⁸. • Neighbouring countries with surplus power supply. | <ul style="list-style-type: none"> • Increasing gap between supply and demand for energy. • High cost of electricity. • Difficulty attracting investors to non-hydro-renewable energy. • Low levels of electrification, especially in rural areas. • Continued dependency on wood fuel for cooking among the poor. |

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⁷⁸Also identified in Green Growth Roadmap 2009.



Thematic 3.3

Information and Communication Technology

Progress

Progress on policy and institutional framework

In Cambodia, the Ministry of Information (MoInf) is responsible for regulating the media including the press, TV and radio. As of 2011, the Ministry of Information registry has 396 Khmer-language newspapers, 74 radio broadcasters (36 in Phnom Penh) and 10 national broadcaster channels. 2010 figures show that there are 72 FM frequencies and 2 AM frequencies countrywide. The Ministry of Post and Telecommunications (MPTC) is responsible for postal and telecommunications services such as telephones and the internet. By 2010, there were 358,850 fixed telephone lines, and 8,155,652 mobile subscriptions, demonstrating a high ratio of mobile subscriptions to fixed lines (Cambodia Communication Review 2011).

After the 1991 Paris Peace Accords, the United Nations Transitional Authority in Cambodia (UNTAC) brought in a new era of media growth. Radio UNTAC started to broadcast in 1992 and disseminated radio sets and equipment to the MoInf. The 1991 Paris Peace Accords and the 1993 Cambodian Constitution gave grounds for media and freedom of expression to flourish in the country. The Royal Government of Cambodia (RGC) has signed and ratified the Universal Declaration of Human Rights (UDHR) and the International Covenant on Civil and Political Rights (ICCPR), which were incorporated into the constitution and guarantees everyone "the right to seek, receive and impart information and ideas of all kinds regardless of frontiers, either orally, in writing or in print, in the form of art or through any other media of his choice." The freedom of expression includes the right to access information to exercise each person's right.

The Press Law 1995 guarantees the freedom of the press with Article 20 providing that no journalist will be arrested or charged for criminal offences for expressing his/her opinion. The Press Law contains positive provisions which protect press freedom and freedom of publication, confidentiality of sources,

and a prohibition on censorship. However, the law only covers print, and excludes broadcast media.

The government is currently in the process of drafting the first cyber law in light of the rapid growth of Information and Communication Technologies to regulate the dissemination of false information through mobile and internet communication.

As part of the Council of Ministers' (CoM) Judicial and Legal Reform work-plan, the RGC committed to passing an international-standard Access to Information law by the end of 2006. This task was assigned to the government ministry MONASRI. The RGC agreed on a committee to draft an Access to Information Policy Paper/framework, which was completed in 2007. This Framework has been with the MONASRI since then and has yet to be approved by the Council of Ministers.

Within the telecommunications sector, the NSDP's 2009-2013 goals include: speeding up the adoption of the Law on Telecommunications and associated legal and regulatory framework; building the capacity of the sector; improving and modernizing equipment and technology to ensure effectiveness and a wider coverage of services, and promoting e-government.

Within the information dissemination sector, the NSDP's 2009-2013 goals include: expanding coverage and improving the quality and effectiveness of the national media (TV, radio and newspapers) to provide services to 95 percent of the population across the country; continue construction of new provincial radio and television stations; enforce the Press Law to enhance the rule of law and freedom of the press, of expression and of publications; and develop legal instruments for effective regulation of media businesses, audio and information technology⁷⁹.

Currently, there is no broadcast law in the country, and Cambodia's radios and TV stations broadcast under a number of parkas and instructions of the

⁷⁹ NSDP Update 2009-2013.



Ministry of Information. In recognition of the need to define clearer boundaries, it is known that a “Law on Public Electronic Broadcasting Service Management” is being drafted, and that the law will cover both cable and satellite broadcasting.

The Molnf is working towards establishing Cambodia's own portal to enhance the internet connection around the country. Internet access is expensive for most Cambodians, because the country currently uses the portal of Singapore, Thailand and Vietnam.

In an effort to include ICT to the education system, the Ministry of Education, Youth and Sport (MoEYS) released the *Master Plan for Information and Communication Technology in Education (2009 – 2013)* to increase access to non-formal and formal education, to develop ICT skills of Cambodian students and to improve school management. However, lack of technological infrastructure and access in schools are seen as main impediments to the implementation of the plan.



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Table 5: Multilateral agreements, laws and policies on Information and Communication Technology

| | <i>Adherence to multilateral agreements related to sustainable development</i> | <i>Laws and policies related to sustainable development</i> | <i>Planning for sustainable development</i> |
|-------------|--|---|---|
| 2009 | <p>Pending - ratification of Charter and Convention of International Telecommunication Union.</p> <p>Pending - ratification of the Adaption of Cambodia as Signatory of Memorandum of US Internet Association.</p> | <p>Draft law on telecommunications.</p> <p>Draft circular on Installing Radio Antenna.</p> <p>Sub-decree on Establishing Universal Telecommunication Services.</p> <p>Prakas on National Telephone Numbering Scheme.</p> <p>Prakas on Costs of Using Telephone Numbering Scheme.</p> <p>Prakas on Connection of Public Telecommunication.</p> <p>Prakas on Technology Management, Setting-up and Use of Telephone Service (Mobile and Fixed).</p> | <p>Announcement on Tabulation of National Frequency Plan.</p> |
| 2010 | <p>Pending -ratification of International Multilateral Partnership Against Cyber Threats.</p> | <p>Draft law on Radio-communication.</p> <p>Policy on Management of Telephone Services through Voice over Internet Protocol (VoIP) and Internet Service Provider (ISP).</p> | |
| 2011 | | <p>Law on Cyber</p> <p>Prakas on Management of Radio-communication Equipment and Cost of Radio Frequency Use.</p> | |

Progress on national indicators

The NSDP Update 2009-2013 has established two targets for its information pillar: increase the proportion of the population with access to TV or radio and increase the proportion of the population with access to newspapers. One indicator has been defined for the telecommunications pillar, focusing

on the increase of telephones in use (landline and mobile).

Overall, there has been an expansion of the coverage of the post and telecommunication services and the internet, and an increase in the number of users, as well as increased access to mass media.



Access to TV, radio and press

The Ministry of Information has made significant progress in improving and expanding the coverage, efficiency and quality of mass media (radio, TV and the press). While in 1993-94, only 21 percent of the population owned a TV or radio, in 2010, the figure had increased by 267 percent (to 77 percent of the population). However, only 2.3 percent of the population had access to printed media in 2010⁸⁰.

Across the country, Cambodian people receive information mainly through broadcast media. Radio is the most powerful medium among the rural and remote population as it leaps the barriers of illiteracy and high costs of electricity. Radio dominates the media environment with 51 percent of Cambodians using it as their primary source of information (Cambodia National Institute of Statistics, Socio-Economic Survey 2004), and about 52 percent of households owning a radio (49 percent in rural areas) (Asia Media Guide 2009). Due to difficulties in distributing print media to rural and remote areas, newspapers have limited reach. Moreover, in Cambodia, the 2008 National Population Census puts the adult literacy rate at 77.6 percent (15 years old and over) and the functional literacy rate at 37.1 percent.

Telephones

As in many other countries, an exponential expansion has occurred in the telephone sector. While in 1998, only 0.74 percent of the population owned a telephone, in 2010 the figure had increased to 87 percent. The expansion happened most rapidly in the past five years, the number of telephones in use growing by 1521 percent between 2005 and 2010, and the telephone density doubling between 2009 and 2010. The expansion can be attributed to an exponential growth of mobile telephony in rural areas. While only 1 percent of the poorest quintile of the population owned a phone in 2004, that figure had risen to 20 percent in 2009⁸⁸. Phone connectivity is therefore well on its way to reaching the 2013 target of 15 million, ahead of time⁸⁹.

Internet

As in other parts of the world, the internet has expanded significantly, the number of subscribers increasing from 8,000 in 2005, to 850,000⁹⁰ in the first quarter of 2011. This number suggests that the 2013 target of 620,000 has far been exceeded⁹¹. There are currently 37 Internet Service Providers (ISPs) in Cambodia with 16 operating.

Table 6: Information and Communication Technology indicators 1998-2010

| | 1998 | 2005 | 2010 | Target 2013 |
|---|--------------------|---------------------|----------------------------|----------------------|
| Ownership of TV/radio ⁸¹ | 21 % ⁸² | | 77 % | Combined target 95 % |
| Access to newspapers ⁸³ | | | 2.3 % | |
| Telephones in use (landline & mobile) ⁸⁴ | | 882,000 | 14.3 million ⁸⁵ | 15 million |
| Telephone density (per 100 population) | 0.74 % | | 87.06 % | |
| Number of internet subscribers | | 8,000 ⁸⁶ | 850,000 ⁸⁷ | 620,000 |

⁸⁰NSDP MTR 2011.

⁸¹ Core NSDP 2009-2013 indicator.

⁸²Calculated based on figures in Cambodia Poverty Assessment 1999, World Bank.

⁸³Ibid.

⁸⁴Ibid.

⁸⁵ 2011 figure in NSDP MTR 2011.

⁸⁶ 2008 figure in NSDP MTR 2011.

⁸⁷Figures for 1st quarter of 2011.

⁸⁸CSES 2009.

⁸⁹NSDP MTR 2011.

⁹⁰ UNESCO noted that internet users were 329,680 in 2011.

⁹¹Ibid.



Key issues and challenges⁹²

- **Disadvantaged groups have less access.** The poor, elderly, disabled, women and children, and indigenous minority groups are covered to a lesser extent by information and telecommunications services.

- **Weak human resource capacities.** Lack of qualified personnel hampers expansion of these sectors. There needs to be further technical training of the officials and staff at the Ministry of Information and the Ministry of Telecommunications both at national and sub-national levels.

- **Lack of infrastructure.** Infrastructure to relay information through broadcast, online and print media such as cable, networks, antennas, radio towers, computers and transportation is needed.

- **Lack of social institution.** The public needs to have an understanding of the role of media and ICT. With the growth of digital media production, the public is no longer just a consumer of information, but will also produce and disseminate information. The public must have ICT and media literacy skills.

- **Legal framework.** Delay of approval of the Law of Telecommunications by the National Assembly, passage of an Access to Information law and a Broadcast Law, review of the Press Law.

- **Coordination.** Coordination between the Ministry of Post and Telecommunications and operators/development agencies needs improvement.

- **High costs.** The cost of the internet remains high, limiting access to the poorer segments of the population.

Policy recommendations

- Approval of Law of Telecommunications.
- Promote competition of internet services in order to reduce costs.

- Promote better coordination between the Ministry of Post and Telecommunications and operators/development agencies.

- Drafting and passage of a law on public electronic broadcasting service management (covering cable and satellite broadcasting) to delineate space for Cambodia's radio and TV station activities. The law should encourage transparency of allocation and distribution of radio frequencies across the country.

- Review and passage of the draft law on Access to Information, giving Cambodian people the right to access public information through print, broadcast and other ICTs about government policy debates, finances, investments, elections, education, health and the environment. The Access to Information Law will facilitate the establishment of information dissemination mechanisms throughout the country, which will foster an increase in ICT development.

- Amendment of the 1995 Press Law to allow journalists to freely cover sensitive issues related to communities' and minorities' rights and access to land and natural resources.

- Encourage participation and public discussion of indigenous and minority communities in the rural and remote provinces, increase their access to information and ICT, and generate a media platform for disadvantaged groups to communicate on issues related to environment, natural resources and land.

- The Cyber law should be drafted taking into account the civil liberties protected under the International Conventions signed and ratified by Cambodia and enshrined in the Cambodian Constitution.

- School management across Cambodia should be informed of the MoEYS Master Plan for ICT in Education and given opportunities and financial support to contribute to the implementation of the plan.

⁹²From NSDP MTR 2011.



Summary overview of opportunities and challenges

| Opportunities/Strengths | Weaknesses/challenges |
|--|--|
| <ul style="list-style-type: none"> Exponential expansion of access to mass media, telecommunications and the internet in the past five years. Exponential increase of mobile telephony in rural areas. | <ul style="list-style-type: none"> Delay of approval of the Law of Telecommunications by the National Assembly to provide a more solid legal framework to the telecommunications sector. Weak coordination between the Ministry of Post and Telecommunications and operators/development agencies. |

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Cambodia Poverty Assessment 1999, World Bank.



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Thematic 3.4

Transport Infrastructure

Progress

Progress on policy and institutional framework

Cambodia’s road network consists of national roads (or primary roads), provincial roads (or secondary roads) under the responsibility of the Ministry of Public Works and Transport (MPWT), and rural (or tertiary) roads under the responsibility of the Ministry of Rural Development.

The Société Concessionnaire de l’Aéroport (SCA) is a special-purpose company that holds a 25-year concession (from 1995) from the Government of Cambodia to manage and operate the two main

airports in Cambodia (Phnom Penh International Airport in 1995 and Siem Reap Airport in 2001, as well as Sihanoukville Airport in 2006). Some parts of the operation of the two main airports are delegated to Cambodia Airport Management Services Limited under an operating agreement with SCA (TWG, 2010).

The railway system is overseen by the MPWT, with construction and rehabilitation under private concessions. Management and operations of ports is overseen by MPWT.

Table 7: Multilateral agreements, laws and policies on transport infrastructure

| | <i>Adherence to multilateral agreements related to sustainable development</i> | <i>Laws and policies related to sustainable development</i> | <i>Planning for sustainable development</i> |
|-------------|--|---|---|
| 2002 | | Transport Strategy | |
| 2004 | ASEAN agreement on globalization of air transport services | | |
| 2009 | | National Policy on Transportation | |

Progress on national indicators

Transport infrastructure (roads, railways, ports and civil aviation) is one of the nine key sectors of the NSDP 2009-2013. For roads, the MPWT aims to construct main national roads for integration of all locations and regions and strengthen the management of the road network. For railways, the MPWT aims to grant concessions for the management and operations of the Royal Cambodia Railway to the private sector, and rehabilitate railways and connect with the Thai and Vietnamese railway system. In civil aviation, the Government aims to improve safety and security and strengthen air navigation and airport services.

The NSDP defines three core targets for the transport sector: length of paved roads (total and rural) and railways rehabilitated and constructed.

Overall, significant progress has been made in the rehabilitation and construction of physical infrastructure of the national roads network, ports and main airports, putting in place a transportation network connecting all parts of the country, as well as the region. RGC has given high priority to ensuring that the transportation network is properly maintained, and has encouraged and promoted the participation of the private sector in the operations and maintenance of the transportation network.

Roads

The country's road network had greatly deteriorated by the early 1990s, as a result of the civil war.



However, since 1992, with assistance from international and bilateral donors, the RGC has focused on rehabilitating the country's road network.

The length of paved roads in Cambodia doubled between 2005 and 2010. In 2010, Cambodia's road network measured approximately 44,919 km, including 11,914 km of primary and secondary roads, and 33,005 km of tertiary roads. A thousand kilometres of road have been constructed between 2009 and 2011, which is about 1.4 Km per day⁹³. The rehabilitation and construction of a single-digit National Roads Network has been finalized. The main National Roads (asphalted) now connect Phnom Penh with almost all provincial capitals, and link to major cross-border check points with neighbouring countries. Significant progress has also been made to put in place regional and sub-regional roads (such as the Asia-Pacific Region, ASEAN, and the Greater Mekong Sub-Region), that will serve as the economic corridor routes, and international transit routes facilitating transportation, provision of logistics, trading, international trans-boundary tourism, and national defence⁹⁴. It is estimated that road transport accounts for an overwhelming share of the total transported volume of passengers in Cambodia (65 percent) and freight (70 percent).

Of the 11,914 km of primary and secondary roads, around 38 percent are paved (4,524 km). This means, however, that only 10 percent of the total road network in Cambodia is paved (as rural roads are not paved). While the progress on primary and secondary roads has been on track, the targets set were modest compared to the requirements in the country⁹⁵. Moreover, out of the 33,005 km of tertiary roads, 75 percent have been rehabilitated, which is still far from the 90 percent goal for 2013⁹⁶. These unpaved rural roads are covered with earth or laterite and, in most cases, are hardly accessible or totally un-passable during the rainy season, which often leads some parts of the country to remain isolated, and facing economic disruption.

Hence, while having improved significantly in the past 20 years (both in terms of quantity and quality), Cambodia's road network is still insufficient for the

current economic needs of the country and remains a serious constraint to growth.

Railways

The Royal Cambodian Railway has two rail lines, both originating in Phnom Penh and totalling about 650 km of single tracks. The first line was built in the 1930s by the French and the second in the 1960s by the French, Germans and Chinese. However, both railway lines have fallen into a state of significant disrepair following years of neglect and vandalism dating back to the Khmer Rouge era.

The RGC, with support from the Government of Australia and the Asian Development Bank, had ambitious plans to rehabilitate and expand the current railway system. The goal was to position Cambodia as a sub-regional transport hub by enabling the efficient and safe transport of heavy, bulky and hazardous cargo⁹⁷. In addition, the RGC has granted a joint venture between Toll Holdings Ltd. of Australia and the Royal Group of Cambodia (called Toll Royal Railways) a business concession to operate the railway.

The NSDP target for 2013 was to lay 47 km of lines, but this is unlikely to be met as the ADB suspended its project in March 2012, due to challenges involving the resettlement and compensation of people living along the rail tracks. Soon after, Toll Holdings also pulled out of its agreement. As a result, Cambodia's railway system remains largely dysfunctional⁹⁸.

The Government awarded a contract to Toll Holdings to manage the rail service once the construction of the tracks is completed. Both the northern and southern lines, from Poi Pet to Sihanoukville will be re-opened in 2013.

⁹³NSDP MTR 2011.

⁹⁴ NSDP Update 2009-2013.

⁹⁵NSDP MTR 2011.

⁹⁶NSDP MTR 2011.

⁹⁷Adb.org/Cambodia.

⁹⁸NSDP MTR 2011.



Table 8: NSDP indicators on transport infrastructure 1992-2010

| | 1992 | 2005 | 2010 | Target 2013 |
|---|------|--------|--------|-------------|
| Length of paved roads (primary + secondary) out of 11,914 Km | | 2,100 | 4,524 | 5,524 |
| Rural roads rehabilitated (out of the total rural roads of 33,005 km) | | 22,700 | 24,862 | 33,055 |
| Railways rehabilitated and constructed | | | 604 | 650 |

Civil aviation

Civil aviation has expanded in Cambodia to respond to the growing needs of the tourism sector. Cambodia has three international airports and nine local airports, including the Phnom Penh International Airport, the country's largest, and Siem Reap Airport, the gateway to Angkor Wat. It also has many local air fields. The two major airports serve international flights, including flights to Asia as well as Europe (through Air France which began operating Paris - Phnom Penh - Paris flights in April 2011).The government has also signed MoUs with the United Arab Emirates, Indonesia, Myanmar, the Philippines and a UK airline to fly to Cambodia⁹⁹.

A new airline, Cambodia Angkor Air, was launched in 2009 as a joint venture between the RGC and the Vietnamese Aviation Company. The Preah Sihanouk International Airport has been renovated and has become operational. To continue implementing the Open-sky Policy, RGC has approved a private sector investment project to establish a new international airport under Build-Operate-Transfer (BOT) in Siem Reap¹⁰⁰.

Ports

Cambodia has two major international ports, Phnom Penh and Sihanoukville (the country's only deep sea port), two coastal ports, Kampot and Koh Kong, and other river ports at Kampong Cham, Kratie, Stung Treng and Kampong Chhnang, as well as Siem Reap in the Tonle Sap. Cambodia has long navigable inland waterways.

To improve public investment and promote private sector participation in the rehabilitation of physical port infrastructure, RGC has developed an Open-sea Policy. As a result, Sihanoukville and Phnom Penh autonomous ports have been rehabilitated and the Mong Rithy Port at Koh Keo (Sihanoukville) and Sre Ambil Port (Koh Kong) have been constructed. The Kampot Port is under construction – all by the private sector.

It is estimated that waterway transport accounted for 15 percent of passengers and 20 percent of cargo¹⁰¹.

Key issues and challenges

- **Insufficient infrastructure capacity to respond to country's growing economic needs.** Two of the breakout groups during the National Dialogue on Rio+20 identified poor infrastructure capacity as a major challenge to the country's development, in view of the connectivity needs of a growing economy.
- **Insufficient budget for road construction maintenance and rehabilitation.** Quality control of some road constructions projects and overload control are still questionable.
- **Disconnect between state of road network and connectivity needs.** While there has been steady progress in rehabilitating and expanding the road network in Cambodia, its quality (only 10 percent paved) and quantity remain insufficient for the growing connectivity needs of the country.

⁹⁹NSDP MTR 2011.
¹⁰⁰NSDP MTR 2011.

¹⁰¹CDC 2003.



- **Poor condition of rural roads network.** The remote rural economy is becoming increasingly dependent on the improved national road network, yet the rural road network continues to deteriorate because of the steady growth in traffic, combined with a lack of maintenance financing, poor road maintenance standards, inadequate institutional capacity in road maintenance and management, lack of private contractor capacity and design and construction deficiencies¹⁰². Moreover, almost none of the rural roads are paved, making them vulnerable to rain and floods during the rainy season.

- **Costs resulting from inadequate infrastructure.** Inadequate transport infrastructure imposes costs and delays on travel, raising the cost of marketing goods or obtaining inputs, and limiting access to facility-based health and education services.

- **Inadequacy of social and environmental safeguards implementation.** While the major road building programs in Cambodia have contributed to stimulating economic development, they have been criticized for the inadequacy of their social and environmental safeguards implementation¹⁰³.

- **High incidence of road accidents.** Cambodia has one of the highest incidences of road accidents in the world with 18 fatalities per 10,000 vehicles in 2007. This is a 50% increase from 2000 and nearly three times higher than that of neighbouring Thailand. Thus, deteriorating road safety is a major sector concern, especially with the increasing growth of traffic in rural areas¹⁰⁴.

- **Traffic congestion in cities.** The increase in the number of vehicles (and little or no control over the number of vehicles in circulation or single occupancy), and lack of traffic facilities have led to worsening traffic congestion in the large cities¹⁰⁵.

- **There is a lack of affordable and convenient public transportation options**¹⁰⁶.

- **Provision of facilities for pedestrians (sidewalks, traffic lights) is insufficient.**

- **Little progress on the railway rehabilitation.**

Policy recommendations

Overall

- **Enabling environment.** Continue promoting and providing an enabling environment for public-private partnerships for infrastructure development.

- **Social and environmental safeguards.** Systematically implement environmental and social safeguards on infrastructure projects to ensure that they are environmentally and socially sustainable.

Roads

- Adequate implementation of social and environmental safeguards on major infrastructure projects.

- Promote public-private partnerships.

- Further strengthen and effectively enforce the existing traffic law, promote public transit and improve quality and quantity of sidewalks¹⁰⁷.

- Promote regular control of vehicle engines to ensure the quality and function of the engines, and to ensure energy efficient combustion¹⁰⁸.

- Promote the use of public transportation through development of policies supporting PPPs within this sector, to encourage greater private sector investment in public transit development¹⁰⁹.

- Promote vehicles that use gas or vegetable oil to minimize carbon emissions¹¹⁰.

- Strengthen the cooperation and collaboration between MPWT, MoE, PP Municipality and MoH to prepare a sustainable transportation action plan focusing on reducing environmental pollution in the cities resulting from traffic congestion, reducing

- traffic accidents and minimizing the CO₂ and CO emissions into the atmosphere¹¹¹.

¹⁰² Adb.org.

¹⁰³ CEP 2011.

¹⁰⁴ <http://pid.adb.org/pid/LoanView>

¹⁰⁵ Green Growth Roadmap 2009.

¹⁰⁶ Green Growth Roadmap 2009.

¹⁰⁷ Green Growth Roadmap 2009.

¹⁰⁸ Green Growth Roadmap 2009.

¹⁰⁹ Green Growth Roadmap 2009.

¹¹⁰ Green Growth Roadmap 2009.

¹¹¹ Green Growth Roadmap 2009.



- Implement measures to increase road safety.

Railways

- Re-launch the rehabilitation of the railway network.

Civil aviation¹¹²

- Increase the budget of civil aviation;
- Promote private investment in the sector;
- Mobilize resources from international partners.

Summary overview of opportunities and challenges

| Opportunities/Strengths | Weaknesses/challenges |
|---|---|
| <ul style="list-style-type: none"> • Intensive program of rehabilitation and expansion of road network, doubling the length of paved roads in the past five years. • Successful implementation of Open Sky policy with opening of new airports, launch of a local airline and increase in international flights to Cambodia. • Progress in rehabilitating and strengthening Cambodia's port infrastructure. • Growing interest of foreign investors in infrastructure development in the country. | <ul style="list-style-type: none"> • Disconnect between current infrastructure capacity– especially the road network - and connectivity needs. • Poor infrastructure network affects the poor disproportionately (access to markets, schools, health services). • Need for systematic implementation of social and environmental safeguards to ensure social and environmental sustainability of infrastructure projects. • High incidence of road accidents. |

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¹¹²From NSDP MTR 2011.



Thematic 3.5

Tourism

The Cambodian Government recognizes the immense development potential of tourism to the country, and therefore places tourism as one of the priority sectors in the NSDP 2009-2013. The tourism sector is a key to Cambodia's sustainable development agenda, by contributing to economic and social development and poverty reduction through job creation and income generation, while contributing to reducing climate change and promoting green economic development. The NSDP 2009-2013 refers to "cultural and natural tourism that contributes to the development, protection and conservation of the country's cultural and historical heritage and the sustainable use of its natural resources"¹¹³.

Progress

Progress on policy and institutional framework

The NSDP articulates its tourism strategy around the following elements: the implementation of an open sky policy; strengthening of intra-regional tourism; promotion of domestic tourism; strengthening of human resources in the tourism sector; strengthening the security and social safety of

tourists visiting Cambodia; developing innovative tourism products, including eco-tourism; improving physical infrastructure (roads, airports, ports), and providing a climate of peace, and law and order¹¹⁴.

As a part of its tourism promotion strategy, in 2008, the Government launched the campaign "Cambodia: Kingdom of Wonder". The campaign has been globally recognized and has strongly enhanced Cambodian competitive levels¹¹⁵. The Ministry of Tourism (MoT) has also promoted the movement of "Clean City, Clean Resort and Good Services".

In late 2011, the MoT formulated a draft Tourism Development Strategic Plan 2011-2020, which identifies four potential tourism areas: Siem Reap and its surroundings, Phnom Penh and its surroundings, coastal areas and eco-tourism areas in the Northeast, and Boeung Tonle Sap. In addition, MoT has formulated a draft Ecotourism Policy to strengthen the focus on ecotourism. In 2012-2013, MoT will finalize the formulation of these key policies, strategies and plans, and their accompanying regulations, providing the basis for a sustainable tourism sector in Cambodia.

Table 9: Multilateral agreements, laws and policies on Tourism

| | Laws and policies related to sustainable development | Planning for sustainable development |
|-------------|--|---|
| 2008 | | |
| 2009 | Tourism Law | |
| 2011 | Draft National Ecotourism Policy | Draft Tourism Development Strategic Plan 2011-2020. |

¹¹³ NSDP Update 2009-2013.

¹¹⁴ NSDP Update 2009-2013.

¹¹⁵ NSDP MTR 2008.





Progress on national indicators

Cambodia's tourism sector has seen a gradual and sustained increase in the past 20 years. Indicators for the tourism sector are set in the NSDP Update 2009-2013.

Tourism revenues and jobs

Tourism is now the third largest sector of the economy, after agriculture and the garment industry. The increase in the tourism sector over the past 20 years has been a significant driver in the economic growth of Cambodia. Revenues from tourism have increased seventeen-fold, from 100 million USD in 1995 to 1.786 billion USD in 2010. In 2008, tourism represented 4.3 percent of GDP, and in 2010 it generated 315,000 jobs¹¹⁶. The sector is estimated to have grown by 20 percent per annum in real growth in the past decade.

Influx of international tourists

The number of international tourists to Cambodia has increased twenty-fold in the past seventeen years, from 118,183 in 1993 to 2.5 million in 2010¹¹⁷. The number of tourists increased slowly during the 2008-2009 economic downturn. In 2008, the country received more than 2.12 million international visitors, an increase of 5.48 percent, while in 2009, there were 2.16 million international visitors, an increase of 1.7 percent

(<http://www.tourismcambodia.org> in a speech in Thong Khon in 2011). The estimated projection of reaching 3.4 million tourists by 2013 may be out of reach, given the current international financial climate.

National tourists

Domestic tourism represents a larger share of total tourist numbers than international tourists, although most likely a smaller share of revenues. Thanks to sustained levels of economic growth and a rise in incomes, the number of national tourists has also seen a significant increase in the past 20 years, increasing to 7.56 million in 2010.

Accommodations (hotels and guest houses)

Responding to the increase in the number of national and international tourists, the number of tourist accommodations has seen a significant increase, growing from 37,522 in 2009 to 39,714 in 2010.

Other achievements in the tourism sector:

- RGC's "Open Sky Policy" to promote easy access to tourist destinations by air travel has resulted in significant airport improvements. In 2009, a new national airline was created and has started operating its flights between key tourist destinations within the country.
- Visa issuance has been simplified at all international check points and e-visas have been introduced.
- Tourist information counters have been established in Phnom Penh and 13 provinces, particularly the provinces that have international check points, to provide information to tourists as well as advertise tourist destinations¹¹⁹.

Table 10: Tourism figures 1993-2010

| | 1993 | 2010 | Target 2013 |
|--|--------------------|-------------|-------------|
| International tourists (in number of people) | 118,183 | 2.5 million | 3.4 million |
| National tourists (in millions of people) | | 7.56 | 8.59 |
| Accommodations (hotels and guest houses) | | 39,714 | |
| | 100 ¹¹⁸ | 1.786 | |
| Number of jobs in the tourism sector | | 315,000 | |

¹¹⁶NSDP Revenues from international tourism (in million USD)MTR 2011.

¹¹⁷Ministry of Tourism Statistics 2011.

¹¹⁸ 1995 figure in Ministry of Tourism Statistics 2011.

¹¹⁹ From NSDP Update 2009-2013.



- Child Safety Committees (CSCs) in all 24 provinces are working together and with NGOs to stop Child Sex Tourism¹²⁰.

- The Ministry of Culture and Fine Arts has been actively involved in ensuring that Cambodia's cultural heritage sites are protected, and in promoting activities covering various aspects of fine arts.

Key issues and challenges

- **Weak tourism marketing.** Tourism marketing studies are still limited, due to lack of funds and human resources. The private sector's contribution to promotional activities is limited. Tourism promotional facilities are limited in quantity, quality and accredited languages. Promotion via the Internet and other systems remains weak. Cambodia has not yet systematically created tourism promotion offices in priority tourism markets¹²¹.

- **High costs.** The high cost of tour packages to Cambodian destinations.

- **Weak competition.** Lack of competition in tourism service markets (accommodation, transportation, tourism advertisements).

- **Quality of services.** The quality of some resorts, facilities and tourism services does not meet required international standards, and needs to be improved.

- **Urban bias.** Tourism development has been concentrated in urban areas, which has prevented the poor living in remote areas from benefiting from the development of this sector.

- **Poor infrastructure.** Physical infrastructure necessary for the development of the tourism sector, such as roads, electricity, clean water supply, and liquid and solid waste management system, is still inadequate and needs to be further improved.

- **Lack of stimulation of domestic production.** Incomes generated by the tourism sector have not significantly contributed to promoting domestic production and consumption of domestically produced commodities, as a significant proportion

of those incomes is spent outside the country to procure goods and services.

- **Slowdown of investments.** Investments in the tourism sector have been affected by the economic recession, putting projects on hold or postponing new ones.

- **Quality of human resources.** The quality of human resources, of both public and private agents engaged in the tourism sector, is still low¹²².

- **Sector's vulnerability to international economic conjunctures.** While the tourism sector is one of the main drivers of Cambodia's economic growth (together with the garment industry, construction and agriculture), it is highly vulnerable to international economic conjunctures. Given that the garment and construction sectors are also linked to external markets, the downturn in the international economy in 2008-2009 affected Cambodia's economic growth, exposing the sector's vulnerability.

Policy recommendations¹²³

- **Further development of aviation infrastructure.** Improvement of airports and flight safety continues to be a key priority for expanding tourism development and absorbing an increasing number of tourists to Cambodia.

- **Approval of key policies.** Approval of key policies and plans, such as the Ecotourism Policy and the Draft Tourism Development Strategic Plan 2011-2020, to strengthen the legal and policy framework for tourism development.

- **Strengthen capacities.** Further strengthen human resources and capacities in the tourism sector.

- **Diversification of sites.** Diversify tourism sites/resorts throughout the country, especially in the coastal and north-eastern areas.

¹²⁰ From NSDP MTR 2011.

¹²¹ NSDP MTR 2011.

¹²² NSDP Update 2009-2013.

¹²³ From NSDP MTR 2011.



- **Strengthening marketing.** Further develop marketing strategies and tools to promote tourism to Cambodia.

- **Ecotourism.** Expand ecotourism development through support to SMEs as a way to stimulate livelihood development and reduce poverty, while sustainably managing the environment¹²⁴.

Summary overview of opportunities and challenges

| Opportunities/Strengths | Weaknesses/challenges |
|---|---|
| <ul style="list-style-type: none"> • Growth of the tourist sector in the past twenty years, representing one of the four main drivers of economic growth, an important source of revenues for the country and a source of employment generation. • Cambodia's historical and cultural heritage. • Significant potential for ecotourism, as a way to boost rural employment and diversify rural revenues, while sustainably managing the environment. | <ul style="list-style-type: none"> • Sector's vulnerability to international economic environment. • Sector's weak stimulation of domestic production. • Urban bias as the sector has benefitted urban areas and populations more than rural. • Poor physical infrastructure in the country presents limitations to the growth of the tourism industry. |

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¹²⁴ This recommendation was made by several participants in the National Dialogue on Rio+20.





Thematic 3.6

Poverty & Equity

Progress

Progress on policy and institutional framework

One of the highest priorities of the RGC in the past 20 years has been to reduce poverty, especially in rural areas. This commitment has been reflected in the objectives of its national development plans (first five-year Socio-Economic Development Plan SEDP-I, 1996-2000), the second Socio-Economic Development Plan (SEDP II 2001-2005), its National Poverty Reduction Strategy (2002), its current Socio-Economic Policy Agenda (Rectangular Strategy Phase 2) and its current national development plan (NSDP 2006-2009 and NSDP update 2009 to 2013), which provides the country's overarching roadmap for sustainable development, including poverty reduction. The current NSDP states that poverty reduction "in the fastest possible manner" is the Government's foremost priority. In 2011, the RGC formulated the National Social Protection Strategy for the Poor and Vulnerable. The strategy has four pillars: vocational and skills training; social insurance (contributory system); social safety nets (non-contributory system); and complementary social welfare services.

A variety of governmental and non-governmental agencies are involved in poverty reduction, including the Ministry of Social Affairs, Veterans and Youth Rehabilitation (MoSVY), which provides social welfare services and assistance to the vulnerable, including disabled and elderly people, as well as the homeless.

The various governmental, non-governmental and international donors and NGOs involved in implementing poverty reduction projects and programs are coordinated through the Planning and Poverty Reduction Technical Working Group, recently split into two separate working groups to ensure a more focused coordination approach.

Progress on national indicators

National targets for poverty reduction were established in 2003 as part of the definition of the Cambodia Millennium Development Goals (CMDGs). CMDG 1 seeks to halve poverty by 2015, reducing the poverty rate to 19 percent of the population by 2015.

Thanks to sustained levels of economic growth over the past 10 years, poverty levels have reduced significantly. The proportion of poor people has been reduced by 33 percent in 20 years, from 47 percent in 1992 to an estimated 26.1 percent in 2009¹²⁵. The poverty reduction achieved in the past five years is particularly impressive, down from 34.7 percent in 2004 (a decrease of 25 percent). In addition to sustained economic growth rates, this decrease could partly be explained by a rise in food prices in 2008 that may have helped boost revenues of rural people, many of whom are net food sellers¹²⁶.

However, poverty levels are still high and sustained efforts need to be made to achieve the target of 19 percent by 2015.

Rural poverty has decreased slightly less than overall poverty in the past 20 years (29 percent compared to 33 percent) and rural poverty levels remain higher than urban, with 30.7 percent of poor people in rural areas (which is still relatively far from the 23 percent target for 2015) as opposed to 19.4 percent in urban areas (excluding Phnom Penh). The poverty rate in Phnom Penh is the lowest in the country at 0.1 percent.

Food poverty has also been reduced (from 20 percent in 1993 to 15 percent in 2009), although the reduction has been less steep than for income poverty (25 percent compared to 33 percent). Food poverty is not high in Cambodia and was not excessively high in the 1990s either, being sparsely

¹²⁵ This figure is based on the 2009 Cambodia Socio-Economic Survey (CSES).

¹²⁶ NSDP MTR 2011.



populated, having good quality land and a long-standing tradition of crop agriculture¹²⁷.

Cambodia's Human Development Index has significantly improved in the last decade (2000-2010), increasing by 18 percent, which is well above the global average of 7 percent and above HDI increases of countries such as Vietnam (12 percent), China (16 percent) and Lao (16 percent)¹²⁸.

Despite progress in reducing poverty, inequality levels have seen very little progress in 20 years, increasing by only 8 percent, from 7.4 percent as measured by the share of national consumption of the poorest 20 percent in 1993, to 8 percent in 2009¹²⁹.

proportion reduced by only about five percentage points through the last decade, a shift of only about half a percentage point per year. Although rural poverty has seen a decrease, the farm sector remains a low productivity option compared to non-farm sectors - farmers' standards of living remain modest and vulnerable to climatic or other shocks¹³¹.

- **Poverty estimations.** There are presently several poverty measurement exercises in Cambodia and no agreement on which one should be used, resulting in multiple estimates and trends and making accurate policies difficult.¹³²

Table 11: CMDG and NSDP Indicators on Poverty and Equity 1993-2009

| CMDG 1 Target: Between 1993 and 2015, halve the proportion of people whose income is less than the national poverty line | | | |
|--|----------------------------|--------------|--------------|
| CMDG 1 Target | Baseline 1993 | Actual 2009 | Target 2015 |
| Reduce the proportion of people below the poverty line | 39 percent | 26.1 percent | 19.5 percent |
| NSDP | | | |
| Reduce the proportion of people in rural areas below the poverty line | 43 percent | 30.7 percent | 23 percent |
| Increase share of poorest quintile in national consumption | 7.4 percent ¹³⁰ | 8 percent | 11 percent |
| Reduce the proportion of people below the food poverty line | 20 percent | 15 percent | 10 percent |

Key issues and challenges

- **High poverty levels.** While significant progress has been made in reducing poverty, overall poverty levels remain high.
- **High vulnerability to shocks.** A large number of people are clustered around the poverty line and a small shock might push them back.
- **Little structural shift in the economy.** The proportion of workers engaged in agriculture and related activities still exceeds 70 percent. This

Policy recommendations

- **Sustained effort to reduce poverty.** Sustained efforts are needed to lift more people out of poverty, including those living under the poverty line, but also those clustered just above the poverty line.
- **Poverty rate calculation.** There is need for a new measure of poverty in Cambodia¹³³ that all stakeholders agree upon, which would be aligned with other social indicators, reflect the current

¹²⁷ CMDG Report 2011.
¹²⁸ UNDP Human Development Report.
¹²⁹ CSES 2009 figures in CMDG Report 2011.
¹³⁰ Figure in original CMDGs.

¹³¹ NSDP MTR 2011.
¹³² NSDP MTR 2011.
¹³³ The current poverty line was defined in 1993-94 and is considered outdated.



realities of the country and be used as basis for policy-making. For temporal comparison purposes, the base year could be 2004, the year when a full coverage of the country was achieved in the CSES sample. All later estimates could be reworked from then on. Finally, the results of poverty estimates should be available within a year after the survey is complete¹³⁴.

- **National HDI.** Develop a National Human Development Index (NHDI) regularly, disaggregated at the province level¹³⁵.

Summary overview of opportunities and challenges

| Opportunities/Strengths | Weaknesses/challenges |
|---|--|
| <ul style="list-style-type: none"> • Significant reduction of poverty levels, especially in urban areas. • Significant improvement of HDI index, above regional and world average. • Efforts to systematically identify the poor through implementation of IDPoor program, provides a strong basis for future targeted anti-poverty programs. • Approval of Cambodia's first National Social Protection Strategy for the Poor and Vulnerable in 2011. | <ul style="list-style-type: none"> • Poverty levels remain high, especially in rural areas. • Slow progress in reducing inequalities. • The clustering of people just above the poverty line leaves a large proportion of the population vulnerable to shocks. • Lack of a large-scale nationwide targeted anti-poverty program to act as a safety net for the poor. |

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¹³⁴ NSDP MTR 2011.

¹³⁵ NSDP MTR 2011.



Thematic 3.7

Health

Progress

Progress on policy and institutional framework

The Ministry of Health (MoH) is responsible for governing healthcare, the healthcare industry, public health and health-related NGOs in Cambodia. The Ministry governs and regulates the activity of medical professionals, hospitals and clinics, and maintains 24 provincial health departments.

Many development partners participate in the health sector in Cambodia. In addition to around 20 multilateral and bilateral donors, there are more than 100 health-related international and national NGOs. Both the Global Fund to Fight AIDS, Tuberculosis and Malaria and the GAVI Alliance are

substantial contributors to the health sector, complemented by several other global health initiatives.

To ensure coordination between the Government and Development Partners, a Technical Working Group on Health (TWGH) has been established. It ensures harmonization and alignment among health partners and the Government/Ministry of Health. A smaller group of senior staff from the Ministry and selected representatives of health partners also meet regularly as the Secretariat of the TWGH¹³⁶.

Table 12: Multilateral agreements, laws and policies on Health

| | <i>Adherence to multilateral agreements related to sustainable development</i> | <i>Laws and policies related to sustainable development</i> | <i>Planning for sustainable development</i> |
|-------------|--|---|--|
| 1992 | Convention on the Rights of the Child (CRC) | | |
| 1993 | Summit Declaration and Plan of Action for Children | | |
| 1998 | | | National Programme of Action on Children |
| 2002 | | | Health Strategic Plan 2003-2007 (HSP1) |
| 2008 | | | National Health Strategic Plan 2008-2015 |
| 2010 | | | Fast Track Initiative in MCH National Strategic Plan for HIV and AIDS III (2011-2015) |

¹³⁶ WHO Country Brief 2011.



Progress on national indicators

National health targets are set in the NSDP 2009-2013. The same targets are also integrated into the CMDGs (CMDG 4, 5 and 6).

Child Health (CMDG 4)

Infant and Child Mortality

Remarkable progress has been made in key health indicators related to infant and child mortality in the past 20 years in Cambodia.

Between 2000¹³⁷ and 2010, the infant mortality rate dropped by 53 percent, from 95 for every 1,000 live births, to 45, reaching the 2015 CMDG target of 50, five years in advance.

Child mortality is the CMDG where most progress has been achieved, dropping 56 percent, from 124 for every 1,000 live births in 2000, to 54 in 2010. As for IMR, the 2015 CMDG target of 65 has therefore already been reached five years in advance¹³⁸.

The significant increase has been attributed to an all-round improvement in pre-natal and post-natal care, strong performance of the national immunization program, successful promotion of exclusive breastfeeding, improved access to basic health services and improved access to education¹³⁹.

Despite overall progress, significant disparities remain between urban and rural areas, with child mortality rates of 75 deaths per 1,000 live births in rural areas, far from the national CMDG target, compared to only 29 in urban areas¹⁴⁰. Some provinces have rates as high as 118 (Preah Vihear/Steung Treng) compared to only 18 in Phnom Penh. While the national CMDG targets may have been reached, significant regional disparities demonstrate that the reduction in IMR and CMR is not yet a finished task.

Compared with other low-income countries in East Asia, Cambodia is on a par with Lao for CMR, has slightly lower performance than Lao on IMR, and has

better performance than Myanmar on both indicators.

Table 13: IMR and CMR indicators, South East Asia 2010

| Country | IMR | CMR |
|----------|-----|-----|
| Cambodia | 45 | 54 |
| Lao | 42 | 54 |
| Myanmar | 50 | 66 |
| Thailand | 11 | 13 |
| Vietnam | 19 | 23 |

Immunization of children

Remarkable progress has also been achieved by Cambodia in immunization coverage, increasing by 58 percent between 2000 and 2010. In 2010, 73.6 percent of children under the age of one were fully vaccinated, compared to 31 percent in 2000¹⁴¹. The immunization target for 2015 (90 percent) is considered on track to be met. One-year-olds immunized against DPT3 was 43 percent in 2000 and increased to 83 percent in 2005 and 85 percent in 2010. One-year-olds immunized against measles was 41 percent in 2000 and increased to 80 percent in 2005 and 85 percent in 2010.

Malnutrition

Child malnutrition is one of the CMDG indicators that has seen insufficient progress in the last 10 years and levels remain high. Between 2000 and 2010, stunting decreased only by 18 percent, from 45 percent to 37 percent. The percentage of wasted children actually increased by 38 percent between 2005 and 2010 (from 8 to 11 percent)¹⁴², probably a result of the financial and economic crises that hit hard on vulnerable groups, among them children.

Exclusive breastfeeding

The practice of exclusive breastfeeding increased significantly since 2000, having grown by 549 percent. In 2000, only 11.4 percent of children under the age six months were exclusively breastfed, compared to 74 percent in 2000, exceeding the CMDG target of 70 percent in 2015 ahead of time.

¹³⁷ No census or demographic and health survey were conducted in Cambodia prior to 1998 and 2000 respectively, hence there is no baseline data on health prior to those dates. Because the census uses a different calculation from the CDHS, the baseline used in this report was therefore the CDHS 2000 data.

¹³⁸ CDHS 2010 and CMDG Report 2011.

¹³⁹ CMDG Report 2010 and 2011.

¹⁴⁰ CDHS 2010.

¹⁴¹ CDHS 2000.

¹⁴² CMDG Report 2011.



Maternal Health (CMDG 5)

Maternal mortality

The maternal mortality rate in Cambodia is one of the CMDGs that has witnessed most changes in the past 10 years. Between 2000 and 2005, the maternal mortality increased by 5 percent (from 450 per 100,000 live births to 472) and then decreased by 56 percent between 2005 and 2010 (from 472 to 206 in 2010)¹⁴³, effectively exceeding the 2015 target ahead of time.

Part of the reason for this improvement is the increased penetration of modern health facilities and services, which has resulted in an increase in the proportion of deliveries at public health facilities and an increase in the proportion of births assisted by skilled health personnel.

Table 14: MMR indicators, South East Asia 2010

| Country | MMR |
|----------|------------|
| Cambodia | |
| Lao | 580 (2008) |
| Myanmar | 240 |
| Thailand | 48 |
| Vietnam | 56 |

Fertility

There has been a steady fall in the total fertility rate in the last decade, decreasing by 25 percent, from 4 in 2000 to 3 in 2010, achieving the 2015 CMDG of 3, five years in advance. The decrease has been especially sharp in urban areas, decreasing from 3.1 to 2.2. However, while there has also been a significant decrease in rural areas from 4.2 to 3.3, the current rate for rural areas still falls behind the national 2015 target. While the fertility rate is falling, it is still considered relatively high. In a comparative perspective, the average annual population growth rate between 1998 and 2008 was 1.54 percent, which is higher than the 1.3 percent average for Southeast Asia¹⁴⁴.

Births attended by skilled health personnel

The number of births attended by skilled health personnel has increased exponentially in the past decade (by 122 percent), rising from 32 percent in

2000 to 71 percent in 2010¹⁴⁵, on track to achieve the 2015 CMDG target of 87 percent. However, there are large discrepancies between urban and rural areas, with 86 percent of births in urban areas being attended by skilled health personnel, compared to half in rural areas (48 percent), well below the national CMDG 2015 target of 87 percent.

The above indicator can be explained by the significant increase in deliveries occurring in public health facilities, rising from 10 percent in 2000¹⁴⁶ to 53.8 percent in 2010 and the corresponding decline in deliveries occurring in the home, declining from 89 percent of births in 2000 to 45 percent in 2010¹⁴⁷.

Birth-spacing methods

Among married women in the age group 15-49 years, the use of modern birth-spacing methods has increased by 84 percent in 10 years (from 19¹⁴⁸ percent in 2000 to 35¹⁴⁹ percent in 2010).

Antenatal care (ANC)

Pregnant women receiving at least two ANC consultations have increased by 114 percent in the past 10 years (from 38 percent in 2000 to 81 percent in 2010), on track to reach the CMDG 2015 target of 90 percent. Again, this is explained by the expansion of access to health care in both rural and urban areas.

Caesarean delivery

C-section deliveries increased from 1.4 percent to 2 percent against a CMDG target of 4 percent by 2015. This indicator needs to be interpreted with caution as C-sections should only be resorted to in the case of complications. In some cases, however, C-sections are performed for other reasons. The indicator is used here as an indication of increased sophistication of health services through recognition of possible complications to the mother and/or the baby, and the ability to perform the procedure.

¹⁴³ Figures from CDHS 2000, 2005 and 2008.

¹⁴⁴ ADB Poverty Analysis Country Partnership Strategy: Cambodia, 2011–2013.

¹⁴⁵ CDHS 2010.

¹⁴⁶ CDHS 2000.

¹⁴⁷ CDHS 2010.

¹⁴⁸ From CMDG Report 2011.

¹⁴⁹ CDHS 2010.



HIV/AIDS, Malaria and other diseases (CMDG 6)

HIV/AIDS

From 1995 to 1998, Cambodia experienced a sharp increase in HIV infections among adults aged 15-49 years, rising from 1.2 percent in 1995 to a peak of 2 percent in 1998. Since then, Cambodia has made considerable progress in reducing the spread, with a decrease in HIV prevalence to 0.7 percent in 2010¹⁵⁰. Due to the impressive reduction of the spread of HIV in Cambodia, the 2015 CMDG target was modified from 2.3 percent to 0.4 percent. Cambodia is well on track to achieving the revised target of 0.4 for 2015¹⁵¹.

The decrease can be attributed to sustained prevention campaigns (such as condom campaigns in brothels), an increase in antiretroviral services, including paediatric care, and the number of voluntary confidential counseling and testing (VCCT) sites available in referral hospitals and health centres¹⁵².

Malaria and dengue

The control of malaria and dengue, both caused by mosquitoes, has improved in recent years. Malaria prevalence declined from 4.2 in 2002¹⁵³ to 2.9 percent in 2007¹⁵⁴ and the malaria case fatality rate

was 0.76 percent in 2010. Dengue fatality is also low at 0.3 percent of the population in 2010, decreasing from 1.5 in 2005¹⁵⁵. It declined from 11.4 in 2000 to about 4.4 in 2008 (there were about 59,000 cases in 2008), although there was a significant increase to 101,000 cases in 2006. This is close to the 2015CMDG target.

Tuberculosis

Significant progress has been made since 1997 in reducing the prevalence of all forms of tuberculosis (TB), from 928 per 100,000 people to 664 per 100,000 people in 2007. This indicator is therefore on track to reach its 2015 target. However, this incidence rate is still the highest in the Western Pacific Region. The proportion of TB cases detected under DOTS has increased from 57 percent in 2002 to 69 percent in 2008, almost reaching the 2015 target of 70 percent, and the treatment success rate of about 90 percent has already exceeded targets. Despite efforts, insufficient progress has been made in the tuberculosis death rate per 100,000 people which, at 75, remains more than double the 2015 CMDG target of 32.

The 3rd national sero-prevalence survey showed a further decline in HIV prevalence among TB patients, from 11.8 percent in 2003 to 7.8 percent in 2007.



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¹⁵⁰Health Information System 2011; NSDP MTR 2011.

¹⁵¹Data from Ministry of Health in CMDG 2011 Report.

¹⁵²CMDG Report 2011.

¹⁵³MOH MIS in CMDG Report 2010.

¹⁵⁴CMDG Report 2010.

¹⁵⁵MOH in CMDG Report 2010.



Table 15: CMDGs on Health 2000-2010

| Target | 2000 | 2010 | Target 2015 |
|--|-------------------|------------------|------------------|
| CMDG 4: Reduce child mortality | | | |
| Reducing infant mortality rate (IMR) by half between 1998 and 2015 | 95 ¹ | 45 | 50 |
| Reducing Under5 (U5) child mortality rate(CMR) by half between 1998 and 2015 | 124 ¹ | 54 ¹ | 65 |
| More than 90 percent of children are vaccinated by 2015 | 31% | 79% | 90% |
| Up to 70 percent of infants up to six months are breast-fed | 11.4% | 74% | 70% |
| Children aged 0 – 59 months who are moderately or severely stunted ¹ | 45% ¹ | 40% ¹ | 25% |
| Children aged 0 – 59 months who are moderately or severely wasted | 8% | 11% | 6% |
| CMDG 5: Improve maternal health | | | |
| Maternal mortality ratio (mortality per100,000 live births) – 2015 target: 250 | 437 | | 250 ¹ |
| Total fertility rate – 2015 target: 3 | 4 | 3 | 3 |
| Proportion of births attended by skilled health personnel – 2015 target: 87 | 32% | 71% | 87% |
| Proportion of married women using birth-spacing methods – 2015 target: 60 | 19% | 35% | 41.60% |
| Proportion of pregnant women with two or more ANC with skilled health personnel –2015 target: 90 | 38% | 81% | 90% |
| Proportion of pregnant women delivering by Caesarean Section – 2015 target: 4 | 1.4% | 2% | 4% |
| MDG 6: Combat HIV/Aids, malaria and other diseases | | | |
| Decrease the prevalence of HIV/AIDS to0.4 percent in the adult population | 2% | 0.7% | 0.4% |
| Malaria prevalence | 4.2% ¹ | 2.9% | 4% |
| Fatality rate from malaria | 0.4% | 0.76% | |
| Dengue prevalence | 1% ¹ | 0.8% | 0.4% |
| Decrease the prevalence of tuberculosis to 626 per 100,000 population | | 681 | 626 ¹ |



Key issues and challenges

- **Disparities between urban and rural areas.**

Despite significant progress on several of the national indicators and the early achievement of several key indicators (infant, child and maternal mortality, fertility and breastfeeding), large disparities remain between urban and rural areas, especially for the indicators of child mortality, births attended by skilled personnel and births occurring in a health facility.

- **Continuing high levels of child malnutrition.**

Despite significant progress in reducing infant and child mortality, child malnutrition remains a serious concern. This seemingly contradictory picture exists due to health services being regionally selective, outreach is limited, and preventive elements like drinking water and sanitation lagging behind¹⁵⁶.

- **Immunization coverage.** Coverage has increased considerably, but issues remain in terms of access to the rural remote areas, capacity to deliver the vaccination and beliefs of local people.

- **HIV/AIDS among most-at-risk populations.**

There are concerns about a possible resurgence in the HIV/AIDS epidemic among most-at-risk populations, such as those engaged in entertainment activities, Men who have Sex with Men (MSM) or injecting drug users.

- **Tuberculosis.** There is a concern about multiple infections with malaria that lead to a long period of treatment.

- **Malaria.** Public awareness on sleeping under mosquito nets is still lacking among rural people. Therefore, it is difficult to avoid malaria infection.

- **Drug-resistant Malaria.** While significant progress has been achieved in reducing the prevalence of malaria, drug resistant strains have evolved on the Cambodia–Thai border, recently confirmed to have artemisinin-resistant parasites¹⁵⁷.

- **Low per capita health expenditures.** While the national health budget has grown substantially over the past 20 years, it remains low on a per capita basis, compared to other countries¹⁵⁸.

- **Weak implementation capacity at the local level.** Implementation capacities at the local level remain weak, health care worker salaries are low and many health centres and hospitals are under-resourced, lack adequate staff, supplies and equipment¹⁵⁹. This affects the quality of healthcare.

- **Quality of private sector health care.** The private sector delivers a large share of health care, with many challenges in ensuring quality of health services¹⁶⁰.

- **Health shocks are a major source of vulnerability for the poor.** The poor tend to have a higher incidence of injury and illness, as they are involved in physical jobs with greater risk, have poor nutrition, lack access to improved water supply and sanitation, and are often in more remote areas with limited access to health and social services. Illness or injury often means lost income and/or depleting savings or selling off assets¹⁶¹. A study found that half of all distress sales, or around 40 percent of cases of families losing land, involved health crises¹⁶².

- **Access to healthcare**¹⁶³. Access to healthcare remains a challenge for the poor, especially women. In addition to high out-of-pocket expenditure for health services (most health care costs are paid out of pocket), in remote areas, the poor lack physical access to quality health care due to long distances to health facilities and high transport costs, especially during the wet season¹⁶⁴.

Policy recommendations

HIV/AIDS

- **Most-at-risk groups.** Action needs to be sustained to avoid further expansion of the disease among most-at-risk groups.

- **Prevention.** A lot of effort will be required in terms of prevention of HIV/AIDS, as the growth of

¹⁵⁶ NSDP MTR 2011.

¹⁵⁷ WHO Country Brief 2011.

¹⁵⁸ WHO Country Brief 2011.

¹⁵⁹ WHO Country Brief 2011.

¹⁶⁰ WHO Country Brief 2011.

¹⁶¹ ADB Country Poverty Analysis 2011.

¹⁶² Oxfam study quoted in World Bank Cambodia Poverty Assessment 2006.

¹⁶³ This was also identified as one of the country's main challenges in the National Dialogue on Rio+20.

¹⁶⁴ ADB Country Poverty Analysis 2011.



the tourism sector and migration will continue to have an impact on the disease¹⁶⁵.

Health sector

- **Improvement of health infrastructure.** Invest more resources to expand physical health infrastructure and medical facilities, and upgrade medical technology.
- **Strengthening human resources in health.** Efforts need to be made to strengthen and expand training for health care personnel.
- **Better targeting.** Public health provision needs to be strengthened to better reach the poor.

Nutrition

Improve indicators on child malnutrition through the following approaches:

- Providing micro-nutrients to the target groups through direct supplementation;
- Strengthening school-feeding programs and nutrition-supplementation to pregnant women and lactating mothers; and
- Improve access to clean drinking water¹⁶⁶.

Summary overview of opportunities and challenges

| Opportunities/Strengths | Weaknesses/Challenges |
|---|--|
| <ul style="list-style-type: none"> • Significant reduction in HIV/AIDS. • Significant reduction of infant mortality and child mortality. • Significant reduction of maternal mortality. • Significant increase in immunization coverage. • Significant increase in access to health services in urban areas. | <ul style="list-style-type: none"> • Low per capita spending on health. • Embryonic social health insurance. • Continuing high levels of child malnutrition. • Large disparities remain between urban and rural areas, especially for the indicators of child mortality, births attended by skilled personnel and births occurring in a health facility. • Poor people must pay most health-related costs out of pocket, contributing to deepening their poverty, through depletion of savings or sale of assets. |

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- World Bank Cambodia Poverty Assessment 2006.

¹⁶⁵ CMDG Report 2011.

¹⁶⁶ NSDP MTR 2011.



Thematic Chapter 3.8

Education

Progress

Progress on policy and institutional framework

The Ministry of Education, Youth and Sport (MoEYS) has four levels of authority: the central, the provincial/municipal (24 offices in charge of secondary schools - lycées), the district (193 district education offices in charge of lower secondary schools - collèges) and the school levels.

The Ministry of Women's Affairs (MoWA) is one of the primary partners of MoEYS in providing early childhood care and education.

The National Training Board oversees technical vocational education and training under the Ministry of Labour and Vocational Training.

The Accreditation Committee of Cambodia was created in 2003 to administer accreditation to all higher education institutions¹⁶⁷.

Table 16: Multilateral agreements, laws and policies on Education

| | Adherence to multilateral agreements related to sustainable development | Laws and policies related to sustainable development | Planning for sustainable development |
|-------------|--|---|---|
| 2007 | | Education Law | |
| 2008 | | | Education Strategic Plan 2009-2013 |
| 2010 | | | MOEYS's Medium-Term Capacity Development Plan 2011-2013 |



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¹⁶⁷ UNESCO World Data on Education 2010-2011



Progress on national indicators

National targets for education are defined in CMDG2 (primary education) and in the NSDP update 2009-2013 (secondary education)

Table 17: CMDGs on Education 1998-2010

| Target | | Baseline year | 2009/10 | Target 2015 |
|---|--------|--------------------------------|-------------------------------|-------------|
| CMDG 2: Achieve universal primary education | | | | |
| Increase literacy rate in population 15-24 years | Total | 62.8% in 1998 or 82% (in 1999) | 87.1% ¹⁶⁸ | 100% |
| | Female | 55.4% in 1998 ¹⁶⁹ | 85.8% ¹⁷⁰ | 100% |
| Improving net enrolment ratio in primary education | | 87% (in 2001) | 95.2% ¹⁷¹ | 100% |
| | Girls | 80.8% in 2000 | 94.6% ¹⁷² | 100% |
| Improving the ratio of girls to boys in primary education | | 87% in 2001 ¹⁷³ | | 100% |
| Primary school completion rate | | | 85.3% (2010 in NSDP MTR 2011) | |

Literacy rate

Literacy rates in Cambodia have seen a significant increase over the past decade, increasing by 40 percent, (from 62.8 percent in 1998¹⁷⁴ to 87.1 percent in 2009).

The 100 percent target for literacy for the age-group 15-24 is largely on track. However, while female literacy has increased exponentially in the past decade (by 55 percent - from 55.4 percent in 1998 to 85.8 percent in 2009), female literacy lags behind that of males (88.3 percent)¹⁷⁵. The disparities are even larger for women aged 25 and above, of which only 68 percent are literate compared to 82 percent of men^{176,177}.

¹⁶⁸ CSES 2009 in CMDG Report 2011.

¹⁶⁹ CIPS 2004.

¹⁷⁰ CSES 2009 in CMDG Report 2011.

¹⁷¹ MoEYS/NIS in NSDP MTR 2011.

¹⁷² NSDP MTR 2011.

¹⁷³ Original 2003 CMDGs defined the baseline year as 2001.

¹⁷⁴ NIS, Cambodia Inter-Censal Population Survey (CIPS) 2004.

¹⁷⁵ CMDG Report 2011.

¹⁷⁶ Continued high levels of illiteracy were identified as a development challenge for Cambodia in the National Dialogue on Rio+20.

Primary education

Cambodia has seen a significant increase in its net enrolment rates in primary education over the last decade. Between 2001 and 2010, the rate increased from 87 percent to 95.2¹⁷⁸ percent. However, the increase was slower than expected as the original target of 100 percent was originally set for 2010. Enrolment of girls has increased significantly (by 17 percent) from 80.8 percent in 2000 to 94.6 percent in 2010, only one percentage point lower than for boys. However, the primary school level completion rate (currently at 85.3 percent) needs additional effort to reach 100 percent by 2013, the NSDP goal.

The difference in enrolment and completion rates can be explained by drop-out and repetition rates, of which the ratio exceeds 10 percent, with rural areas having a drop-out ratio twice that of urban areas (11.3 versus 5.6 respectively)¹⁷⁹.

¹⁷⁷ CSES 2009, NIS.

¹⁷⁸ MoEYS/NIS in NSDP MTR 2011.

¹⁷⁹ CMDG Report 2011.



The main problem appears to be at Grade 1 level, where the dropout is about nine percent (CMDG 2015 target is less than 5 percent) and repetition rate is almost 13 percent (CMDG 2015 target is less than 10 percent). The completion rates are accordingly lower¹⁸⁰. It is estimated that about half of all adult Cambodians aged 25 and over have either no schooling or dropped out before completing primary education¹⁸¹.

Secondary education

Significant progress has been achieved by Cambodia in increasing enrolment in lower secondary education, the gross enrolment rate having increased by 121 percent since 1998 (from 26.5 in 1998 to 58.5 percent in 2010)¹⁸². However, this remains far from the ambitious NSDP target of achieving 100 percent gross enrolment rates by 2015. Also, completion rates for Grade 9 dropped by half (to 44.4 percent) compared to completion rates for Grade 6. Note that there was a drop in gross enrolment in lower secondary education in 2009, which is expected to reach 2008 levels only in 2011.

While the ratio of females attending school at the upper secondary school level increased from 80.3 percent in 2004 to 83.3 percent in 2009, the target of 100 percent ratio by 2015 may not be reached unless efforts are made to bridge this gap¹⁸³. The gender gap in completion of Grade 9 is gradually closing, reducing by 3.5 percentage points between 2008 and 2010, although overall levels still remain low (under 50 percent).

Gender and urban/rural inequalities remain stark. It is estimated that only 10 percent of rural women aged 25 and over have completed lower secondary schooling¹⁸⁴.

Tertiary education

Only 5 percent of those in the tertiary education age range are enrolled in tertiary education in Cambodia.

Key issues and challenges

Primary education

- **Impact of income disparities on education.** While significant progress has been achieved in increasing enrolment in primary schools, lower than expected completion rates in both primary and secondary are particularly pronounced among poor and disadvantaged children, who are often required by their families to work.

Secondary education

- **High drop-out and repetition rates.** While progress has been achieved in increasing enrolment and completion rates in primary education, and in closing the gender gap, the major challenge in Cambodia's education system lies in enrolling and retaining students beyond the primary level, with repetition and drop-out rates remaining high.

- **Shortage of resources.** The shortage of basic school facilities, textbooks and trained teachers, especially at secondary level in newly established institutions and in remote areas, constitute major challenges to access and quality of education in Cambodia. In 2007, the number of students per teacher averaged 51 in primary school and 29 in secondary school, giving Cambodia one of the highest pupil-teacher ratios in Asia and the Pacific¹⁸⁵.

- **Standards enforcement.** Standards for measuring teachers' performance and evaluating students' results are not systematically followed, affecting the quality of education¹⁸⁶.

Tertiary education

- **Mismatch between demands of the economy and student demands**¹⁸⁷. Tertiary education is thought to concentrate too heavily on subjects related to business administration (Accounting, Finance and Management) at the expense of Science and Engineering. This is partly based on student demand, as the low level of

¹⁸⁰ CMDG Report 2011.

¹⁸¹ ADB Poverty Analysis Country Partnership Strategy: Cambodia, 2011–2013.

¹⁸² NSDP MTR 2011.

¹⁸³ CMDG Report 2011

¹⁸⁴ ADB Poverty Analysis Country Partnership Strategy: Cambodia, 2011–2013.

¹⁸⁵ ADB Country Poverty Analysis 2011.

¹⁸⁶ This was identified by one of the breakout groups in the National Dialogue on Rio+20 as one of Cambodia's weaknesses and also in the presentation by MoF.

¹⁸⁷ This was identified by one of the breakout groups in the National Dialogue on Rio+20 as one of Cambodia's weaknesses.



mathematics teaching leaves students with a weak base in Mathematics. Thus many students do not pursue Science, Engineering and Mathematics at the university level. Other key economic sectors that are under-represented at the tertiary level are Education, Health, Agriculture and Industry.

- **Low quality tertiary education.** Higher education in Cambodia lacks an adequate certification and accreditation system to ensure quality control of private, as well as public, education providers. There is an agency which does this job, but it needs to be staffed by recognized academics (not officials, as at present), with international participation in the early years.

Cross-cutting issues

- The Education Law and Organic Law need to be complemented by additional regulations in order to strengthen the legal framework for education¹⁸⁸.

- Establish a pedagogical research institute to develop relevant education indicators and monitor the quality of the Cambodian education system¹⁸⁹.

- The link between educational planning and budgeting remains weak and requires strengthening.

- Human resource capacities for managing the education sector at the sub-national level remain weak and need to be strengthened.

- The delegation of the key responsibilities of education, youth and sports at city and district/khan levels is yet to be achieved, due to insufficient capacity at sub-national government level.

- The transfer of roles and sub-roles of the education sector to sub-national administrations is still at the planning stage.

Policy recommendations¹⁹⁰

- Implement D&D reform in the education sector, build capacity of Provincial Offices of Education

¹⁸⁸NSDP MTR 2011.

¹⁸⁹ Recommendation made in National Dialogue on Rio+20.

¹⁹⁰ Strengthening Cambodia's education system was identified by two of the breakout groups in the National Dialogue on Rio+20 as one of key policy recommendations.

(POE) and District Offices of Education (DOE), to better respond to local education needs¹⁹¹.

- Set up an Inter-ministerial Commission to examine options in education under the leadership of the Ministry of Education. This commission could include professionals from other ministries to ensure coverage of the multi-disciplinary nature of the subject¹⁹².

- Improve links between planning and budgeting in the education sector¹⁹³.

- Increase public education expenditures to ensure that the incidence of schooling expenses do not fall on children and their families (especially the poor)¹⁹⁴.

- Strengthen capacities of the national and sub-national management staff in the education sector¹⁹⁵.

- Bring into operation the MOEYS Medium-Term Capacity Development Plan 2011-2013¹⁹⁶.

- Implement the general education curriculum development policy 2010-2014¹⁹⁷.

- Promote higher, technical and vocation educational¹⁹⁸.

- Expand and improve ministry-level information management¹⁹⁹.

- Expand early childhood education²⁰⁰.

- Standardization of national assessment of student achievements in Grades 3, 6 and 9²⁰¹.

- Implement accelerated learning programs for special targets groups²⁰².

¹⁹¹NSDP MTR 2011.

¹⁹²NSDP MTR 2011.

¹⁹³NSDP MTR 2011.

¹⁹⁴NSDP MTR 2011.

¹⁹⁵NSDP MTR 2011.

¹⁹⁶NSDP MTR 2011.

¹⁹⁷NSDP MTR 2011.

¹⁹⁸NSDP MTR 2011.

¹⁹⁹NSDP MTR 2011.

²⁰⁰NSDP MTR 2011.

²⁰¹NSDP MTR 2011.

²⁰²NSDP MTR 2011.



- Provide more upper secondary education scholarships²⁰³.
- Construct dormitories to retain girls in secondary school²⁰⁴.
- Formulate capacity of MoEYS development master plan²⁰⁵.
- Strengthen teaching skills in mathematics and science²⁰⁶.

Tertiary education

- Complete regulations for Masters' Degree Programs²⁰⁷.
- Reform tertiary education to better respond to needs of the economy (and to promote technological and scientific innovation)²⁰⁸.
- Make functional relevant institutions in promoting an accreditation system at tertiary level²⁰⁹.
- Develop effective technology education institutions²¹⁰

Summary of Opportunities and Challenges

| Opportunities/Strengths | Challenges/Weaknesses |
|--|---|
| <ul style="list-style-type: none"> • Significant increase in literacy rates, including females. • Significant increase in net enrolment rates in primary education in both urban and rural areas, including for girls. • Significant increase in gross enrolment rate in secondary education. | <ul style="list-style-type: none"> • Literacy gap remains between men and women, especially for women aged 25 and above. • High drop-out and repetition rates in primary school, especially in rural areas, leading to low completion rates. • Enrolling and retaining students beyond the primary level, as enrolment rates in secondary schools still remain low and completion rates even lower. • Mismatch between demands of the economy and student demands in tertiary education. • Weak enforcement of standards lowers the quality of primary, secondary and tertiary education. • Tertiary education remains out of reach for the large majority of the population. |

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²⁰³ NSDP MTR 2011.
²⁰⁴ NSDP MTR 2011.
²⁰⁵ NSDP MTR 2011.
²⁰⁶ NSDP MTR 2011.

²⁰⁷ NSDP MTR 2011.
²⁰⁸ Recommendation made in National Dialogue on Rio+20; NSDP MTR 2011.
²⁰⁹ Recommendation made in National Dialogue on Rio+20.
²¹⁰ Recommendation made in National Dialogue on Rio+20.



Thematic 3.9

Mine Action

Introduction

Cambodia's landmine and ERW situation is the result of a sequence of internal and regional conflicts that affected the country from the mid 1960s until the end of 1998. Landmines and explosive remnants of war (ERWs) were planted and scattered throughout the country during the Lon Nol regime in 1970 to 1975, the Khmer Rouge regime between 1975 and 1979, and during the civil war that raged between 1979 and 1998. In addition to landmine/ERW contamination in the North West provinces, more than 2.75 million tons of bombs were dropped on Cambodia's Central and Eastern provinces, leaving a large number of unexploded ordnances, including cluster munitions (CMAA 2011).

Much progress has been made in the mine action sector in Cambodia over the past 20 years, both in terms of establishing a solid policy and institutional framework for mine action, and achievements in mine detection and clearance, and reduction of casualties. However, while important progress has been made, there are significant challenges ahead, with large areas still contaminated²¹¹, representing a daily threat to people living in those areas, preventing access to agricultural land and constituting a serious impediment to sustainable socio-economic development.

Progress

Progress on policy and institutional framework

There is now a solid legal policy and institutional framework for mine action in Cambodia. In 2004, a ninth Cambodia Millennium Development Goal (CMDG 9) was established on Demining and Survivor Assistance, reflecting the importance of demining to the national development goals of Cambodia. In 2009, given the size of the demining challenge in Cambodia, the RGC requested a 10-year extension (until 2019) to fulfil its Article 5 mine clearance obligation under the anti-personnel mine ban convention (APMBC).

In 2004, sub-decree No. 70 on "Socio-Economic Management of Mine Clearance Operations" was approved, after which Guidelines on "Socio-Economic Management of Mine Clearance Operations" were developed in 2005. These were reviewed in 2010-2011 and will be implemented starting in 2012. In 2005, the National Assembly approved the Law on the Management of Weapons, Explosives and Ammunitions. In 2007, Cambodia signed the UN Convention on the Rights of Persons with Disabilities and its Optional Protocol, and in 2009 the Law on the Protection and Promotion of the Rights of Persons with Disabilities was approved. A National Plan of Action (2009-2011) for Persons with Disabilities, including Landmine/ERW survivors was adopted in 2009, to ensure the implementation of the law.

In November 2010, the National Mine Action Strategy (NMAS) (2010-2019) was endorsed by the RGC, covering the 10-year Article 5 Extension Request period, as well as two cycles of the NSDP (2009-2013; 2014-2018) and CMDG 9. The NMAS aims to achieve the Article 5 Extension Request, reduce casualties, and work towards eliminating the threats posed by landmines and ERW in Cambodia, so as to contribute to poverty reduction and economic growth. Mine action is also a priority focus in the Rectangular Strategy Phase II and the NSDP 2009-2013.

The institutional framework for mine action is divided into a variety of actors and agencies with different functions. In 2000, the RGC established the Cambodian Mine Action and Victim Assistance Authority (CMAA), presided over by Cambodian Prime Minister. The CMAA is mandated to regulate, coordinate and monitor mine action activities in Cambodia. CMAA's Secretariat manages the day-to-day operations and coordinates the different partners involved in mine action in Cambodia, including development partners, line ministries, demining operators, mine risk education operators, victim assistance operators, the Provincial Mine Action Committee (PMAC) and the Mine Action Planning Unit (MAPU).

²¹¹The areas contaminated by landmines are mainly in the North and North West of the country bordering Thailand in the provinces of Battambang, BanteayMeanchey, OddarMeanchey and PreahVihear. The East is also affected, but to a lesser extent and mainly by ERW.



CMAA has developed a regulatory framework and a system for accrediting, licensing and monitoring demining operators. There are currently four humanitarian demining operators²¹² in Cambodia in addition to the Royal Cambodian Armed Forces (RCAF). The Ministry of Social Affairs, Veterans and Youth Rehabilitation (MoSVY) and the Disability

Action Council (DAC) are responsible for victim assistance. Numerous NGOs provide support to victims in the form of emergency assistance, physical rehabilitation, community-based rehabilitation, income-generating activities, vocational training and social reintegration of Persons with Disabilities²¹³.



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²¹² CMAA, the Halo Trust, the Mines Advisory Group and the Cambodia Self Help Demining.

²¹³ CMDG Report 2010.

**Table 18: Multilateral agreements, laws and policies on Mine Action**

| | <i>Adherence to multilateral agreements related to sustainable development</i> | <i>Laws and policies related to sustainable development</i> | <i>Planning for sustainable development</i> | <i>Institutional Framework for Sustainable Development</i> |
|-------------|---|---|--|---|
| 2000 | Became a State Party to APMBBC | | | Establishment of Cambodian Mine Action and Victim Assistance Authority (CMAA) |
| 2004 | | 9 th CMDG on demining established. Sub-decree No. 70 on Socio-Economic Management of Mine Clearance Operations. | | |
| 2005 | | Law on the Management of Weapons, Explosives and Ammunitions. Guidelines on Socio-Economic Management of Mine Clearance Operations. | | |
| 2007 | Signature of UN Convention on the Rights of Persons with Disabilities and its Optional Protocol | | | |
| 2009 | Request for ten-year extension (until 2019) to fulfil Article 5 obligation. | Law on the Protection and Promotion of the Rights of Persons with Disabilities. | National Plan of Action (2009-2011) for Persons with Disabilities, including Landmine/ERW survivors. | |
| 2010 | | Review of guidelines on "Socio-Economic Management of Mine Clearance Operations". National Mine Action Strategy (NMAS) (2010-2019). | | |



Progress on national indicators

One of the challenges faced by mine action stakeholders in Cambodia is to determine the exact location and extent of remaining anti-personnel landmines and ERW contamination. A baseline survey, initiated in 2009 to quantify and locate the extent of the remaining contamination, is expected to be finalized in 2012. Therefore, while quantitative targets were originally established for CMDG 9 to be reached by 2015, these will be revised when the survey has been finalized. Overall progress can be measured from 1992 onwards.

Decrease in the number of victims of mines/ERW

Casualties from landmines have dropped by 91 percent in the past 18 years, from 2,427 in 1991 to 211 in 2011²¹⁴. Although there has been an overall decreasing trend, certain periods have seen increases (from 2,189 in 1992 to 4,320 in 1996 and from 243 in 2009 to 286 in 2010, due to separate accidents)²¹⁵. Worldwide, Cambodia remains one of the countries with the highest landmine accident rate and ERW²¹⁶. However, provided no large incidents happen and that the clearance rate continues to progress, the number of casualties should gradually decrease. It is estimated that 124 of the country's 193 districts are affected by landmines. The region most heavily affected by landmines, and where almost all the landmine accidents occur, is in the North West of the country, in 23 districts bordering Thailand. The East is also affected, but to a lesser extent and mainly by ERW²¹⁷.

Table 19: Landmine/ERW casualties by country in 2010

| Country | Nr of casualties |
|-------------|------------------|
| Afghanistan | 1,211 |
| Pakistan | 394 |
| Colombia | 512 |
| Cambodia | 286 |

International Campaign to Ban Landmines 2010

Increase in the cumulated areas cleared of mines/ERW and percentage of land areas cleared of mines/ERW

Approximately 63,962²¹⁸ hectares of contaminated land were cleared between 1992 and 2010, which represents around 59 percent of the estimated total contaminated land²¹⁹. NMAAS estimates that another 64,880 hectares will require full clearance over the next 12 to 15 years, but this number is subject to change based on the results of the baseline survey.

Table 20: Progress on CMDG indicators 1992-2010

| Indicator | 1992 | 1996 | 2010 | Target 2019 |
|--|-------|----------|--------|-------------|
| Annual victims caused by mines/ERW | 2,189 | 4,320 | 286 | <100 |
| Total cumulated areas cleared of mines/ERW (in ha) | 12.39 | 4,917.23 | 63,962 | 111,754 |
| Percentage of land areas cleared of mines/ERW | 0.01% | 4.54% | 59% | 103.08% |

CMAA estimates in CMDG 2011 Report

Note: The comparison number is 108,410 ha

Key issues and challenges²²⁰

- **Large areas remain contaminated.** While significant progress has been made in terms of clearing landmines and ERW and reducing the number of casualties, large areas remain contaminated and Cambodia still has a relatively high number of landmine/ERW casualties per year compared to other countries.

- **Link between demining and sustainable development²²¹.** Continued clearance of landmines and ERW are inextricably linked to the sustainable

²¹⁴CMVIS 2011 Annual Report.

²¹⁵CMAA in CMDG 2010 Report.

²¹⁶ It is estimated that 56 countries still have landmines that cause casualties. Of these, Cambodia ranks fourth in the annual number of landmine/ERW casualties.

²¹⁷Information received from the US Department of State (in NMAAS).

²¹⁸NSDP MTR 2011.

²¹⁹CMAA in CMDG Report 2011.

²²⁰ These have been extracted from the CMDG 2010 and 2011 Reports as well as CMAA's side event at the 11th Meeting of States Parties to the Anti-Personnel Mine Ban Treaty on addressing the landmine contamination in the framework of international obligations (Article 5) and Millennium Development Goals (CMDG 9) held on 29 November 2011 in Phnom Penh.

²²¹ Demining was seen as posing a major challenge to Cambodia's sustainable socio-economic development by two of the four breakout groups during the National Dialogue on Rio+20.



development of Cambodia, as they constitute a daily threat to people living in rural areas and prevent access to agricultural land. Since 1979, 80 percent of landmine victims (which represent around 80 percent of all casualties) were men, as they unknowingly entered into mine-contaminated areas to find land for resettlement, agriculture or other livelihood activities²²². The release of land through clearance and the baseline survey will provide new access to agricultural land, a precious resource in Cambodia.

- **Access to the Northwest.** It is difficult to conduct mine clearance in the Northwest of Cambodia (due to the border tension with Thailand). The region is the one most heavily affected by landmines, and is where almost all landmine accidents occur.

- **Lack of accurate data on mine/ERW survivors.** The development of accurate data on services received by mine/ERW survivors, as distinguished from other persons with disabilities, is a major challenge which hinders policy formulation, setting targets and development of strategies and plans.

- **Funding gap.** Cambodia is facing a decrease in donor funding for mine action, as donor countries face financial crises and other countries currently at war (for example Afghanistan) receive higher priority. It is estimated that Cambodia will need an additional USD 450 million to achieve the NMA by 2019²²³.

- **Need for greater aid coordination.** Although progress has been achieved in aid coordination in the demining sector through the Technical Working Group on Mine Action and the signature of Partnership Principles²²⁴, projects funded by donors are still not fully coordinated, as different donors pursue their own projects, at times without adequate coordination with CMAA.

Policy recommendations²²⁵

- **The need for a comprehensive approach to mine action.** When mine action started in Cambodia, any approach was considered acceptable due to the humanitarian imperative. However, as the demining agenda moves from an emergency focus towards a longer-term development approach, a more integrated, comprehensive and harmonized approach is needed.

- **Need for greater aid coordination.** Further strengthen donor coordination in the mine action sector.

- **Promote national ownership.** Promote greater national ownership of the CMAA by:

- Adequately informing and consulting the agency about new and on-going projects;

- Using the NMA as a basis for all activities by development partners in the mine action sector.

- Using The Working Group on Mine Action as a forum for effective policy dialogue between the Government and development partners, for promoting information exchange in policy, for dialogue on operational aspects, and consultation on programs/projects.

- Develop a program-based approach to be implemented through the Technical Working Group, regarding mine action.

- **Need for more effective and efficient mine action.** The decline in resources for mine action in Cambodia requires more effective and efficient mine action, through full integration of mine clearance planning, with evolving development needs and integration of tools to enhance productivity and efficiency.

- **Resource mobilization.** Resources need to be mobilized to fill the funding gap for mine action.

²²²CMAA 2011.

²²³NSDP MTR 2011.

²²⁴Signed by the Governments of Australia, Canada, Germany, Norway, Ireland, the United Kingdom and the Government of Cambodia in April 2011.

²²⁵Provided during the side event to 11th Meeting of States Parties to the Anti-Personnel Mine Ban Treaty on 29 November, 2011, Phnom Penh.



Summary of opportunities and challenges

| Opportunities/Strengths | Challenges/Weaknesses |
|--|--|
| <ul style="list-style-type: none"> • Significant reduction of casualties from landmines/ERW. • Significant progress in mine clearance. • Significant progress in implementation of baseline survey to locate remaining contamination. | <ul style="list-style-type: none"> • The number of casualties from landmines/ERW remains one of the highest in the world. • Large areas remain contaminated preventing access to valuable agricultural land • Funding gap for mine action in the context of declining international resources for demining • Need for greater coordination between donors and CMAA |

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Thematic 3.10

Cultural Diversity

Progress

Progress on policy and institutional framework

Cambodia is a poly-ethnic state, containing ethnic groups as well as national minorities. Chams, Chinese and Vietnamese generally came to Cambodia through successive immigration waves throughout history. While these groups maintain elements of their ethnic heritage, they are linguistically and institutionally integrated to a considerable degree.

The Cambodian Constitution (1993) guarantees all Cambodians the same rights regardless of race, colour, language and religious belief. In its political platform for the third legislature of the national assembly, the Royal Government of Cambodia (RGC) acknowledged the importance of having a multi-cultural Cambodian society (Constitution article 31).

Cambodia became a signatory to seven international conventions:

- The UNESCO Convention for the Protection of Cultural Property in the Event of Armed Conflict adopted in 1954, and its first protocol
- The 1970 UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property
- The 1972 UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage adopted in Paris
- The UNESCO Convention on Underwater Cultural Heritage adopted in 2001
- The 2001 UNIDROIT Convention aimed at safeguarding the intangible cultural heritage of nations
- The 2003 UNESCO Convention for the safeguarding of Intangible Cultural Heritage
- The 2005 UNESCO Convention on the protection and promotion of the diversity of cultural expressions

In providing access to natural resources, Cambodia became a Party to the Convention on Biological Diversity in February 1995 that recognizes the role of indigenous peoples in the protection of biodiversity and genetic resources (Article 10 and 15).

Cambodia's Ministry of Culture and Fine Arts (MoCFA) was formally established by Decree No 62 ANKR-BK in October 1997²²⁶. The MoCFA is charged with overall responsibility for the development of culture and fine arts in Cambodia, for nurturing creativity and innovation and for promoting the diverse Cambodian cultural heritage. It does this by implementing policies for protecting, preserving and heightening the values of the national cultural heritage and other cultural properties of the Kingdom of Cambodia. The Ministry processes legislation for arts and culture and supervises and supports designated national cultural institutions and organizations.

The MoCFA has a National Cultural Centre, which also manages the Directorate of Cultural Development, and is responsible for cultural diffusion and cultural education. It seeks to enhance community awareness of traditional culture by researching and organizing exhibitions on traditions, customs and religious ceremonies at the National level in Cambodia and overseas. The Directorate is responsible for conducting research into the customs and traditions of the ethnic minority communities of Cambodia and organizes a number of annual traditional festivals.

The country protects all culture and citizens. Chapter VI of Cambodia's Constitution, "Education, Culture and Social Affairs", supports the inclusion of some social, economic and cultural rights, and the State has been entrusted with protecting and promoting them. Over time Cambodian citizens may

²²⁶ This agency existed in 1993 to coordinate works on culture and fine art.





evolve their own strategies to secure these rights, which are as important as civil and political rights. The Constitution also specifies the protection of traditional cultural expressions guaranteed by the State (Chapter VI "Education, Culture and Social Affairs", Article 69 (preservation and promotion of national culture and Khmer language, ancient monuments, artefacts and historic sites)). It also clearly refers to punishment for any offense affecting cultural artistic heritage (Chapter VI, Article 70).

The country passed Land Law in 2001. This law grants collective land ownership rights to indigenous communities, offering a unique chance for indigenous peoples in Cambodia to exercise their right to self-determined development (article 23-27).

The Interim Strategy of Land Policy Framework (2002) stipulates that government policy, as enshrined in the Land Law, states that indigenous communities shall be granted collective ownership rights to their land. The Land Law also recognizes the practice of shifting cultivation, as part of the traditional land management system of indigenous communities.

Forestry Law (2002) contains provision for community forestry to be officially recognized. The legal procedures and guidelines required for this are near completion. This offers indigenous and non-indigenous communities an opportunity to obtain user and management rights to forests in 15-year renewable intervals. The Protected Area Management Law (2008) applied a similar approach allowing local communities regardless of ethnicity to lease protected areas of land under the jurisdiction of the Ministry of Environment for up to 15 years, to manage in a sustainable manner.

The National Policy on Indigenous People (2009) and the National Policy on Registration and Right to Use of Land of Indigenous Communities in Cambodia (2009) should be mentioned as well, as they constitute positive acknowledgement of Indigenous People's rights. (Ministry of Rural Development, Department of Indigenous People Development).

The government has acknowledged the important role played by culture as a means to shape national identity, strengthen social cohesion and contribute to the economic development of Cambodia.

However, at the present stage, the capacity of the Government for the protection, preservation and development of the Cambodian cultural heritage is still limited due to a lack of sufficient financial and human resources. Special attention is being focused on the involvement and improvement of the conditions of local communities living within monumental complexes around the country.

The government recognizes the value of cultural protection of communities and associations of different ethnicities living in the country such as Chinese, Vietnamese, Islamic and hill tribes. After Cambodia's independence, the country classified the hill tribes as 'Khmer Loeu', the Chams as 'Khmer Islam', and members of the Khmer national minority in the Mekong Delta as 'Khmer Krom'. The groups were regarded as members of the ethnically defined Cambodian nation, while all other groups were excluded.

The recent passage of the *Law on Administrative Management of Communes/Sangkats* on 19th March 2001, known as the organic law, is a positive sign for promoting cultural diversity of various ethnic groups in terms of administration, contributing to poverty reduction and societal integration.

Progress on national indicators

The 2008 census put the population of Cambodia at 13.4 million with an average annual population growth rate of 1.54 percent. Ethnic groups are made up of: Cambodian 90 percent, Vietnamese 5 percent, Chinese 1 percent, and others 4 percent. There are small numbers of hill tribes, Cham, and Lao people. Religions in Cambodia are Theravada Buddhism 95 percent; Islam; Animism; Christian. Languages: Khmer (official) spoken by more than 95 percent of the population, while some French is still spoken in urban areas. English is increasingly popular as a second language. The 1998 Cambodian Population Census identified 17 different indigenous groups.

The largest ethnic group in Cambodia is the Khmers. Of the minority groups, the largest is Vietnamese. There are also a significant number of Chinese descendants who dominate the business community and indigenous minority groups of Phnong, Tampuon, Kreung, Jarai, Braoa, among others, who are collectively known as Khmer Loeu.



Minority groups living in the lowlands, often among or adjacent to Khmers, include Chinese, Vietnamese and Cham.

The Chinese, approximately 9 percent of the population, are one of the largest and most visible ethnic minorities in Cambodia with about 1,180,000 living in Cambodia. The Chinese in Cambodia belong to five major linguistic groups, the largest of which is the Teochiu accounting for about 60 percent, followed by the Cantonese (20 percent), the Hokkien (7 percent), and the Hakka and the Hainanese (4 percent each). Intermarriage between the Chinese and Khmers has been common, in which case they would often assimilate into mainstream Khmer society, retaining few Chinese customs. Much of the Chinese population dwindled under Pol Pot and during the Cambodian Civil War.

There are two distinct linguistic families in Cambodia. The main groups are the Austronesian speaking Jarai and the Austro-Asiatic (Mon-Khmer) speaking Brao, Kreung, Tampuan, Phnong, Stieng, Kui and Poar. Over half of the indigenous population is found in the north-eastern provinces of Ratanakiri and Mondulakiri, forming the majority of the population in both provinces. Information obtained from indigenous peoples' representatives and key informants show that indigenous peoples reside in 13 other provinces (NGO Forum, 2006, p.2). In total, 24 linguistic minorities have been identified all over

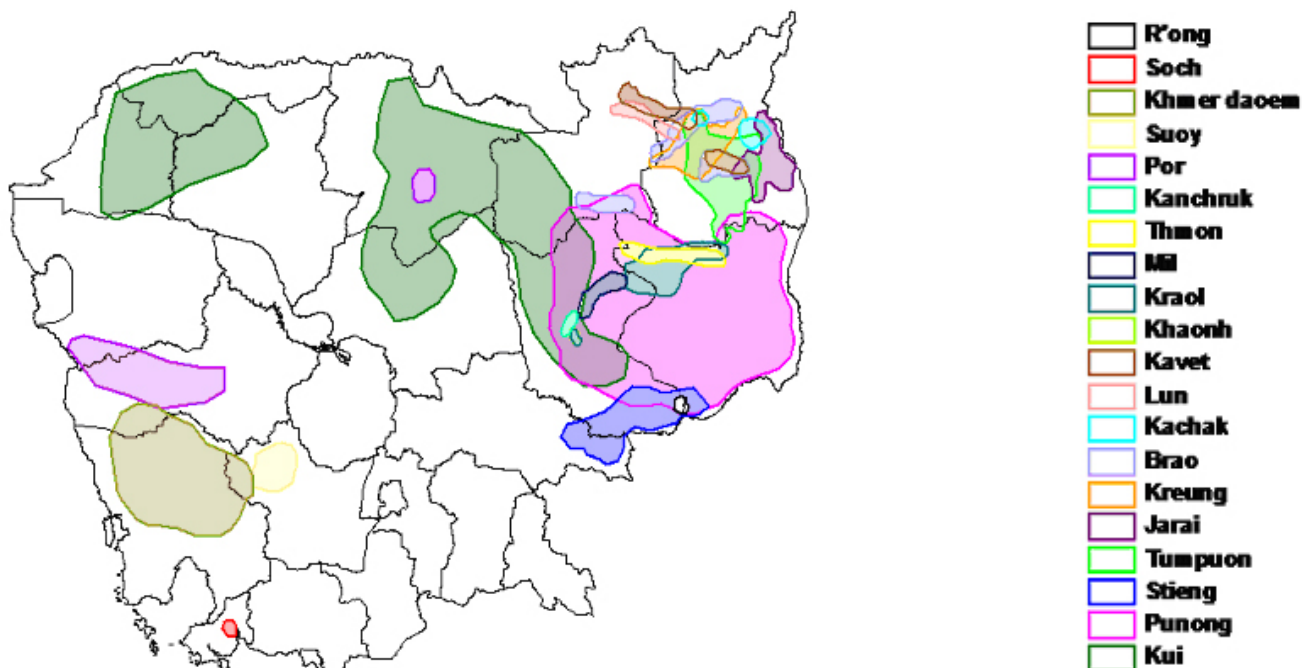
the Cambodian territory.

Cambodia has a diverse media including TV, radio, and newspapers. At present, beside Khmer language, the country has TV channels run in English, French, Mandarin and Vietnamese.

On 28th May 2010, the *National Program for Sub-National Democratic Development (2010–2019)*, (NP-SNDD or the "National Program") was approved. This program supported several activities in the north-east on poverty reduction, preserving cultural diversity of ethnic minorities such as Jarai, Tampuan, Phnong, Kroal, Mil, Stieng, Kouy, Lun, Kachak, Kavet and others, funded by several development partners. It aims to achieve democratic, inclusive and equitable development, improved access, quality and use of service delivery, and to contribute to poverty reduction.

The Government, in collaboration with UNESCO, is working toward enhancement of the links between cultural and biological diversity by the preservation of natural resources, through working closely with other sectors –namely, education and culture. This would strengthen science education, raise awareness about climate change and promote sustainable management of natural resources.

Figure 8: Indigenous peoples of Cambodia based on preliminary analysis of key informant interviews (NGO Forum, 2006)





Key issues and challenges

- **Current Policies towards Hill Tribes:** While a number of policies put pressure on Cambodia's indigenous peoples to adapt to the majority culture, not all relevant policies in Cambodia aim at highlanders' integration. Rather, the explicit objective of various public policies and initiatives is the accommodation and perpetuation of indigenous cultures, most notably the following: in 1994, the Royal Government created the Inter-Ministerial Committee for Highland Peoples' Development (IMC). With considerable support of various organizations – including ADB, UNDP and ILO – the IMC drafted a 'General Policy for Highland Peoples Development' (IMC 1997b).

- **Decentralization:** Implies upward accountability of the commune councils to the central government. Accordingly, the roles of the Council are twofold: the first set of roles is associated with local affairs, while the second involves the performance of agency functions for the central government.

- The process of registering communities' and minorities' land moves slowly, while the process of granting economic land concession for agro-plantation moves fast. This places a serious concern among communities and minorities in terms of access to natural resources and land rights.

Policy recommendations

- **Decentralization and Indigenous Rights.** Facilitate the effectiveness of indigenous institutions, with participation in them extending to formal institutions of local governance, where they adapt to the operations of the existing institutional environment. This is particularly interesting with regard to the very objective of decentralization in Cambodia, which is to promote participatory democracy and development on the local level. Translate the National Policies on Indigenous People and Land use by Indigenous People into actual regulations to be implemented (instead of mere principles).

- **Value of cultural diversity.** It is known that human activities are part of ecosystems and likewise, many ecosystems and species are dependent on human involvement. Human settlements have an obvious impact on the environment, this is why it is essential to better

know and understand how the different communities forming the Cambodian cultural mosaic interact with the natural resources. Further attention should be directed towards incorporating and respecting cultural aspects, values and perceptions in approaches, policies and development implementation programmes, to achieve sustainable development, including human well-being. Connections between culture and nature through considering local perceptions, knowledge and experiences of the people, are key to understanding and being able to preserve the environment, while moving towards sustainable development. It is recommended to support the survival of indigenous cultures and make these cultural resources available to all citizens. The highlanders' abundant knowledge regarding their natural environment can aid the development of more effective and sustainable models for natural resource management throughout Cambodia.

- **Decentralization and Deconcentration.** Continue to implement Decentralization and Deconcentration Program to promote the creation of participatory and effective institutions of local governance to benefit all cultures. Careful monitoring of the process of allocation of large-scale agro-industrial, mine and eco-tourism concessions in indigenous areas, in order to ensure the free, prior and informed consent of affected indigenous communities and compliance with international and national laws and standards.

- **Cultural Identity and Democratic Citizenship in Cambodia.** Attempt to integrate all citizens into common institutions operating in Khmer language and facilitate their democratic participation. Without protective measures, nation-building inevitably privileges members of the majority society and disadvantages members of cultural minorities.

- **Sustainable development.** Promote culturally sensitive and participative approach in any development project to ensure their sustainability. Have systematic cultural components in preliminary studies, impact evaluation studies etc.

- **Promote Cambodia's diverse cultural heritage.** As a component of responsible eco-tourism, promote more research on these topics and promote ethnographic museums to diversify tourism.



Summary of Opportunities and Challenges

| Opportunities/Strengths | Challenges/Weaknesses |
|---|---|
| <ul style="list-style-type: none"> Diversity of culture gives Cambodia a credit in terms of culture richness to attract more visitors, human resource and various developments. Several laws provide a special right for indigenous people to acquire land to use for up to 15 years and develop in a sustainable manner. This could increase efforts in carbon credit and REDD+ activities | <ul style="list-style-type: none"> A number of policies put pressure on Cambodia's indigenous peoples to adapt to the majority culture, not all relevant policies in Cambodia aim at highlanders' integration. Decentralization implies upward accountability of the commune councils to the central government. Accordingly, the roles of the Council are twofold: the first set of roles is associated with local affairs, while the second involves the performance of agency functions for the central government The culture of hill tribes, including their lifestyle and agricultural practices, is difficult to integrate with Khmer culture |

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Thematic Chapter 3.11

Water Resources & Sanitation

Access to Water & Sanitation

Progress

Progress on policy and institutional framework

Water and Sanitation Sector

Large-scale investments, driven largely by donor funding, have been made in the water and sanitation sector in Cambodia since 1989. Until 1999, assistance was primarily in the form of emergency relief, with a focus on the water supply sector. Since 2000, significant investments have also been made in the sanitation sector.

Significant progress has been made in the legislative, policy, planning and institutional framework for water and sanitation.

The policy guidelines for the water and sanitation sector are established in the National Policy for Water Supply and Sanitation, approved in 2003 and prepared by the Ministry of Industry, Mines and Energy (MIME) and the Ministry of Rural Development (MRD). The Policy is divided into three main parts: Urban Water Supply, Urban Sanitation, and Rural Water Supply and Sanitation. The National Policy was strengthened through the adoption of a National Water Resources Policy and National Drinking Water Quality Standards in 2003, and the adoption of a National Strategy for Rural Water Supply, Sanitation and Hygiene (NSRWSSH) for 2011-2025. The NSRWSSH consolidates revised institutional arrangements resulting from more recent national policies and strategies (Rectangular Strategy, the NSDP and the D&D Policy²²⁷) that supersede the RWSS in the 2003 National Policy.

An Institutional Development Plan for Water and Sanitation (2003-2012) has been developed to guide sector reform implementation and an updated Rural Water and Sanitation Sector investment plan (2010-2025) provides the basis for the implementation of water and sanitation reform in rural areas.

A number of governmental and non-governmental agencies at different levels are involved in the delivery of water and sanitation services in Cambodia. The MRD and its deconcentrated offices oversee water supply and sanitation in rural areas. Within the MRD, the Department of Rural Health Care (DRHC) is responsible for sanitation and hygiene promotion. A number of local and international NGOs also deliver water and sanitation services in rural areas.

In urban areas, the provision of drinking water and the regulation of private sector involvement in piped water systems is covered by MIME. MIME oversees the Phnom Penh Water Supply Authority (PPWSA), an autonomous government agency which produces and supplies clean water in Phnom Penh. MIME also covers rural water provided by private operators or public authorities capable of full cost recovery.

The Ministry of Public Works and Transport (MPWT) has the key mandate for urban drainage including sewage. The Ministry of Health (MoH) is in charge of public health issues, for example, the quality of public water supplies, and includes behavioural change as one of its six priority areas of work.

All these agencies are coordinated through a Technical Working Group on Rural Water Supply, Sanitation and Hygiene (TWG-RWSSH) formally established since 2007 to provide policy and strategy guidance for rural water supply, sanitation and hygiene. TWG-RWSSH, chaired by the Minister of Rural Development, consists of representatives of relevant ministries, development partners, international financial institutions and NGOs. To supplement sector coordination, the Water and Sanitation (WatSan) Sectoral Working Group, a loose coalition of water and sanitation stakeholders from government and NGOs, meets monthly.

Water Resources

Cambodia has made progress on establishing a policy framework for water resources in line with the global commitments under the World Summit on

²²⁷National Program for Sub-National Democratic Development (2010-2012 and 2013-2025).



Sustainable Development (WSSD) Johannesburg Plan of Implementation 2002. The Law on Water Resources was approved in 2007, building on the National Policy on Water Resources Management and the Strategic Plan on Water Resources Management and Development (2005-2008). The Water Law and its sub-decree are set within the framework of Integrated Water Resource Management, recognizing the different sectoral interests in water, while calling for greater coordination and the need to balance social and environmental considerations.

The Ministry of Water Resources and Meteorology (MoWRAM) was created in 1999 to bring major responsibilities for water resource management²²⁸ under one Government agency, strengthening inter-sectoral coordination. In 2007, the Tonle Sap Authority was established as a river basin organization. Under the auspices of MoWRAM, it brings together 36 local and provincial representatives from the six provinces around the Tonle Sap river basin, along with line Ministries with a remit related to water²²⁹.

Table 21: Multilateral agreements, laws and policies on Water and Sanitation

| | <i>Adherence to multilateral agreements related to sustainable development</i> | <i>Laws and policies related to sustainable development</i> | <i>Planning for sustainable development</i> |
|-------------|--|--|---|
| 2002 | | | Institutional Development Plan for Water and Sanitation (2003-2012) |
| 2003 | | National Policy for Water Supply and Sanitation National Policy on Water Resource Management National Drinking Water Quality Standards | |
| 2005 | | | Strategic Plan on WRM and Development (2005-2008) |
| 2007 | | Law on Water Resources | |
| 2009 | | | Rural Water and Sanitation Sector investment plan (2010-2025) |
| 2010 | | National Strategy for Rural Water Supply, Sanitation and Hygiene (NSRWSSH) (2011-2025) | |

²²⁸ Hydropower is under MIME.

²²⁹ Cambodia HDR 2011.



Progress on national indicators

National targets for access to water and sanitation were established in 2003 as part of the definition of the Cambodia Millennium Development Goals (MDGs). The goal was to halve the proportion of people without sustainable access to safe drinking water and sanitation by 2015. This goal is also integrated into the NSDP 2009-2013. The 2003 National Water Supply and Sanitation Policy further extends this goal to reach full coverage of the rural population by 2025.

Urban water and sanitation

The most significant progress has been achieved in access to urban sanitation, where coverage has increased from 56 percent in 1998 to 82 percent in 2009²³⁰, well exceeding the 2015 target of 74 percent.

While coverage of urban water supply has improved from 35 percent in 2004 to 54 percent in 2009²³¹, it is still far from the target of 80 percent in 2015.

Despite an increase in coverage and access to safe water and sanitation in urban areas, Cambodia continues to lag significantly behind other neighbouring countries (see Table 2)²³².

Rural water and sanitation

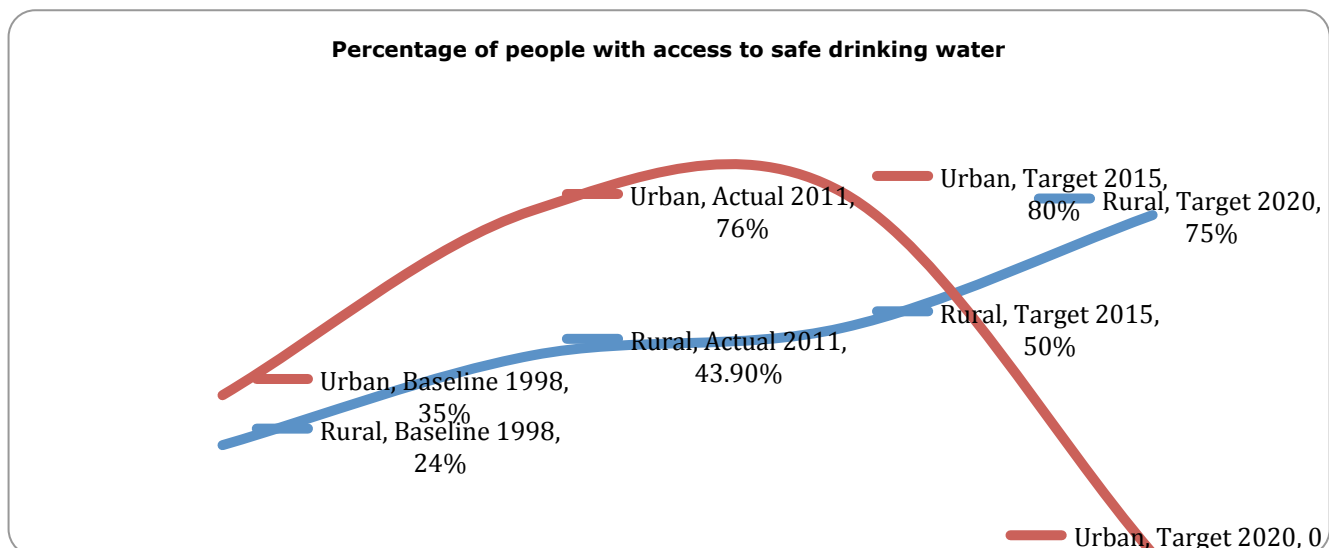
Significant progress has been achieved in expanding access to water and sanitation in rural areas since 1992. However, access to safe water and sanitation is far more limited in rural than in urban areas and over half of the population are still not covered by either.

The most significant expansion has been in rural sanitation, where coverage has quadrupled from 6 percent in 1998²³³ to 26 percent in 2011²³⁴. However, efforts need to be stepped up to reach the modest CMDG target of 33 percent for 2015.

Access to rural water has also seen significant improvements, increasing from 24 percent in 1998 to 43.9²³⁵ percent in 2011. It is estimated that the CMDG goal of reaching 50 percent of the rural population by 2015 will be achieved if efforts are sustained. However, the goal is seen by many as too modest²³⁶.

Similar to the situation in the urban sector, despite significant progress in increasing coverage to safe water and sanitation in rural areas, Cambodia continues to lag significantly behind other neighbouring countries, except for Lao which has a lower coverage of safe water (see table 2).

Figure 1: Progress on CMDG indicators for access to safe water 1998-2011



²³⁰CMDG Report 2010.

²³¹ The progress in access to urban water is difficult to ascertain as there are no figures prior to 2004 and the baseline used a different methodology from the target. Hence, the target is in the process of being revised.

²³² Compared to other South East Asian countries, Cambodia has the lowest coverage of urban sanitation and is on a par with Myanmar with lowest coverage of safe water.

²³³ The baseline year for measuring progress in access to water and sanitation is 1998, as there is no reliable data prior to that.

²³⁴ The baseline is provided in the CMDG 2010 Report and the 2011 figure is provided in NSDP MTR 2011.

²³⁵ The baseline is provided in the CMDG 2010 Report and the 2011 figure is provided in NSDP MTR 2011.

²³⁶CMDG Report 2011.



Figure 2: Progress on CMDG indicators for access to sanitation 1998-2011

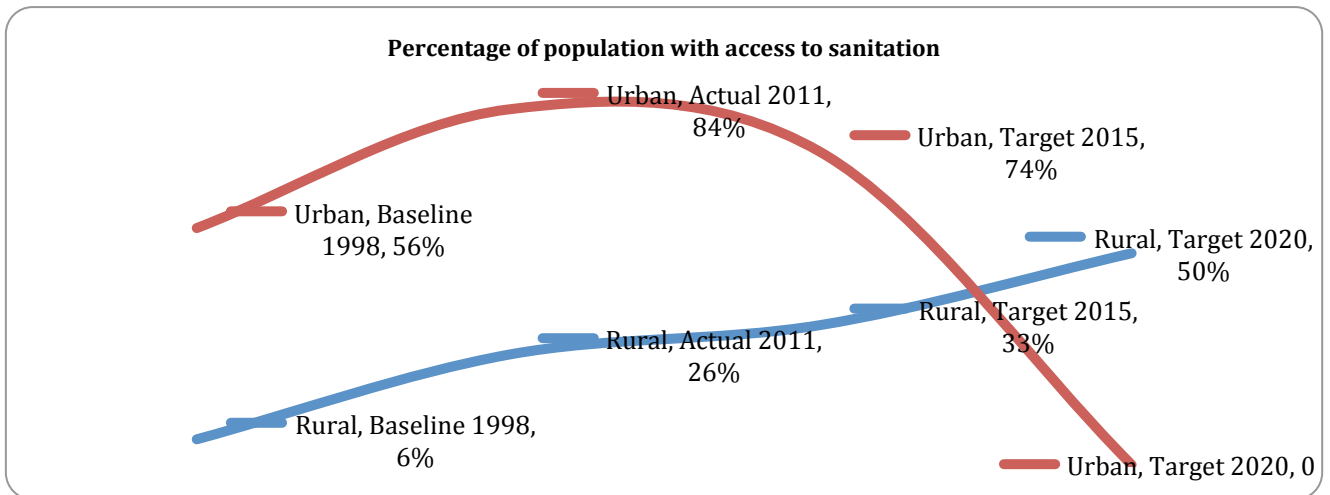


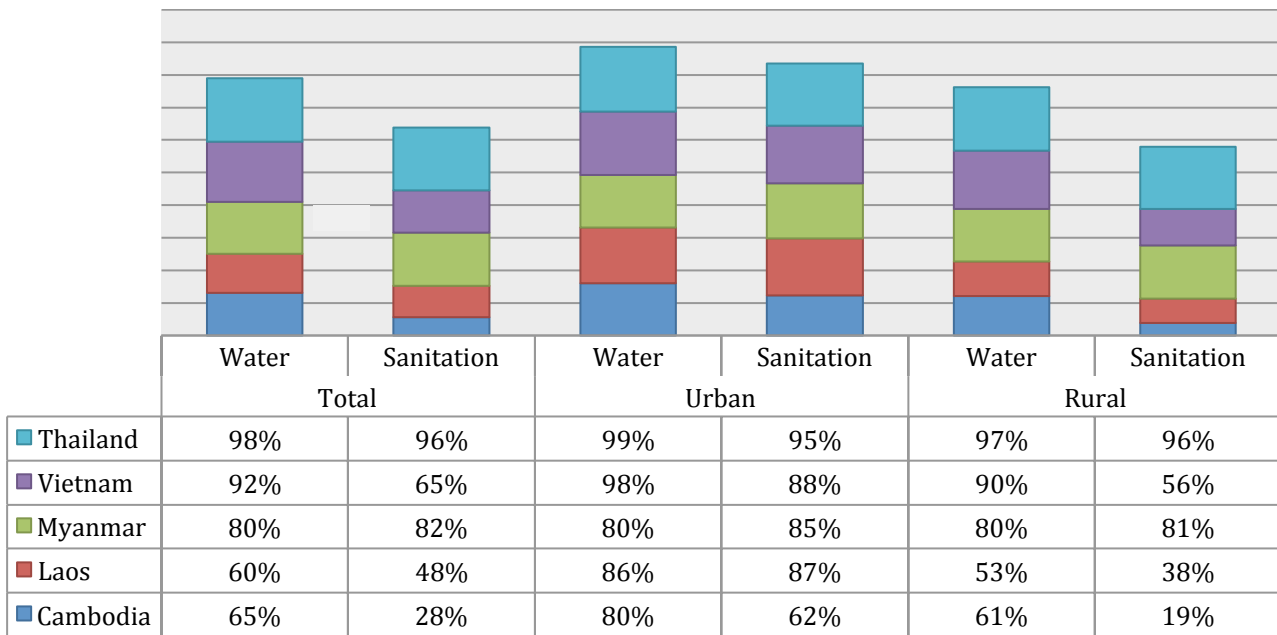
Table 22: CMDGs on Water and Sanitation 1998-2010

| Sector indicators | 1998 | Target | | |
|---|------|--------|------|------|
| | | 2005 | 2010 | 2015 |
| Proportion of rural population with access to safe water | 24% | 30% | 40% | 50% |
| Proportion of urban population with access to safe water | 60% | 67% | 74% | 80% |
| Proportion of rural population with access to improved sanitation | 8.6% | 12% | 20% | 30% |
| Proportion of urban population with access to improved sanitation | 49% | 59% | 67% | 74% |





Figure 3: Regional comparisons on access to water and sanitation 2006



Water Resources

The Cambodian hydrological system is dominated by the Mekong river and Tonle Sap Great Lake. Tonle Sap is the largest freshwater lake in Southeast Asia. It swells to cover 12,000 square km in the wet season when the Mekong river flows into it. The flow reverses in the dry season, and a large volume of water drains out of the lake and into the Mekong river, causing the lake level to fall by as much as nine meters. This annual cycle of inflow and outflow creates spawning grounds for fish and a fertile wetland known as the “flooded forest”²³⁷.

The Tonle Sap has provided income and nourishment to Cambodians for generations. Ironically, it is now among the country’s poorest regions. The lake and its rich resources are under threat from overpopulation, overfishing, illegal fishing, illegal logging, conversion of forest to farmland, pollution, and the possible impacts of climate change.

Water resources are central to two of the pillars of economic development in Cambodia: the energy sector, through the promotion of hydropower, and agricultural development, through the expansion of irrigation. But water is also fundamental to the

basics of human well-being and health. The core challenge of water resource management in Cambodia is access and distribution (CHDR 2011).

While the total surface of arable land under irrigation has been expanding to 25,000 ha per year thanks to government support, Cambodia has one of the lowest proportions of arable land under irrigation in the region (20 percent)²³⁸. This makes the agriculture sector particularly vulnerable to any change in rainfall patterns²³⁹. Lack of access to irrigation is identified as the major constraint to improving rice production in Cambodia. Most rural households rely heavily on subsistence agriculture for their livelihoods, especially rice, which accounts for 90 percent of total cultivated area and 80 percent of agricultural labour input.

Fisheries

Most fish caught in Cambodia are from natural capture fisheries. Cambodia is a country with globally significant freshwater fisheries including the Mekong river and the Tonle Sap. The latter accounts for 60 percent of total fish production²⁴⁰.

Fisheries provide full- or part-time employment for two to four million people, and contribute

²³⁷Cambodia HDR 2011; EU CEP 2011.

²³⁸ 2005 figure in CDRI 2011.

²³⁹ UNCDF 2010.

²⁴⁰ EU CEP 2011.



significantly to domestic food security. It is estimated that one-quarter of the poor depend on fishery and forest products for over one-half of their income, and on average, fishery and forest products account for one-quarter of poor households' income²⁴¹. However, access to this common property is becoming increasingly limited and there is alarming evidence of a significant decline in the quantity and quality of fish stocks²⁴². Data show that fish catch rates declined from 196 tons per fishery in 1995, to 116 in 2008.

There has been a policy shift towards recognizing the importance of common property resources in rural livelihood and poverty reduction, for example, the promotion of fishery communities (Forestry Communities and Community Protected Areas for forest sector) and communal land registration for indigenous people.

The fisheries sector remains key for food security, nutrition and economic development for the people and the country. The current master plan on Fishing for the Future 2010-2019 lays out three indicators:

- **Wild fish capture production** is stabilized and sustained at not more than 500,000 tons per year
- **Rice field fish production** is increased by 15 percent annually, to reach 500,000 tons per year by 2019
- **Aquaculture production** is increased by 15 percent (50,000 t) annually, to reach 185,000 tons per year by 2019

Key issues and challenges²⁴³

The main issues and challenges in the water and sanitation sector relate to the low coverage of water and sanitation services in rural areas. This section is therefore focused mainly on the RWSS sector:

- **Insufficient financial resources to RWSS sector.** Until 2012, the Government has relied on donor funding for all new investments in the rural water and sanitation sector (RWSS). While significant, these funds have not been able to meet the total funding needs of the sector, which are mainly the lack of piped water supply in rural areas and the high installation costs linked to such investments. A

²⁴¹World Bank, Cambodia Poverty Assessment 2006.

²⁴²UNCDF 2010.

²⁴³From the National Strategy for Rural Water Supply, Sanitation and Hygiene 2011-2025 and UNDP, UNICEF, UNESCO Report on Improving Local Service Delivery to achieve the MDGs in Asia: Water and Sanitation Sector in Cambodia.

National Water and Sanitation Sector Financing Strategy, approved in 2012, estimates that a significant funding gap remains to reach water and sanitation targets in rural areas. The challenge will be to ensure that foreign funds and national resources will be able to cover the financial investment needs of the sector, given that private sector investment in this area remains low.

- **Institutional framework and capacity constraints.** Considerable uncertainty remains about the roles and responsibilities of the various actors involved in rural water supply and sanitation, and about new structural arrangements under the evolving process of decentralization and deconcentration (D&D) in Cambodia. Insufficient or weak coordination between different government departments and organizations also needs to be addressed. Human resource capacities remain weak, affecting the effective planning and delivery of services in rural areas, and sector legislation and regulation lacks adequate enforcement, affecting the adequate monitoring and control of water quality.

- **Low quality installations and rural poverty limits service delivery and maintenance of water services in rural areas.** Widespread poverty in rural areas limits cost recovery efforts for maintaining existing levels of water service, or implementing upgrades. Inappropriate choices of technology, poor workmanship and low quality of materials have led to low levels of performance and durability of rural water supply installations. As a result, observations indicate that a significant number of wells in rural Cambodia are no longer used for drinking water purposes (or are completely non-functional because of pump breakdowns)²⁴⁴.

- **Limited private sector participation.** The participation of the private sector is limited due to a number of factors, including a lack of access to credit, investment risk, lack of business skills, unfair competition and a weak regulatory system.

- **Technological limitations.** There are few options for water supply, particularly in drought-prone areas. With sanitation, there are very few low-cost latrine designs that would allow the poorest people to afford one. Until now, there have been no

²⁴⁴DANIDA, 2010.



solutions for sustainable latrines for floating villages or areas subjected to regular flooding.

- **Arsenic contamination of groundwater.** Natural arsenic contamination in groundwater (often exceeding the World Health Organization's guidelines of 10mg/l) caused by the construction of thousands of village wells²⁴⁵ without proper testing, is a major challenge and has been one of the causes of disease in rural areas. This has only recently been discovered and its long-term effects remain unknown²⁴⁶.

- **Lack of a single, standardized, monitoring system and data.** Monitoring progress towards RWSSH targets is complicated by the fact that there is no single, standardized monitoring system to which the various actors involved in the sector can contribute. Also, there is a lack of good data on coverage in rural areas.

Water resources

- **Data.** Systems for data processing and quality control remain weak and need to be strengthened²⁴⁷.

- **Integration of climate forecasting.** No system exists to integrate climate and weather forecasting with hydrological features at national, provincial or community levels²⁴⁸.

- **Weak regulatory framework.** Despite significant advances in the legal and policy framework for water resource management, rules, regulations and institutional mechanisms for effective and integrated management of water resources are not yet in place²⁴⁹.

- **Insufficient land under irrigation**²⁵⁰. The area of land under irrigation is insufficient, and represents a major constraint to improving rice production²⁵¹.

- **Weak efficiency of existing irrigation systems.** The irrigation system has not been fully developed and utilized to its potential, requiring more efficient management and investment²⁵². Many current irrigation systems perform poorly, due to weak institutional capacity of farmer groups, poor design of irrigation schemes, and lack of economic viability.

Fisheries²⁵³

The Cambodia Human Development Report 2011 describes the fisheries situation in Cambodia as "a crisis of governance of access to and control of over fishery resources". Challenges include:

- **Increasing pressure on fisheries.** There are three forms of fishery management: large-scale/commercial or fishing lot, medium-scale and small-scale. Currently, the Government has abolished large-scale or fishing lots covering 953,740 ha. Large-scale (sometimes illegal) commercial fishing using highly efficient, but destructive gear, has contributed to putting pressure on fishing stocks. Pressures also come from illegal clearing of key fishery habitats, such as the flooded forests around the Tonle Sap.

- **Impact of hydropower.** The rapid pace of hydropower on the Mekong mainstream and tributaries has serious consequences for Cambodian fisheries production, and consequently, overall food security and nutrition. The most recent Strategic Environmental Assessment indicates that total losses in fishery stocks are as much as 550,000 to 800,000 tons for the whole Mekong river. The same estimate suggests that nearly 200,000 people in Cambodia will directly or indirectly be affected by this.

- **Inequitable access.** Inequitable access to fisheries has had a disproportionate impact on small-scale fishers, with many forced to seek opportunities outside the sector.

- **Constraints for small-scale fishers.** Poor access to markets, including distribution channels and information, are major constraints to small-scale fishers deriving economic benefits from their catch.

²⁴⁵ Particularly the the provinces of Kampong Cham and Kandal.

²⁴⁶ Source: Resource Development Institute (RDI).

²⁴⁷ Cambodia HDR 2011.

²⁴⁸ Cambodia HDR 2011.

²⁴⁹ Cambodia HDR 2011; EU CEP 2011.

²⁵⁰ This was identified by one of the breakout groups as a development challenge for Cambodia in the National Dialogue on Rio+20.

²⁵¹ Cambodia HDR 2011.

²⁵² NSDP MTR 2011.

²⁵³ From Cambodia HDR 2011.



- **Weak organization.** Fishers are weakly organized, with 87 percent being small-scale and highly dispersed. This limits value chain members' ability to effectively access higher-value markets and advocate for the sector as a whole.

- **Little value-added processing.** Low investment in the fisheries sector has led to few viable plants existing in related industries such as fish meal producers, fish canneries and others. As a result, those fish not consumed in the local market are exported to neighbouring countries for higher-value-added processing.

- **Obstacles to community fisheries.** While Cambodia has actively promoted Community Fisheries since 2001, there have been roadblocks, including complex procedures for official recognition of Community Fisheries.

Policy recommendations

Water & Sanitation

- Further clarify the definition of functional assignments of different actors involved in rural water supply and sanitation.
- Increase national funding to RWSS sector.
- Continue administrative reforms and functional reassignment to enable deconcentrated and decentralized service delivery to more effectively meet the CMDGs.
- Continue supporting greater private sector involvement in the RWSS sector.
- Continue building the capacity of non-governmental organizations as well as private suppliers to help build the RWSS infrastructure.
- Move from a short-term project approach to long-term programs to reorient the rural population to adopt safe hygiene practices.

Water Resources

- Develop rules, regulations and institutional mechanisms for effective and integrated management of water resources²⁵⁴.
- Put in place appropriate mechanisms for assessing water resource options and continue to systematically implement impact assessments of large-scale water infrastructure²⁵⁵.
- Expand the area of land under suitability for irrigation, with better designed and economically viable irrigation, possibly through smaller-scale systems adapted to local needs and circumstances²⁵⁶.
- Strengthen the institutional capacity of farmer, water-user communities to manage irrigation schemes²⁵⁷.

Fisheries

- Strengthen the organization of small-scale fishers.
- Expand fisheries refuges, fish sanctuaries.
- Protect deep pool rice-fish production in natural ways.
- Strengthen market access for small-scale fishers.
- Promote value-added processing of fish products.

²⁵⁴ Cambodia HDR 2011.

²⁵⁵ Cambodia HDR 2011.

²⁵⁶ Cambodia HDR 2011.

²⁵⁷ Cambodia HDR 2011.



Summary of Opportunities and Challenges

| Opportunities/Strengths | Challenges/Weaknesses |
|---|---|
| <ul style="list-style-type: none"> • Significant improvement in access to urban sanitation. • Quadrupling in access to rural sanitation. • Rich water resources. | <ul style="list-style-type: none"> • Access to urban drinking water remains low. • Access to rural sanitation remains low. • Low levels of irrigation present a major obstacle to improve rice production. • Depletion of fish stocks due to over-exploitation. |

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Thematic 3.12

Sustainable Forest & Land Use

Progress

Progress on policy and institutional framework

Forests and Protected Areas

Cambodia's environmental legal and policy framework has been significantly strengthened over the past 20 years. The Land Law was enacted in 2001, the Forestry Law in 2002 and the Law on Protected Areas in 2008. In 1993, His Majesty King Norodom Sihanouk issued the first piece of environmental legislation in the form of a Royal Decree on the creation of the Law on Environmental Protection and Natural Resource Management, enacted by the National Assembly in 1996.

Several sub-decrees have also been passed: Water Pollution Control (1999), Solid Waste Management (1999), Environmental Impact Assessment or EIA (1999) and Air Pollution Control, Noise Disturbance (2000), procedure for granting right to tree planting on state forest land (2008), community forestry (2003) and establishment of protection forest and wildlife conservation area, and 10 year Strategic Planning Framework for Fisheries (2010), including flooding forest and mangrove. The latest State of the Environment assessment was made in 2006.

National Forest Programmes (2010-2029) is, update every 5 years, the main framework for sustainable forest management in Cambodia. National Biodiversity Strategy and Action Plan (2002) also support biodiversity conservation.

The protection of natural resources in Cambodia is the joint responsibility of mainly the Ministry of Agriculture, Forestry and Fisheries (MAFF) and the Ministry of Environment (MoE) and. MAFF manages

permanent forest reserves (production forest, protection forest and conversion forest), mangrove and flooded forests and MOE manages protected areas. Other ministries with mandates supporting rational use of natural resources were created after 1998, namely the Ministry of Water Resources and Meteorology (MoWRAM), and the Ministry of Land Use Management, Urbanization and Construction (MLMUPC). Several cross-agency national ministerial committees were established in charge of a number of cross-sectoral concerns: biodiversity, protected areas, coastal and marine management, and management of the Tonle Sap Biosphere Reserve.

With the adoption of a number of key laws over the past 15 years, a legal, strategic and institutional framework for the protection of natural resources is now in place, testifying to the Government's commitment to this important agenda. The Prime Minister stated recently, "...development with environmental sustainability is the key goal of Cambodia."²⁵⁸ However, the systematic enforcement of this framework remains a source of concern.

Land

A Land Law was enacted in 2001 to regulate land administration, management and distribution. The law also formalized the legal framework for granting concessions for economic purposes. The MLMUPC is the Government entity that issues land titles. However, according to the law, MAFF is solely responsible for granting Economic Land Concessions.

²⁵⁸ Prime Minister's Opening Speech at the Third Greater Mekong Sub-region Environment Ministers' Meeting, July 28, 2011, Phnom Penh. Quote taken from the CMDG Report 2011 quoting from NSDP MTR 2011.

**Table 23: Multilateral agreements, laws and policies on Forestry and Land Use**

| | <i>Adherence to multilateral agreements related to sustainable development</i> | <i>Laws and policies related to sustainable development</i> | <i>Planning for sustainable development</i> | <i>Institutional Framework for sustainable development</i> |
|-------------|--|---|--|--|
| 1993 | | Royal Decree on Creation and Designation of Protected Areas | | |
| 1996 | | Law on Environmental Protection and Natural Resource Management | | |
| 1998 | | | National Environmental Action Plan 1998-2002 | |
| 1999 | | Sub-Decree on Environmental Impact Assessment or EIA | | |
| 2000 | | Sub-decree on forest concession management | | |
| 2001 | | Land Law Law on Protected Areas in the Tonle Sap Lake | Ministry of Environment Strategic Plan 2001-2003 | |
| 2002 | | Forestry Law | National Biodiversity Strategy and Action Plan | |
| 2003 | | Sub-Decree on Community Forest Management | | Establishment of Forestry Administration |
| 2004 | | Sub-Decree on the Establishment of the Protected Forest for Biodiversity Conservation, Elephant Corridor Protection and Wildlife Rehabilitation Centre in Koh Kong Province | | Technical Working Group on Forestry and Environment (TWG-F & E) for government-donor coordination to support and strengthen development activities within the forestry and environment sectors |
| 2005 | | Sub-Decree on State Land Management Sub-Decree on Economic Land Concession (amended in 2009) Sub-decree on procedures for | | |



| | | | | |
|-------------|--|--|---|--|
| | | establishment classification and registration of permanent forest estate | | |
| 2006 | | Sub-Decree on Timber and Non-Timber Forest Products Allowed for Export and Import | | |
| 2008 | | Law of Protected Areas | | |
| 2009 | | National Policy on Development of Indigenous Peoples; Policy on Use rights and registration of indigenous communal land; Sub-decree No. 83 on Procedure of Registration of Indigenous Community Land | | Council for Land Policy, Ministry of Rural Development, Ministry of Interior |
| 2010 | | | 20-year National Forest Program 10-year Strategic Planning Framework for Fisheries | |
| 2012 | | | Executive Order No. 001, dated 7 May 2012 on Strengthening Measures Promoting Effectiveness of Management of Economic Land Concessions. | |

Progress on national indicators

CMDG 7 and the NSDP Update 2009-2013 sets environmental targets, including those related to protected areas, forestry and biodiversity²⁵⁹. It also sets separate targets for issuance of land titles. A Study made in 2010 by the RGC on the

achievements made on the CMDG seven indicate that 8 out of 13 indicators were fully or nearly fulfilled²⁶⁰

²⁵⁹ Note that some of these targets have been revised down since the NSDP Update 2009-2013 was formulated. The protected area target was 3.3 million hectares and, revised down to 3.1 million ha in the NSDP MTR 2011.

²⁶⁰ RGC 2010. Challenges and Achievements: A study of CMDG Seven-Ensuring Environmental Sustainability



Protected Areas and Protection Forests

Cambodia's first protected area was created in 1925 as the first such area in South-East Asia. Today, Cambodia's national protected area system comprises 23 protected areas managed by the MoE. The Government has also established community-protected areas as part of its environmental protection strategy, due to the importance of protected resources to local livelihoods and in response to the limited number of rangers. The protected areas in 2010 represented around 3.1 million hectares, a decrease from the 1993 baseline of 3.3 million hectares. However, since the CMDG 2015 target was revised down from 3.3 million hectares to 3.1 million hectares, this indicator is achieved.

Since 2000, Cambodia has established 11 protected forests and wildlife conservation area,, managing by the Forestry Administration, MAFF. These protected forests are absolutely considered to be high biodiversity conservation area as the processes of establishment are based on well scientific studies by both government and non-governmental bodies. A Currently, protected forest covers areas of more than 1.5 million ha, above the target of 1.4 million for 2015. In addition, number of Protection forests is expecting to be established in the next few year. Under the National Forestry Programme, the government set a target to establish 3million ha of protection forest by 2029. Therefore, protection forests need to be double in the next 17 years, i.e around 100,000ha per year. This target could only met relying solely on sufficient funding to manage the forest, wildlife and biodiversity and on participation of local community and other stakeholders. The potential sustainable financial source is carbon credit (REDD), which is implementing by the Forestry Administration, MAFF.

Protected areas are under severe pressure from illegal logging, encroachment and economic land concessions. About 350,000 hectares within protected areas and forests have been allocated to economic land concessions, effectively reducing their total surface to about 2.9 million hectares in 2010.

The number of rangers in protected areas increased from 600 in 2001 to 910 in 2009, but was reduced to 480 in 2010 due to budget cut-backs²⁶¹. This is far

²⁶¹ MoE figures in EU CEP.

from the 2012 target of 1,200. Similarly, the number of rangers in protected forests decreased from 500 in 2001 to 315 in 2010²⁶², far from the 2015 maintenance target of 500.

Forest cover

In 2010, forest cover is 57.07% of Cambodia's land area. In the 1960s, it is believed that 73 percent of Cambodia's land area was covered by forests. Since the 1990s, however, Cambodia has experienced a rapid rate of deforestation due to the expansion of agriculture and other commercial plantations. As a result, between 1990 and 2010, it is estimated that Cambodia lost an average of 142,500 ha or 1.1 percent of forest-cover per year, reducing the total forest cover from 61.15 percent in 2002 to 57.07 percent in 2010²⁶³, which is still below the target of maintaining the forest cover at 60 percent of the total land area until 2015²⁶⁴. Most of the deforestation has happened in the northwest and northeast provinces.

To reverse Cambodia's deforestation trend, the Government is implementing measures to reinforce the protection and management of forests, decrease the pressure on forests by improving farming techniques, reduce dependence on fuel-wood, and engage in an active program of forest rehabilitation and reforestation, including commercial plantations. It is estimated that Cambodia has around 66,000 hectares of planted forests²⁶⁵. This is estimated to result in a net reforestation of about 73,000 ha per year. The RGC expects that this will bring the forest cover back to the target of 60 percent²⁶⁶. If Cambodia manages to reforest rapidly, it might become a net absorber of carbon dioxide.

Forest has been under the process of sustainable forest management and sustainable forest resource use through the forest reform policy. Up to 2011, the total tree plantation activities was 33,540 ha, of which 1,820 ha planted by FA, 30,365 ha planted by private investment companies, and 1.355 ha by individual households. Besides that, 561 forestry communities have also been created and managed with the total areas of 481,779 ha (Speech Prime Minister on April 12, 2012).

²⁶² CMDG Report 2010.

²⁶³ NSDP MTR 2011.

²⁶⁴ Note that Cambodia includes rubber and oil palm plantations as 'forest' in their national forest cover estimates.

²⁶⁵ Forest Administration figures in CMDG Report 2011.

²⁶⁶ CMDG Report 2010.



Biodiversity

Cambodia is rich in biodiversity, which support many endangered species. There are around 600 species of birds, 200 of mammals, 100 of reptile, 62 of amphibians, 843 of fishes. Cambodia is one of the world's richest countries in terms of diversity of plant families. Cambodia is the member of CBD, CITES, UNFF, UNFCCC, UNCCD, etc. Wildlife and biodiversity conservation effort has been seen increasing due to government commitment on wildlife and biodiversity conservation, especially in the last 12 years. Many key conservation areas, with endangered and vulnerable species of wildlife such as tiger, elephant, giant ibis, crane have been protected.

Cambodia has 2,308 plant species belonging to 852 genera in 164 families, including seven genera and 14 species belonging to Gymnosperms; 219 genera and 488 species belonging to Monocotyledons; and 626 genera and 1,806 species belonging to Dicotyledons. As no systematic and complete study has yet been done, it is estimated that a full list for Cambodia would be expected to exceed 3,000 species, with at least 700 additional species described as new to science (Aswell, 1997).

The World Conservation Monitoring Centre, (Year 2000) estimates there to be 8,260 plant species in Cambodia, 10 percent of which are endemic. Fifty seven species and 125 taxa of aquatic macro invertebrate were recorded in surveys in two provinces in 1991 and 2001, including Insecta, Oligochaeta, Mollusca, Crustacea and others. Twenty eight species of amphibian and reptile are described. A total of 874 fish species were recorded, of which 490 are freshwater fish from 64 families, 410 are saltwater fish from 83 families, 22 are threatened, one is endemic, and 13 are introduced fish species. More than 500 birds have been recorded but it is likely that number actually exceeds 600. A list of known species is provided below.

Of 490 freshwater fish species, at least 45 species are currently commercially important and 23 threatened fish species are recognised for their conservation significance. It is becoming increasingly common that aquatic habitats are being converted for agricultural and other types of land use, and that fish migration patterns are constrained by hydrological infrastructure development, particularly in the upstream region of

the Mekong, and due to local irrigation schemes in the flood plain. The flooded forests originally extended over an area of more than one million hectares, but became reduced to only 614,000 hectares in the 1960s and 362,000 hectares in 1991.

Coral reefs are reported around almost all islands off the coast of Cambodia. Around 70 coral species in 33 genera and 11 families have been identified. Coral diversity is higher in offshore reefs, while inshore areas have low species diversity and are dominated by massive corals. Little is known about the current distribution, composition and health of these coral reefs. Its extent is currently about 2,805 hectares.

Sea grass of Cambodia's coastal waters can be divided into extensive sea grass meadows along the mainland and paths of sea grass intermingled with coral reef around islands. The current extent of sea grass in Cambodia's coastal water is 32,494 hectares. Ten sea grass species and some 30 species recognized as true mangroves have been identified so far.

Recent surveys by the International Rice Research Institute (IRRI) have identified over 2000 different strains of rice used in Cambodia. Of the total rice cropping area of 2,585,905 ha (2007) in Cambodia, 86 percent is rain field lowland rice, 8 percent is dry season rice, 4 percent is floating rice and 2 percent is upland rice (4th National Report of Cambodia to UNCBD, 2010).

Land

A Land Law was enacted in 2001 to regulate land administration, management and distribution. The law also formalized the legal framework for granting concessions for economic purposes. The MLMUPC is the Government entity that issues land titles. Issues surrounding land use, access, security and titling are integral to the country's sustainable development agenda. Hence, the NSDP Update 2009-2013 states that "The Royal Government recognizes that land reform is vital to enhance social stability, development of an efficient land market, environmental sustainability, and for increasing agricultural productivity...".

Land titling

Out of a total land area of 18.1 million hectares, it is estimated that the state owns 14.5 million hectares,



while 3.6 million hectares (20 percent) are owned by private entities. This private land is increasingly titled and entered into a new cadastral system. In 2001, it was estimated that there were some six to seven million privately owned land parcels that needed to be registered. The Government therefore set a period of 15 years to conduct land registration under a land reform program focusing on the strengthening of land administration, land management and land distribution and titling, with the aim of reducing poverty²⁶⁷.

Thus, the land target of CMDG 7 seeks to increase the proportion of the population in both urban and rural areas with access to land security by 2015. The original CMDG target was to provide titles to 65 percent of untitled land. However, due to the scope of the land titling needs in Cambodia, this target

was revised down to 43 percent by 2011, through the World Bank funded project. However, the actual figure was less than this. A new effort by the government, with funding from Canada and Finland, will try to achieve land titling of 46 percent by December 2012.

Despite the downward revision of the land titling target, the Government has made steady progress in issuing land titles. From 2003 until early 2011, The MLMUPC had issued some 2.37 million land titles in 16 provinces. The rate of farmland registration, measured by the percentage of total plots registered per year to total plots, has risen by 60 percent (from 5 percent in 2000 to 24 percent in 2010), which is still far from the revised target of 43 percent in 2015.

Table 24: NSDP indicators on forestry and land use 1993-2010

| | Indicator | Baseline 1993 | 2010 | Target 2015 |
|--|--|----------------|------------------------------------|-----------------------------|
| Reverse the loss of environmental resources | Maintain forest cover at 60% of total land area | 59.82% | 57.07% | 60% |
| | Maintain the total surface of protected areas at 3.1 million ha | 3.3 million ha | 2.9 or 3.1 million ha | 3.3 million |
| | Maintain the total surface of protected forest areas at 1.4 million ha | | 1.5 million in 2009 ²⁶⁸ | 1.4 million ha |
| Increase the proportion of people having security of land tenure | Proportion of land parcels having titles registered | 5% in 2000 | 24% | 43% (revised down from 65%) |

²⁶⁷ NSDP Update 2009-2013.

²⁶⁸ CMDG Report 2010.



Key issues and challenges

- **Pressures and encroachment of protected areas and forests.** Protected areas, community-protected areas and forests are under severe pressure and encroachment, especially the conversion of forest land to other land use. This issues cause by lack of forest demarcation on the ground.

- **Lack of financial resources for management of protected areas and protection forests.** Protected areas and protection forests suffer from a lack of human and financial resources, which have been aggravated by budget cuts due to the financial crisis²⁶⁹.

- **Illegal logging.** Although the effort from the government on combating illegal logging and log transportation, illegal logging is still be a concern. Logging for fuel wood is hardly controlled as it is operating by local community.

- **Weak legislation enforcement.** While a legal, strategic and institutional framework for the protection of natural resources is now in place, enforcement remains a challenge in relation to protected areas and forests, blurring demarcation, and weakening the effective protection, and sustainable management of the areas under the ministries' jurisdiction²⁷⁰.

- **Pace of land titling.** While the Government has distributed a significant number of land titles since it started its land titling program in 2003, the pace remains slow and significantly under the revised target, due to limited funding.

Policy recommendations

Sustainable Forest, Protected Areas Management and Biodiversity Conservation

- Support activities described in the national forest program: forest demarcation, conservation and development of Forest Resource and biodiversity, forest Law enforcement and

governance, community forestry, capacity and research development, sustainable forest financing. This NFP is a single framework for sustainable forest management as well as supporting livelihood of local community

- Develop integrated forest land use planning by all relevant government agencies in particular through the Cambodia REDD taskforce

- Improve activities to support local community to set up community forestry

- Speeding up process to set up more protection forest

- Maintain an adequate balance between mono-crop plantations and forests²⁷¹.

- More extensive guidelines for zoning are required to develop zoning systems for each protected area based on its habitats, species and patterns of use by local people and specific rules and regulations that govern how different zones will be used. These rules are especially important for any subsistence harvests that might be allowed in some parts of protected areas. Determining the location of core zones should be a high priority.

- Prepare regulations and guidelines to implement protected area law and forestry law

- Improve constructive dialogue on forest, protected areas and land management and economic development at the national and sub-national levels

- Improve conservation and governance of priority forest/protected areas landscapes to mitigate climate change and to conserve biodiversity and natural capitals;

- Increase the economic benefits from the sustainable forest management and protected areas management

- Promote forest law enforcement and forest land demarcation

- Promote REDD+ process and carbon credit by developing the National REDD+ strategy and implementation framework; promoting broad base stakeholder engagement and consultation, and designing the monitoring system and implementation framework;

- Provide the supportive policy framework to encourage widespread application of sustainable land management and community based natural resources management

- Promote concerted public action to halt illegal logging and deforestation²⁷²;

²⁶⁹ CMDG Report 2010.

²⁷⁰ CMDG Report 2011.

²⁷¹ NSDP MTR 2011.



- Add expansion in natural forests as an additional indicator to measure the quality of the forest cover²⁷³;
- Support appropriate goal and outcome setting for sustainable forest management by rationalizing forest and protected areas land to balance between the needs for economic development, social development and environmental sustainability; and
- Other additional indicators that could be added to measure the land dimension are land encroachment, unsolved disputes in law courts and land dispute settlements, justice delivered, or a reduction in bribing²⁷⁴;

Sustainable Land Management

- Develop community learning networks for proper soil management in areas highly prone to erosion and areas with problem soils (" hot spots ")
- Incorporate watershed management priorities in local decisions, plans and public investment programs
- Prepare the Agricultural Land Act based on updated land capability and land use information.

- Coordinate resource mobilization and partnership building with donors; civil societies and private sectors to promote sustainable forest and land management
 - Provide appropriate information for decision makers and service providers
 - Ensure that provincial and district authorities are supportive of land and forest management policies
 - Enable widespread adoption of appropriate on – farm soil management practices to address land degradation and adapt to climate change
 - Enable local stakeholders to restore watershed and forest ecological services that improve and sustain local agricultural productivity
- Support human resources capacity to promote sustainable land management, and
- Develop and apply more effective resource mobilization strategies for sustainable land management

Summary of Opportunities and Challenges

| Opportunities/Strengths | Challenges/Weaknesses |
|---|---|
| <ul style="list-style-type: none"> • Solid legal framework for environmental, natural resource and land issues in place²⁷⁵ • Cambodia is one of the countries in the world with the highest share of protected areas and the country in Southeast Asia with highest share of forest cover • Potential of forestry sector as a driver of green growth • Continuing increase in the number of community protected areas/forestry • Increase in the surface of reforested areas. • Rich and unique biodiversity • Steady progress in distribution of land titles • Strong donor support to environmental sector | <ul style="list-style-type: none"> • Protected areas and Protection forests has no adequate funding to support forest and wildlife manage leading to weak in management • Deforestation sometimes causes by non-forestry sectors due to competing development priorities • Weak enforcement of environmental and land-related legislation. • the forest are still not well demarcated on the ground • Many governmental agencies involve in forest management • Anarchic forest land grabbing expect to arise |

²⁷² CMDG Report 2011.
²⁷³ NSDP MTR 2011.
²⁷⁴ NSDP MTR 2011.



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Thematic Chapter 3.13

Climate Change

Progress

Progress on policy and institutional framework

Cambodia has started working on its first national communication report and other climate change issues since 1999. A Climate Change Office (CCO) was established under the Department of Planning and Legal Affairs, Ministry of Environment (MoE), to be responsible for a wide range of climate-change related activities, including planning and policy formulation, implementation of the United Nations Framework Convention on Climate Change (UNFCCC), assessment of new technologies to cope with the adverse effects of climate change or to mitigate greenhouse gas emissions, and capacity building and awareness raising. It also serves as a Secretariat of the UNFCCC, the Inter-governmental Panel on Climate Change (IPCC), the Kyoto Protocol and the Clean Development Mechanism (CDM) Focal Points for Cambodia. The Government promoted the status of CCO from office to department level in October 2009.

In 2006, the National Climate Change Committee (NCCC) was established to deal with climate change issues including setting overall policy on climate change. Its responsibilities are (a) coordinating the implementation of climate change activities in Cambodia; (b) developing climate change policies, strategies, legal instruments, plans and programs; and (c) the integration of climate change concerns into relevant policies, strategies and legal instruments. The Committee is cross-sectoral and multidisciplinary in nature and is composed of high-level representatives (Secretaries and Under-Secretaries of State) of 20 Ministries, including the Ministry of Agriculture, Forestry and Fisheries (MAFF), Ministry of Water Resources and Meteorology (MoWRAM), Ministry of Economy and Finance (MEF), and other key government agencies. The Minister of Environment chairs the NCCC, while the Prime Minister is an honourable Chairman.

The MoE gained another role as the Designated National Authority (DNA) for the CDM in July 2003. The DNA's responsibilities include technical and institutional capacity strengthening, CDM

awareness raising, CDM project identification and facilitation of host country approvals consistent with the requirements of the Kyoto Protocol of the UNFCCC.

Apart from MoE, there are several key ministries whose mandates deal with climate change matters. They are the Ministry of Industry; Mines and Energy (MIME); MAFF; MoWRAM; Ministry of Health (MoH); Ministry of Land Management, Urban Planning and Construction (MLMUPC), Ministry of Public Works and Transport (MPWT); Ministry of Rural Development (MRD); and the National Committee for Disaster Management (NCDM).

MIME deals with energy efficiency, clean energy, cleaner production and rural electrification. MAFF has Forest Administration (FA) and General Department of Agriculture, which address climate change issues including Reducing Emissions from Deforestation and Forest Degradation (REDD) activities, land degradation, farming and agro-industry plantation. FA is a REDD Focal Point of MAFF. MoWRAM deals with atmospheric-change monitoring by measuring change of water levels of rivers and tributaries, temperature, rainfall distribution, flood and drought. MoH deals with adaptation work for local communities. MLMUPC has various responsibilities relating to land management including cadastral administration of state land, public and private state land and individuals' private land registration, issuing land titles throughout Cambodia; carrying out cadastral surveying and mapping; managing and disseminating all kinds of maps of Cambodia to national mapping standards by cooperating with relevant institutions which produce sectoral maps; and Geographical Information Systems (GIS) coordination. Cambodia also established a REDD Task Force to improve work on conservation and forest cover rehabilitation.

Cambodia produced policy papers such as the National Adaptation Program of Action to Climate Change (NAPA), National Forestry Program (2010-2029), National Action Program for Land Degradation (2010-2020), Cambodia REDD+ Road Map (2010), Green Growth Roadmap, National Self-



Capacity Assessment (NSCA) Action Plan for UNCBD, UNFCCC and UNCCD. These policies address climate change issues. A second version of the National Biodiversity Strategic Plan (NBSAP) is being revised. Remarkably, among these policies, the National Forest Program aims to secure forest cover for 60 percent of total territory. One of the central components of this strategy is to support the establishment of Community Forests (CFs) and to allocate a total of two million hectares to rural communities (FA, 2010).

MAFF and MoWRAM produced the Strategy for Agriculture and Water (SAW) for the period 2010-2013. The Strategy will promote regulation, capacity building, research and education, food security, water resource management and agriculture land management, and agricultural business marketing (SAW, 2009).

The country also passed several laws including Forestry Law 2002, Land Law 2001, Fisheries Law 2007, Protected Areas Law 2008, Environmental Protection and Natural Resource Management Law 1996, 1993 Royal Decree on Creation and Designation of Protected Areas and Sub-decree number 83 on Registration of Land of Indigenous Communities 2009. These laws help regulate forest management and promote forest cover, tourism and community development, and are supportive of REDD++ activities.

The Law on Water Resources Management was passed in 2007, building on the National Policy on Water Resources Management and the Strategic Plan on Water Resources Management and Development (2005-2008). The Water Law is set within the framework of Integrated Water Resources Management (IWRM), recognizing the different sectoral interests in water while calling for greater coordination and the need to balance social and environmental considerations. Cambodia has attempted to strengthen such coordination with the formation of the MoWRAM in 1999, bringing most of the responsibility for water resource management under one government agency. The Tonle Sap Authority (TSA) is the only river basin organization established to date, under a Royal Decree in September 2007. The TSA brings together 36 local and provincial representatives from six provinces around the Tonle Sap river basin, along with line Ministries which are related to water. It also aims to bring together international organizations and NGOs (RGC 2007, Tonle Sap Authority 2010).

With policy and institutional frameworks in place, the country could enhance its work toward fighting climate change activities, support sustainable development under climate change conditions and other cross-cutting issues.

Progress on national indicators

Under NAPA (2006), Cambodia has developed 39 national adaptation projects including agriculture development, water supply, irrigation, health care, fighting malaria, malaria education, agro-forestry development and coastal zones. The project aims to provide (1) capacity building/training; (2) awareness raising/education; and (3) infrastructure development.

The Government with the funding support from donors such as EU, DANIDA, Sida and UNDP has established a multi-donor funded Cambodia Climate Change Alliance (CCCA) programme with a comprehensive and innovative approach to addressing climate change in Cambodia. The CCCA aims to create the enabling conditions required for Cambodia to respond to the challenges and opportunities posed by climate change. The approach is to focus on capacity building and institutional strengthening targeting key national institutions, sub-national authorities, and civil society. The CCCA includes a horizontal multi-donor Climate Change Trust Fund, administered by UNDP, which provides resources for the programme and for mainstreaming initiatives and creates a harmonized engagement point for donors, thereby minimizing transaction costs for Government. The overall objective of the CCCA is to strengthen the capacity of the NCCC to fulfill its mandate to address climate change and to enable line ministries and Civil Society Organizations (CSOs) to implement priority climate change actions.

The government has developed and is implementing a pilot programme for climate resilience in Cambodia with funding of US\$ 86 million for 2010-2015. The objective of the PPCR is to build on NAPA and other relevant country studies and strategies to mainstream climate resilience into national and sub-national development policies, plans and projects. These will be supported by scaled up financing of adaptation activities in key development sectors, underpinned by (i) strengthened participation and coordination among



stakeholders, (ii) science-based adaptation planning, and (iii) enhanced links between adaptation and disaster risk reduction measures.

The project is expected to enhance institutional capacity for mainstreaming climate resilience in planning and budgeting processes of key national ministries; to support mainstreaming in sub-national planning and budgeting processes; strengthen the climate resilience of investments in the agriculture and water sectors, as well as in rural infrastructure, through the implementation of on-the-ground adaptation measures; strengthen civil society and private sector engagement and gender considerations in climate change adaptation and enhance the flow of policy-relevant climate change information consistent with local capacities and capabilities.

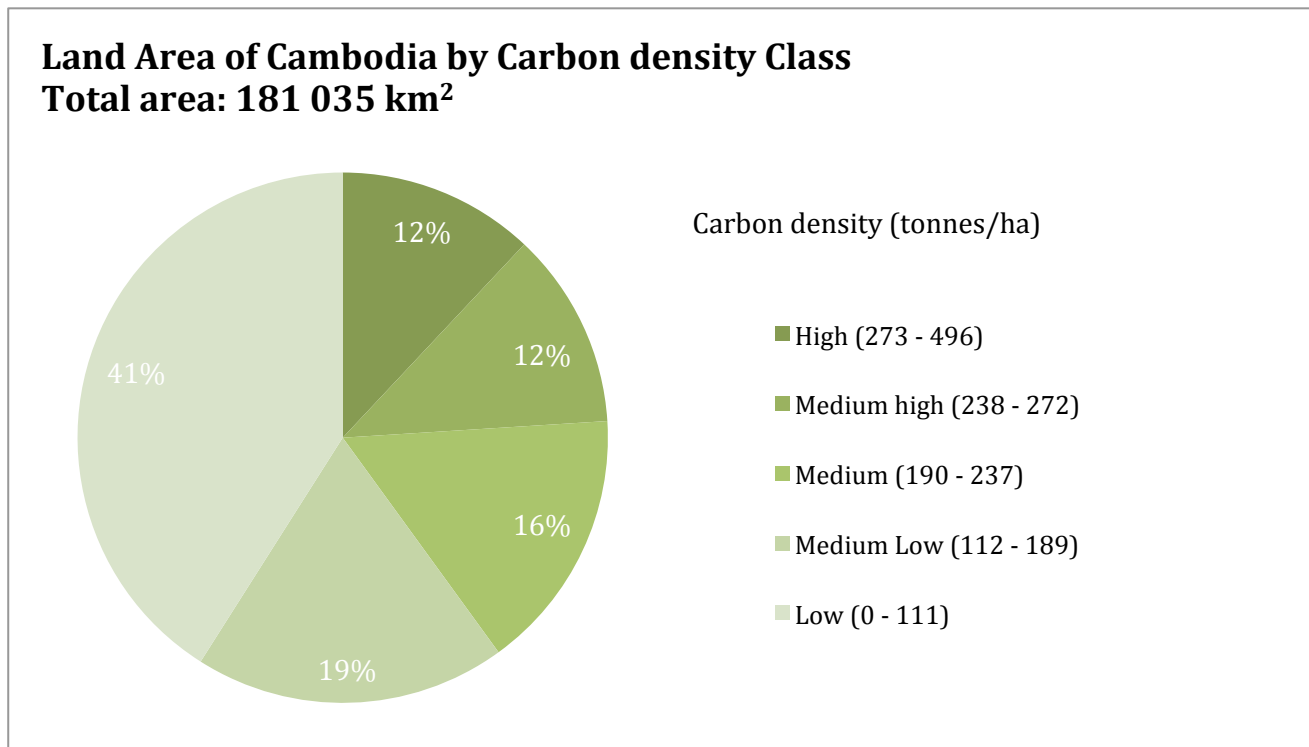
In late 2010, 430 Community Forests (CFs) had been established in 20 provinces equalling 380,976 ha. However, only 107 CFs reached agreement with MAFF (only four have reached final stages of approval).

formal process of registration with MoE, only two had formally reached the final stage (MoP 2010).

Cambodia REDD+ Roadmap has been developed and being implemented. A recent study (2010) shows a total of 2.96Gt of carbon is stored in Cambodia's forest ecosystems, with 30 percent of forest carbon stock estimated to be in the Forestry Concessions (Production Forest, Permanent Forest Reserve, or PFR) managed by the Forestry Administration (FA).

Twenty-six percent of the country's territory is under different forms of protected areas and protected forest managed by the Ministry of Environment and the Ministry of Agriculture, Forestry and Fisheries. Twelve percent of the total land use has been gazetted as Economic Land Concessions owned by land concessionaires, and 19 percent is in Other Forests (private forests, or plantations), for which management responsibility is unclear (Cambodia REDD+Roadmap, revised draft, 27 September 2010).

Figure 4: Land area of Cambodia by carbon density class



Source: Leng et al, 2010.
Leng et al, 2010.

In 2009, while 84 Community Protected Areas (covering about 93,000ha) were going through the

The Forest Administration (2010) estimates that nearly 4 million rural people, more than 30 percent of the population, live within five kilometres of a



forest, with forest resources accounting for an average of 10 to 20 percent of household consumption and income sources.

The Energy industry sector (electricity) is projected to become the second largest emitter of greenhouse gasses, after the transport sector, by 2050.

The country aims to connect 70 percent of households with grid electricity by 2030, however private sector and donor support is needed to meet this objective.

Cambodia is pushing for a green growth low carbon emission path with 68 percent of electricity

Mitigation options include expansion in grid connections, solar home systems, biomass gasification and energy efficiency initiatives.

Total potential savings in 2050 are 3,877 Gg CO₂ eq. per year if all mitigation options are implemented.

Cambodia has moved forward on carbon markets, having developed guidelines for CDM projects; seven CDM projects were developed and approved by late 2010, which amount to 574,804 tons of CO₂ eq reduction per year generating carbon credits (IGES/MoE 2010). At least four projects under voluntary carbon markets are operating or being proposed, mainly by civil society organizations, (Cambodia Human Development Report, 2011).

Table 25: Total emissions and removals by sector for the year 2000 (Gg)

| Greenhouse Gas Source and Sink Categories | CO ₂ Emissions | CO ₂ Removals | CH ₄ | N ₂ O | Total CO ₂ eq |
|---|---------------------------|--------------------------|-----------------|------------------|--------------------------|
| Energy | 2,047.66 | | 55.38 | 0.75 | 3,443.14 |
| Agriculture | | | 875.52 | 8.79 | 21,110.82 |
| Land Use Change & Forestry | 22,858.73 | -4,8,165.86 | 32.06 | 0.22 | -24565.67 |
| Waste | | | 10.18 | 0.05 | 229.24 |
| Total | 24,906.39 | -4,8,165.86 | 973.14 | 9.81 | 217.57 |

Table 26: Emissions by source categories for the Agriculture Sector for the year 2000 (Gg)

| Greenhouse Gas source categories | CH ₄ | N ₂ O | Total CO ₂ eq(Gg) | Total CO ₂ eq (%) |
|--|-----------------|------------------|------------------------------|------------------------------|
| Enteric fermentation | 163.82 | | 3,440.22 | 16 |
| Manure management | 22.37 | 1.11 | 813.87 | 4 |
| Rice cultivation | 684.05 | | 14,365.05 | 68 |
| Agricultural soils | | 7.62 | 2,362.20 | 12 |
| Prescribed burning of savannahs | 2.24 | 0.03 | 55.29 | 0 |
| Field burning of agricultural residues | 3.09 | 0.04 | 77.29 | 0 |
| Total | 875.57 | 8.70 | 21,113.92 | 100 |

2nd National Communication Report, 2010.

generation in 2024 planned to be provided by hydro electric plants.

Despite being affected by floods in 2011, Cambodia managed to increase production by 6.42 percent



over 2010. As a result, the country is able to sell rice 2,780,328 tons (MAFF Annual Report, 2011).

Key issues and challenges

- Insufficient expertise and financial resources in key ministries in climate change act as major constraints to promote broad base climate change responses to make Cambodia greener, sustainable and resilient in the face of climate change
- The preparedness of local communities to extreme climate events is low, as is their capacity to adapt to climate change. There are cases where local communities are resourceful when dealing with climate hazards, but these are exceptions and usually coincide with settlements with higher social capital and stronger local institutions
- Under the high and low emission scenarios, up to 2050 most lowland forests will be exposed to a longer dry period of between six and eight months or more
- Degradation of land resource, forest land and protected area land in key critical watersheds spot is a great challenge to future sustainable development

Opportunities

Cambodia is in the process of developing its domestic energy supply, providing the opportunity to follow a sustainable development path, and in doing so, set an example for other countries. This sustainable growth path will, in addition to reducing GHG emission, support the protection of natural

Agriculture is identified as the sector most vulnerable to climate change in Cambodia. It is also critical to Cambodia's GDP, employment, rural development and food security. There is however, with the right support, a range of ways in which Cambodia can adapt to the risk posed by climate change.

There are numerous ways the private sector can play a key role in adapting to climate change, for example, the development of agriculture, hydro-power and insurance. Rural farmers are an important contributor to the private sector, and economic development collectively, as they are an important part of the agriculture supply chain. The development of climate-resilient irrigation systems for the entire country is a significant task. While much of this work will be done by the public sector, there remains scope for the private sector to play a role in delivering, operating and maintaining irrigation systems

The CDM is a mechanism with on-going potential and application in Cambodia. At present, major emission sources in Cambodia such as enteric fermentation, rice cultivation and agricultural soils are not included in the CDM.

REDD+ presents significant opportunities for emission reductions in Cambodia and has strong Government support. REDD+ could play an important part in this sink creation.



**Box 1: Opportunities for REDD in Cambodia** (Second Communication Report, 2010)

'The RGC is firmly committed to utilizing this mechanism [REDD] to protect its forests, which presently cover 59 percent of our country, and to improve the livelihoods of Cambodians living in and near the forests.' H.E. Ty Sokhun, Former Head of the Forestry Administration.

The Forestry Administration, along with Pact and Terra Global Capital, has recently developed Cambodia's first REDD carbon offset project. Introduced in December 2007, the project involves 13 community forestry groups which protect 67,783 ha of forest in the northwestern province of Oddar Meanchey. The project is expected to generate an estimated 7.1 million tons of CO₂ offset credits over 30 years (PACT, 2008). It demonstrates that a highly valuable community-based REDD project can successfully be brought to market.

The project is one of the first to use a new methodology and be submitted under both the Voluntary Carbon Standard (VCS) and the Climate Community Biodiversity Alliance (CCBA) guidelines. It is being submitted to both certifiers to boost the quality of the resulting credits. Forests in Oddar Meanchey province have been under pressure, with an annual deforestation rate of 2 percent from 2002 to 2006. A growing number of communities in the province have been protecting the remaining natural forest as community forest areas. The project supports sustainable forest management and livelihood development by providing financing through carbon credits, generated through forest protection. Funding was provided by Danida, DFID, NZAID and the Clinton Climate Initiative.

The RGC has confirmed its high-level commitment to sustainable forest management by local communities. The Community Forestry Sub-Decree (2003) and the Community Forestry Guidelines (2006) provide the legal framework for establishing community forests by enabling local communities to obtain rights to forest resources. They lay the foundation for the future expansion of the community forestry/REDD model.

Under Government Decision No 699, the FA is assigned as the agency to sell forest carbon credits in Cambodia, which will be used to (i) improve the forest quality (ii) maximize benefits to local communities participating in the project activities and (iii) study the potential area for new REDD projects in Cambodia. A minimum of 50 percent of net income after project costs will flow directly to local communities. The DG is clear evidence of the serious support the project commands at the highest level of Government.

The Oddar Meanchey project is a critical first step in establishing a Community Forestry-REDD model that can be applied elsewhere in Cambodia. Lessons learnt include: the need for a formal feasibility study; a clear understanding of the division of benefit sharing upfront; at least two years of startup funding needs to be in place before a Community /REDD initiative is embarked on; a sub-national approach is a good interim measure to achieve fast action pending the development of a national carbon accounting system and framework; high-level Government engagement is critical; and, technical requirements are high, particularly for VCS/carbon modeling which involve specialist expertise. In developing countries such as Cambodia, human and financial resources to conduct this work are limited and capacity building and financial support are needed.



Policy recommendations

- Cambodia should focus on the adaption measures covering Agriculture, Water Resources, Forestry, Coastal Zones and Health;
- Build resilience for rural livelihoods through strengthening community-based adaptation;
- Encourage local actions for climate change resilience;
- Build awareness, knowledge and capacity on adaptation and resilience;
- Ensure secure and reliable access to finance to address climate change issues;
- Strengthen access rights of local people to reduce land use conflicts and build their foundation for climate resilience;
- Promote climate change mainstreaming into the decentralization and deconcentration programme dealing with agricultural extension services, environmental quality and safety, fisheries and forestry;
- Strengthen and build technical capacity;
- Mobilize resources for implementation of adaptation and mitigation projects;
- Promote cooperation and coordination for actions, education and awareness raising, research work, strengthening the role of the private sector;
- Apply ecosystem based approaches and regional land use planning to address climate change issues;
- Build adaptive and learning institutions;
- Develop policy and strategic planning;
- Develop and implement climate change strategic plan at national, sectoral, and sub-national levels;
- Develop a credible and attractive climate change financing framework to support broad based climate change responses;
- Encourage Clean Development Mechanism (CDM);
- Implement a National Green Growth Program; and
- Develop and implement REDD+ Strategy.

Summary of Opportunities and Challenges

| Opportunities/Strengths | Challenges/Weaknesses |
|---|---|
| <ul style="list-style-type: none"> • Institutions established in place to deal with climate change • Have relevant laws and policies such PA law, forest law, water law etc. and REDD Road+ Map in place to implement • There are numerous ways the private sector can play a key role in adapting to climate change, for example, the development of agriculture, hydro-power and insurance. Rural farmers are an important contributor to the private sector, and economic development collectively, as they are an important part of the agriculture supply chain • Cambodia is in the process of developing its domestic energy supply, providing the opportunity to follow a sustainable development path, which can be replicated for other countries • REDD+ presents significant opportunities for emission reductions in Cambodia and has strong Government support. REDD+ could play an important part in this sink creation | <ul style="list-style-type: none"> • Coordination is limited to ensure the flow of information • Enforcement is still difficult • Balance of forest cover with the trend of conversion of forest land into large agricultural farm • Floods occur every year, thus water-borne diseases are challenges • Agriculture is important to the country, it is quite easily affected by climate change • Human and financial resources are challenges for the country to address |



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Thematic 3.14

Agriculture and Food Security

Progress

Progress on policy and institutional framework

Key ministries in charge of agriculture and food security are the Ministry of Agriculture, Forestry and Fisheries (MAFF), Ministry of Water Resources and Meteorology (MoWRAM) and Ministry of Rural Development (MRD). Under MAFF, there are the General Departments of Agriculture, Fisheries Administration, Animal Health, Production, and the Cambodian Rice Development Institute (CARDI).

Several policies and laws have been produced within the framework of agriculture and food security. Among those are the Phyto-sanitary Inspection Sub-decree 2003, a Sub-degree on Sanitary Inspection of Animal and Animal products 2002, a policy paper on The Promotion of Paddy Production and Rice Export (2010), the Law on Crop Seeds Management and Right of Breeders 2008, Law on Management of Quality and Safety on Products, Goods and Services 2000. The Agricultural Land-use Management Law is being drafted with the aim to regulate farming land for the purpose of agricultural development.

Cambodia has shaped its policy toward enhancing rice production through developing a policy paper on The Promotion of Paddy Production and Rice Export, 2010. The government regards rice as white gold. Paddy production could reach 7.3 million tons in 2010-2011, after a remarkable rebound over the past decade. With an estimated domestic consumption of approximately 3.14 million tons of paddy, and a provision for seeds and harvest loss, statistical data shows a surplus of 3.32 million tons, which can be processed into rice for export.

As elaborated in a chapter on Climate Change, the Strategy for Agriculture and Water (SAW) for the period 2010-2013 was developed. It will promote regulation, capacity building, research and education, food security, water resource management, agriculture land management and agricultural business marketing. MAFF also prepared annual reports and set direction on agriculture development including crop production, animal

production and fisheries production, to charge people and sell abroad for the national income. Most work is concentrated in the export of local crop products such as rice, cassava, soybean, corn and other agricultural non-food products.

Further to agriculture development and sustainability in Cambodia, modern bio-technology allows production of living modified organisms (LMO) like crops, animals, fish, trees and micro-organisms that are resistant to specific environments or traits. Cambodia passed a law on bio-safety, which allowed the country to regulate LMOs in a sustainable manner, as many developed and developing countries turned to modern bio-technology as a solution to food security. In 2010, the government established a Secretariat of the National Steering Committee for Bio-safety to oversee overall policy on bio-safety and modern bio-technology, including reviewing applications for LMOs' release into the environment and monitoring the Cartagena Protocol on Bio-safety implementation.

Progress on national indicators

Most Cambodian households depend on agriculture and livestock rearing, fisheries and forest exploitation for their living. Crops account for about 60 percent of agricultural output, with rice contributing 40 percent, livestock 27 percent, fisheries 10 percent and forestry 3 percent.

Sixty-five percent of the farming population is female and 80 percent of these women work in the agricultural sector. Women took over traditional roles of men, such as ploughing in farming, during the war years and this has continued to the present time (Secretariat of State for Women's Affairs, 1995). In addition, women are responsible for marketing agricultural produce in local markets.

More than 70 percent of the population, or about 9.5 million people, are engaged in agriculture to some extent (FAO/MoP 2010). The vast majority are smallholder farmers.

Rice exports could reach 3 million tons, with the total export due amounting to USD 7.1 billion





(approximately 20 percent of GDP) or to about USD 600 million (approximately 5 percent of GDP) in value added contribution to the national economy. Rice production reached 2.67 million tons, 2.77 million tons and 2.766 million tons in 2009, 2010 and 2011 respectively (MAFF Annual Report, 2011).

As a result, Cambodia has secured 2.24 million tons of rice, 2.51 million tons and 2.78 million tons in 2009, 2010 and 2011 respectively to address food security.

Agriculture is a key sector in economy development, with 28.4 percent of GDP in 2011. The share of sub-sectors in agriculture: crop productivity occupies 54 percent, fisheries production 25 percent, animal production 15 percent and forestry 6 percent (MAFF Annual Report 2011).

Based on the UN Food and Agriculture Organization (FAO), in late 2008 the Cambodian population used on the average 71 percent of its total monetary expenditure on food products. Survey data shows there were clear changes in the affordability of food during 2008-2009, with 21 percent of households being able to afford less rice than the year before and 57 percent being able to afford the same as

before. The rest were able to buy more rice. The statistics for vegetables and fruit are similar to those of rice. The clearest changes happened in the prices of fish and meat, which have become less affordable for approximately one-third of the population. These foods have become more affordable for about 15 percent of the population, and for the rest there has been no change.

Availability of rice was quite good for the urban respondents, with only 7 percent not able to buy enough rice for their households during 2008-2009. The situation was a little more difficult with fish and meat, with 10 percent not able to buy enough fish and 17 percent not able to buy enough meat.

Agriculture, representing about one-third of GDP, was disrupted by the most severe flooding in more than a decade in September and October 2011. The floods lowered wet-season rice production, though output in the dry season increased, and fisheries production rose by 4.5 percent. Agricultural growth overall expanded by an estimated 3.3 percent (ADB, 2011).

Table 27: Rice Production 2007-2011

| Items/Year | 2007 | 2008 | 2009 | 2010 | 2011 | Comparison 2010/2011 |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|----------------------|
| Cultivated land (ha) | 2,585,905 | 2,615,741 | 2,719,080 | 2,795,892 | 2,968,529 | 6.17% |
| Harvested land (ha) | 2,566,952 | 2,613,363 | 2,674,603 | 2,777,323 | 2,766,617 | -0.39% |
| Yield (ton/ha) | 2.621 | 2.746 | 2.836 | 2.970 | 3.173 | 6.85% |
| Production (ton) | 6,727,127 | 7,175,473 | 7,585,870 | 8,249,452 | 8,779,365 | 6.42% |
| Grain leftover (ton) | 1,649,640 | 2,025,033 | 2,244,598 | 2,516,752 | 2,780,328 | 10.47% |
| Rice leftover (ton) | 2,577,562 | 3,164,114 | 3,507,185 | 3,932,425 | 4,344,263 | 10.47% |

MAFF Annual Conference, 2011.



The government also improved other crop production for feeds, food and processing. This included corn, cassava, maun bean and soy bean. Cultivated land for corn reached 174,257 ha in 2011, while cassava was 391,714 ha in 2011. In total for

four crops, the cultivated land was 704,666 tons in 2011. Remarkably in 2012, cassava production would rise by double due to increased cultivation land and high demand.

Table 29: Cultivated land in hectares for Corn, Cassava, Maun bean and Soybean

| Crops | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Corn | 80,470 | 93,362 | 91,203 | 90,732 | 108,836 | 142,391 | 163,106 | 206,058 | 213,622 | 174,257 |
| Cassava | 19,563 | 25,740 | 22,749 | 30,032 | 97,918 | 108,122 | 179,945 | 160,326 | 206,226 | 391,714 |
| Maun bean | 39,802 | 44,940 | 39,089 | 60,570 | 85,140 | 65,261 | 45,605 | 49,599 | 69,206 | 68,111 |
| Soybean | 33,438 | 53,064 | 84,886 | 118,760 | 75,053 | 76,981 | 74,413 | 96,388 | 103,198 | 70,584 |
| Total for four crops | 173,273 | 217,106 | 237,927 | 300,094 | 366,947 | 392,755 | 463,069 | 512,371 | 592,252 | 704,666 |

MAFF Annual Conference, 2011.

Poultry production reached 21.62 million head in 2011, compared to 2007 where production reached only 15.8 million head. Livestock rearing is a key part

of rural livelihoods, providing a means for saving in the case of larger livestock, and sources of income and food in regard to pigs and poultry (Tong 2009).

Figure 5: Poultry Production 2007-2011



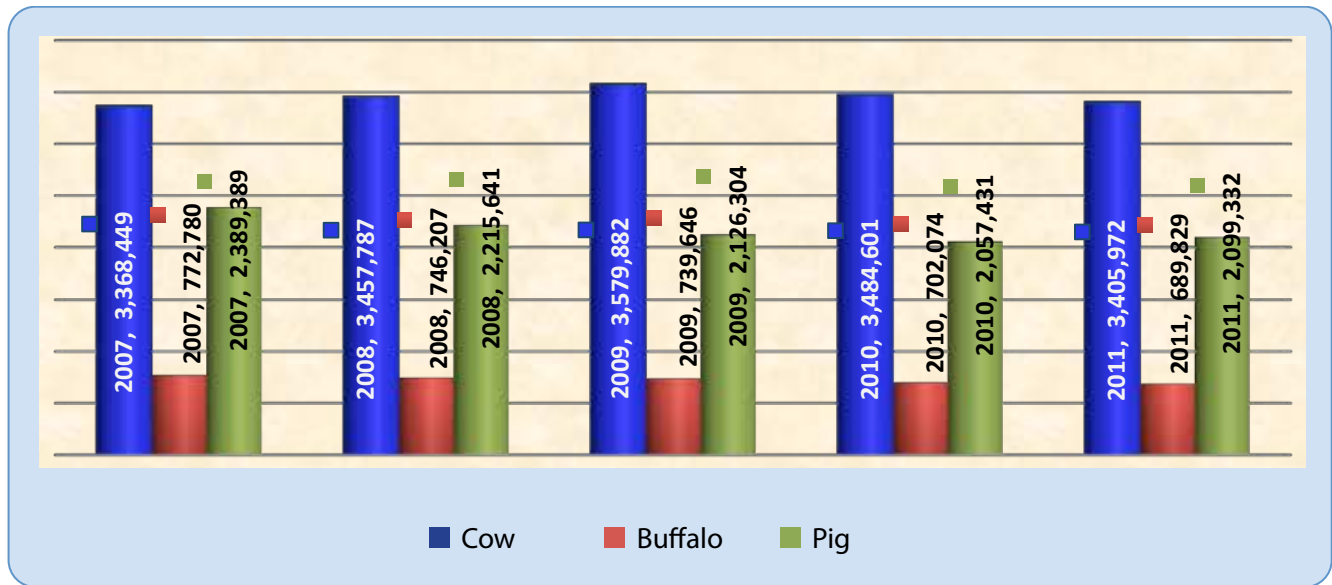
MAFF Annual Conference, 2011.

Cambodia produced more than 3.36 million head of cattle in 2007, compared to 3.4 million head in 2011.

Buffaloes were 772,780 head in 2007, compared to 689,829 head in 2011. Pigs were 2.38 million head in 2007, compared to 2.09 million head in 2011.



Figure 6: Animal husbandry 2007-2011

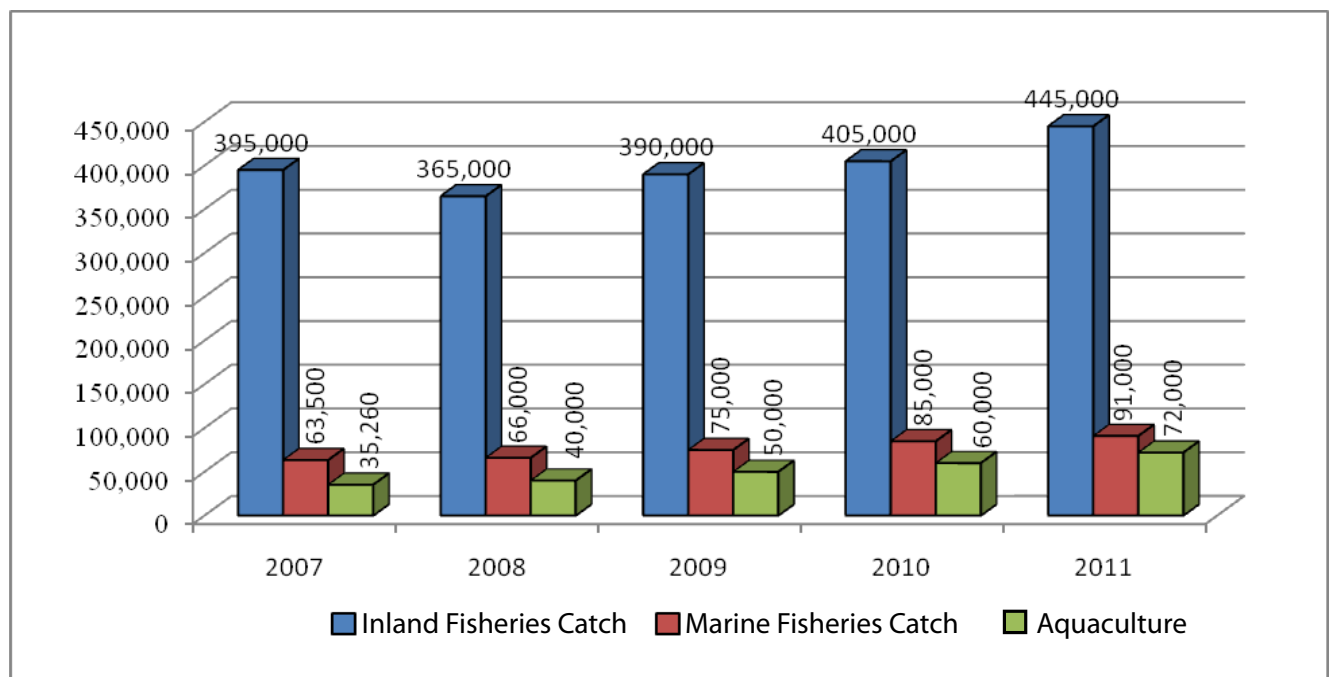


MAFF Annual Conference, 2011.

Cambodia's inland fisheries produced 395,000 tons in 2007, compared to 445,000 tons in 2011, indicating a steady increase. Marine fisheries production was 63,500 tons in 2007, compared to 91,000 tons in 2011. Aquaculture production was 35,260 tons in 2007 compared to 72,000 tons in 2011.

Cambodia supported the establishment of Community Fisheries and is turning over commercial fishing lots to local communities (FiA 2009).

Figure 7: Inland and Marine Fisheries Catch 2007-2011



MAFF Annual Conference, 2011.



Key issues and challenges

- The lack of proper milling infrastructure means that many poor farmers are unable to produce rice locally that is ready to eat. They are currently obliged to have their rice milled across the border in neighbouring countries. Once this is done, they have to buy it back at a much higher price – a serious concern given the continuing risk of food price volatility.
- Storage facilities and irrigation systems are also typically lacking. Only 15 percent of rice fields use irrigation, while these irrigated fields account for 40 percent of the country's rice production.
- The surplus of paddy for export remains limited. If Cambodia wishes to export 3 to 4 million tons of rice per year, at least 10 to 11 million tons of paddy must be produced. This requires the country to address a number of challenges constraining productivity such as land management, irrigation systems, research and development and extension services.

Policy recommendations

- The Ministry of Water Resources and Meteorology (MoWRAM) shall improve the efficiency of water management on existing water resources, and strengthen technical capacity for designing and selecting investment projects, using experiences shared from neighbouring countries with similar geography and weather conditions. The practical measures include:
 - Maximizing the use of existing water resources in the system. In future, attention should be focused on economic efficiency and sustainability of the

projects; Investing in small-scale irrigation networks to benefit from existing or future large-scale irrigation facilities.

- Encouraging NGOs and charitable people to participate in building small-scale irrigation canals.
- Strengthen institutional capacity of MoWRAM in the maintenance and management of water user communities.
- The Ministry of Economy and Finance (MEF) and National Bank of Cambodia (NBC) must review measures to facilitate and encourage commercial banks and other financial institutions to extend more credit to farmers.
- MAFF should focus on its priority areas: (1) Enhancement of agricultural productivity and diversification, (2) promotion of agricultural production and market access, (3) strengthening institutions, legal framework and human resource development, (4) sustainable management of fisheries resources and (5) sustainable management of forest resources.
- Ministry of Environment should enhance its capacity to implement the law on bio-safety to ensure safe use of LMOs in the agriculture sector. Capacity of LMO detection has to be improved to be able to analyze DNA of LMOs crops, animals, trees and fish contributing to food security and environmental protection, taking human health into account.
- The Government should enable investment in rice milling to promote markets throughout the region and the world while rice production is increasing steadily.



Summary of Opportunities and Challenges

| Opportunities/Strengths | Challenges/Weaknesses |
|--|---|
| <ul style="list-style-type: none"> • Have established expert institution for agriculture and food security • Several prices of agricultural crops are increasing such as rice, soy bean, and rubber. This could trigger the country to grow more rice and rubber trees. • Agricultural land is expanded every year to meet the demand of agro-industry • Well-established agricultural market in neighbouring countries gives opportunity for Cambodian farmers to promote their production • Government has a pragmatic policy on paddy production promotion, which gives the country another player in rice market in the world | <ul style="list-style-type: none"> • The lack of proper milling infrastructure means that many poor farmers are unable to produce rice locally that is ready to eat. They are currently obliged to have their rice milled across the border in neighbouring countries. Once this is done, they have to buy it back at a much higher price • Storage facilities and irrigation systems are also typically lacking. Only 15 percent of rice fields use irrigation, while these irrigated fields account for 40 percent of the country's rice production • The surplus of paddy for export remains limited. If Cambodia wishes to export 3 to 4 million tons of rice per year, at least 10 to 11 million tons of paddy must be produced. This requires the country to address a number of challenges constraining productivity such as land management, irrigation systems, research and development and extension services |

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Thematic 3.15

Disaster Risk Reduction

Progress

Progress on policy and institutional framework

Cambodia is one of the most disaster affected countries in South East Asia, and the impact of these disasters is felt most in rural areas, where it is estimated that 80 percent of the poor reside (CSES, 2004). Over the past 10 years, Cambodia has been affected by a series of exceptional floods and by widespread, but highly localized, agricultural droughts. As a result, the Government has become aware that without serious efforts in risk reduction disasters will increasingly become a major obstacle to the achievement of the country's development aspirations, particularly to its highest priority of poverty reduction.

The country's National Poverty Reduction Strategy (NPRS-2002) identifies natural disasters, particularly flood and drought, as critical factors that have, and continue to, increase socio-economic vulnerabilities of the rural poor, including placing a disproportionate burden of coping with the effects of disasters on women.

In 2008, Cambodia approved the Strategic National Action Plan for Disaster Risk Reduction (DRR) 2008-2013. This action plan is to reduce the vulnerability of its people, especially the poor, to the effects of natural, environmental and human-induced hazards. This can best be achieved by strengthening the disaster management system in Cambodia and by incorporating a disaster risk reduction perspective into the policies, strategies and plans of government, in all sectors and at all levels. The Action Plan was formulated to serve as the "road map" or guide for strengthening and undertaking disaster risk reduction in Cambodia.

The National Strategic Development Plan (NSDP) 2006 -2010, which synthesized the goals and objectives of the Rectangular Strategy (2004), NPRS and the Cambodia Millennium Development Goals (CMDGs), does not directly address disaster risk reduction, but incorporates it in the areas of social

welfare, water resource management, agriculture and rural development.

In 2006, the Royal Government of Cambodia approved the National Adaptation Program of Action to Climate Change (NAPA). Both the DRR Action Plan and the NAPA seek to address community vulnerability to hazards, although adaptation to climate change focuses on responding to extreme weather events and slow-onset changes in climate, whereas disaster risk reduction focuses on wider issues, not just climate-related disasters.

Despite a number of government policies and pronouncements recognizing the importance of disaster risk reduction, the actual practices of government institutions and local governments remain focused primarily on responding after a disaster.

The National Committee for Disaster Management (NCDM) and its key members, particularly the Ministries of Interior and Rural Development, will provide overall facilitation and coordination, while the responsibility for implementation rests mainly on the relevant government ministries and local governments, in collaboration with other relevant government institutions.

Individual specialized ministries and agencies are already addressing different aspects of disaster management and risk reduction. These include the Ministry of Water Resources and Meteorology (MoWRAM), Ministry of Agriculture Forestry and Fisheries (MAFF), Ministry of Health (MoH), Ministry of Environment (MoE), Ministry of Interior (Mol), Ministry of Public Works and Transport (MoPWT), Ministry of Rural Development (MRD), Ministry of Land Management, Urban Planning & Construction (MoLMUPC) and the Ministry of Education, Youth and Sport (MoEYS).

Government commitment and political will towards the adoption and implementation of the plan will be demonstrated by the issuance of a policy statement



and executive order that will require all relevant departments/non-departmental agencies and local governments to implement the components of the plan relevant to their institutional mandates.

An independent Technical Advisory Committee (TAC) consisting of experts from relevant local and international institutions will be formed to provide technical support and guidance in the implementation of the Action Plan for DRR. These will include key disaster management and donor institutions and will also include representatives from scientific, academic institutions and the private sector.

The Ministry of Planning, in coordination with the NCDM, will be responsible for monitoring and reporting on the implementation of the plan and ensuring that this is undertaken in synergy with the overall medium- and long-term development plans of the country. To ensure the accountability of disaster risk reduction on development policy, measurable achievement indicators will be developed. Based on these indicators annual reports will be prepared to enable stakeholders to see progress. The DRR National Platform members, as a collective body, will be responsible for conducting an annual review of the Action Plan including revising and updating the plan based on information gathered from monitoring and evaluation exercises and other special studies that may be conducted.

In general, the effectiveness of the disaster risk reduction system will be measured through the following indicators: approval of a comprehensive disaster risk management law; a capable and functional national-level multi-sectoral platform; a level of funding allocated to disaster risk reduction, emergency response and recovery; capable and functional provincial authorities; risk reduction and climate change adaptation are mainstreamed into development planning and implementation, and a reduction in the number of deaths, injuries, physical and economic losses due to disasters.

Progress on national indicators

The During the recent floods in 2012, the Government immediately responded to the news of the disaster by mobilizing the national and local administrations, armed forces and volunteer groups to rescue stranded people and provide immediate

relief, including temporary shelter, medicine and food. The Office of the Council of Ministers and the National Committee for Disaster Management (NCDM) oversaw the immediate response efforts. The Cambodian Red Cross (CRC) and the country's many partners in development efficiently supplemented the Government's efforts with quick relief actions.

The Government gave high priority to restoring livelihood opportunities, while starting to rehabilitate the most urgent infrastructure. Senior officials from the Government met with bilateral and multilateral agencies to discuss the impact of the floods that resulted from Typhoon Ketsana, and to mobilize emergency assistance.

The Cambodian Red Cross also took immediate action, working in close coordination with the provincial and district disaster management offices and local authorities to deliver basic goods and services in the most effective way to the most affected people.

The actual progress on national indicators has been reported in various sectors such as health status in rural areas prone to frequent floods and droughts, agriculture, rural education, access to clean water and climate change. This part is not a stand-alone section but is more or less a cross-cutting issue reported on thematic areas.

There are currently 103 water utilities across Cambodia, including private and public utilities. Among those, two entities are autonomous, 14 entities are under direct supervision of MIME and 87 utilities are located in urban areas.

The Government set up a policy to encourage private-sector participation in the urban water supply sector, as the private sector could provide piped water to 21 percent of the total population of the country (13,381,740 inhabitants); yet, the part of the private sector in this is still very limited. The majority of urban water supply is still provided by public utilities, reaching an estimated 1,057,157 people. Among these, 83.3 percent (880,056 people) are under the service of the Phnom Penh Water Supply Authority.

**Table 30: Summary Natural Disasters in Cambodia, 1987-2007**

| | No. of Events | Killed | Injured | Homeless | Population Affected | Damage USD\$ (in 000's) |
|-----------------|---------------|--------|---------|----------|---------------------|-------------------------|
| Flood | 12 | 1,125 | 53 | 275,805 | 9,514,614 | 327,100 |
| avg. per event | | 94 | 4 | 22,984 | 792,885 | 27,258 |
| Drought | 5 | 0 | 0 | 0 | 6,550,000 | 138,000 |
| avg. per event | | 0 | 0 | 0 | 1,310,000 | 27,600 |
| Epidemic | 8 | 788 | 0 | 0 | 413,570 | 0 |
| avg. per event | | 99 | 0 | 0 | 51,696 | 0 |

EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net- Université catholique de Louvain - Brussels – Belgium quoted from SNAP for DRR 2008-2013.

Key issues and challenges

- Early warnings on flood and drought are weak and still a challenge for the country to overcome to avoid substantial damage in property;
- Capacity preparedness of local community and sub-national government in the case of natural disasters is not yet ready;
- The government has established an institution to deal with risk from natural disasters but its communication is still questionable;
- Climate change is a global, trans-boundary issue causing flood and drought not only to Cambodia, but many countries around the world. Cambodia must challenge this issue using its existing means;
- Poverty is a key determinant of people's vulnerability to natural disasters and their ability to recover. But natural disasters also cause people to become poor or, in some cases, destitute.
- In 2003, the NCDM and the UN World Food Programme (WFP) mapped the most disaster-prone areas of the country and approximately 500 communes were identified as being prone to natural disasters, 260 prone to floods and 293 prone to drought. These represent about one third of the total number of communes in the country. This represents a challenge: that the government must restore damage and mitigate in the future;
- Disasters affect a significant proportion of Cambodians, irrespective of wealth. However, the poorer the household, the more significant the implications. Despite a general reduction in the percentage of people affected by disasters, the rate of improvement is much lower for poor and middle-

income groups. Dealing with disasters thus remains a problem that is intimately linked with poverty.

Policy recommendations

- Develop a policy reform that focuses on strengthening resilience and incorporating disaster risk reduction and climate change adaptation mechanisms.
- Develop institutional capacity and strengthen the governance functions (accountability, participation and capacities for coordination).
- Promote planning and mainstreaming disaster risk reduction into development agenda at national, sectoral and sub-national levels.
- Implement actions that incorporate disaster risk reduction with social protection schemes.
- Mobilize financial resources and promote human resource development to address climate change and disaster related issues at both national and sub-national levels.
- Address immediate needs on safety nets for disaster risk reductions.
- Promote community based disaster risk management and public education.
- Develop disaster information management system to record loss and damage and to promote effective recovery responses.
- Ensure disaster risk reduction becomes both a national and a local priority through formulating a national disaster risk management policy and legislation; creating and strengthening a national



disaster risk reduction coordination mechanism; integrating of disaster risk reduction into the national development planning.

- Strengthen Sub-national and Community Disaster Risk Management Capacities.
- Mainstream DRR into policies and programs of relevant Government Ministries.

• Identify, assess and monitor hazard risks and enhance early warning.

- Use knowledge, innovation and education to build a culture of safety and resilience.
- Strengthen disaster preparedness for effective response at all level.

Summary of Opportunities and Challenges

| Opportunities/Strengths | Challenges/Weaknesses |
|--|---|
| <ul style="list-style-type: none"> • Institution has been established to deal with risk from natural disasters • Can mobilize resources through Cambodian Red Cross to cope with natural disasters • Cambodia is surrounded by mountainous areas, which serve as a barrier to reduce risk from natural disasters such as storms | <ul style="list-style-type: none"> • Early warning on flood and drought are weak and still a challenge for the country to overcome to avoid substantial damage in property • Capacity preparedness of local community and sub-national government in the case of natural disasters is not yet ready • The government has established an institution to deal with risk from natural disasters but its communication is still questionable • Poverty is a key determinant of people's vulnerability to natural disasters and their ability to recover. But natural disasters also cause people to become poor or, in some cases, destitute • Disasters affect a significant proportion of Cambodians, irrespective of wealth |

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Section 4



Summary and Conclusions







Summary and Conclusions 4.1

Summary of Strengths/Opportunities and Weaknesses/Challenges

| Opportunities/Strengths | Challenges/Weaknesses |
|---|--|
| Identified during National Dialogue²⁷⁶ | |
| <ul style="list-style-type: none"> • Strong donor support (NGOs as well as bilateral and multilateral donors) • Many laws and policies in various sectors, forming the basis for a solid and comprehensive legal and policy framework • Institutional framework in place for climate change • Strong political will | <ul style="list-style-type: none"> • Weak law enforcement (3) • Weak human resources (3) • Negative social and environmental impacts of economic land concessions • Economic and social impact of landmines • Lack of coordination between various stakeholders (NGOs, private sector and Government) • Impacts of climate change • Weak infrastructure • Weak accountability and transparency |
| Progress in advancing sustainable development in Cambodia | |
| Economic Development | |
| <ul style="list-style-type: none"> • Sustained high levels of economic growth in the past decade • Increasing capacity to promote inclusive growth, as witnessed in gradual reduction of poverty levels and increased access to basic services, especially in urban areas • High capacity of economy to rebound from external economic shocks • Niche sectors: garments and tourism • Good location in South East Asia • Open economy • Abundant land and agricultural resources | <ul style="list-style-type: none"> • Narrow production base of the economy • Trade deficit • The open character of the economy makes Cambodia vulnerable to international shocks • The productivity of the agricultural sector is not fully utilized • High cost of promoting green growth |
| Energy | |
| <ul style="list-style-type: none"> • High potential for development of renewable energies, from biomass, wind and solar energy²⁷⁷. • Neighbouring countries with surplus power supply. | <ul style="list-style-type: none"> • Increasing gap between supply and demand for energy. • High cost of electricity. • Difficulty attracting investors to non-hydro-renewable energy. • Low levels of electrification, especially in rural areas. • Continued dependency on wood fuel for |

²⁷⁶The general strengths and weaknesses were identified by more than one breakout group in the National Dialogue on Rio +20. If there is no number next to the issue, it was identified by two breakout groups. If it has the number 3 in parenthesis, it was presented by 3 breakout groups.

²⁷⁷Also identified in Green Growth Roadmap 2009.



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| | cooking among the poor. |
| Information & Communication | |
| <ul style="list-style-type: none"> Exponential expansion of access to mass media, telecommunications and the internet in the past five years Exponential increase of mobile telephony in rural areas | <ul style="list-style-type: none"> Delay of approval of the Law of Telecommunications by the National Assembly to provide a more solid legal framework to the telecommunications sector Weak coordination between the Ministry of Post and Telecommunications and operators/development agencies |
| Transport & Infrastructure | |
| <ul style="list-style-type: none"> Intensive program of rehabilitation and expansion of road network, doubling the length of paved roads in the past five years. Successful implementation of Open Sky policy, with opening of new airports, the launch of a local airline and an increase in international flights to Cambodia Progress in rehabilitating and strengthening Cambodia's port infrastructure Growing interest of foreign investors in infrastructure development in the country | <ul style="list-style-type: none"> Disconnect between current infrastructure capacity – especially the road network - and connectivity needs Poor infrastructure network affects poor people disproportionately (access to markets, schools, health services) Need for systematic implementation of social and environmental safeguards to ensure social and environmental sustainability of infrastructure projects High incidence of road accidents |
| Tourism | |
| <ul style="list-style-type: none"> Growth of the tourist sector in the past twenty years, representing one of the four main drivers of economic growth, an important source of revenue for the country and a source of employment generation Cambodia's historical and cultural heritage Significant potential for ecotourism, as a way to boost rural employment and diversify rural revenues, while sustainably managing the environment | <ul style="list-style-type: none"> Sector's vulnerability to international economic environment Sector's weak stimulation of domestic production Urban bias as the sector has benefitted urban areas and their population more than rural Poor physical infrastructure in the country presents a limitation to the growth of the tourism industry |
| Social Development | |
| Poverty & Equity | |
| <ul style="list-style-type: none"> Significant reduction of poverty levels, especially in urban areas Significant improvement of HDI index, above regional and world average Efforts to systematically identify the poor through implementation of IDPoor program, provides a strong basis for future targeted anti-poverty programs Approval of Cambodia's first National Social Protection Strategy for the Poor and Vulnerable in 2011 | <ul style="list-style-type: none"> Poverty levels remain high, especially in rural areas Slow progress in reducing inequalities. The clustering of people just above the poverty line leaves a large proportion of the population vulnerable to shocks Lack of a large-scale nationwide targeted anti-poverty programme to act as a safety net for the poor |
| Health | |
| <ul style="list-style-type: none"> Significant reduction in HIV/AIDS | <ul style="list-style-type: none"> Low per capita spending on health |



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|---|--|
| <ul style="list-style-type: none"> • Significant reduction of infant mortality and child mortality • Significant reduction of maternal mortality • Significant increase in immunization coverage • Significant increase in access to health services in urban areas | <ul style="list-style-type: none"> • Embryonic social health insurance • Continuing high levels of child malnutrition • Large disparities remain between urban and rural areas, especially for the indicators of child mortality, births attended by skilled personnel and births occurring in a health facility • Poor people must pay most health-related costs, contributing to deepening their poverty, through depletion of savings or sale of assets |
| Education | |
| <ul style="list-style-type: none"> • Significant increase in literacy rates, including female • Significant increase in net enrolment rates in primary education in both urban and rural areas, including for girls • Significant increase in gross enrolment rate in secondary education | <ul style="list-style-type: none"> • Literacy gap remains between men and women, especially for women aged 25 and above • High drop-out and repetition rates in primary school – especially in rural areas - leading to low completion rates • Enrolling and retaining students beyond the primary level as enrolment rates in secondary school still remain low and completion rates even lower • Mismatch between demands of the economy and student demands in tertiary education • Weak standard enforcement weakens the quality of primary, secondary and tertiary education • Tertiary education remains out of reach for the large majority of the population |
| Mine Action | |
| <ul style="list-style-type: none"> • Significant reduction of casualties from landmines/ERW • Significant progress in mine clearance • Significant progress in implementation of baseline survey to locate remaining contamination | <ul style="list-style-type: none"> • The number of casualties from landmines/ERW remains one of the highest in the world • Large areas remain contaminated preventing access to valuable agricultural land • Funding gap for mine action in the context of declining international resources for demining • Need for greater coordination between donors and CMAA |
| Cultural Diversity | |
| <ul style="list-style-type: none"> • Diversity of culture gives Cambodia a credit in terms of culture richness to attract more visitors, human resource and various developments. • Several laws provide a special right for indigenous people to acquire land to use for up to 15 years and develop in a sustainable manner. This could increase efforts in carbon credit and REDD+ activities | <ul style="list-style-type: none"> • A number of policies put pressure on Cambodia's indigenous peoples to adapt to the majority culture, not all relevant policies in Cambodia aim at highlanders' integration. • Decentralization implies upward accountability of the commune councils to the central government. Accordingly, the roles of the Council are twofold: the first set of roles is associated with local affairs, while the second involves the performance of agency |



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|---|---|
| | <p>functions for the central government</p> <ul style="list-style-type: none"> The culture of hill tribes, including their lifestyle and agricultural practices, is difficult to integrate with Khmer culture |
| <p>Environment and Natural Resource Management</p> | |
| <p>Water Resource & Sanitation</p> | |
| <ul style="list-style-type: none"> Significant improvement in access to urban sanitation Quadrupling in access to rural sanitation Rich water resources | <ul style="list-style-type: none"> Access to urban drinking water remains low Access to rural sanitation remains low Low levels of irrigation present a major obstacle to improve rice production Depletion of fish stocks due to overexploitation |
| <p>Forest & Land Use</p> | |
| <ul style="list-style-type: none"> Solid legal framework for environmental, natural resource and land issues in place Cambodia is one of the countries in the world with the highest share of protected areas and the country in Southeast Asia with highest share of forest cover Potential of forestry sector as a driver of green growth Continuing increase in the number of community protected areas/forestry Increase in the surface of reforested areas. Rich and unique biodiversity Steady progress in distribution of land titles Strong donor support to environmental sector | <ul style="list-style-type: none"> Protected areas and Protection forests has no adequate funding to support forest and wildlife manage leading to weak in management Deforestation sometimes causes by non-forestry sectors due to competing development priorities Weak enforcement of environmental and land-related legislation. the forest are still not well demarcated on the ground Many governmental agencies involve in forest management Anarchic forest land grabbing expect to arise |
| <p>Climate Change</p> | |
| <ul style="list-style-type: none"> Institutions established in place to deal with climate change Have relevant laws and policies such PA law, forest law, water law etc. and REDD+ Road Map in place to implement There are numerous ways the private sector can play a key role in adapting to climate change, for example, the development of agriculture, hydro-power and insurance. Rural farmers are an important contributor to the private sector, and economic development collectively, as they are an important part of the agriculture supply chain Cambodia is in the process of developing its domestic energy supply, providing the opportunity to follow a sustainable development path, which can be replicated for other countries REDD+ presents significant opportunities for emission reductions in Cambodia and has strong Government support. REDD+ could play an important part in this sink creation | <ul style="list-style-type: none"> Coordination is limited to ensure the flow of information Enforcement is still difficult Balance of forest cover with the trend of conversion of forest land into large agricultural farm Floods occur every year, thus water-borne diseases are challenges Agriculture is important to the country, it is quite easily affected by climate change Human and financial resources are challenges for the country to address |



| Disaster Risk Reduction | |
|--|---|
| <ul style="list-style-type: none"> • Institution has been established to deal with risk from natural disasters • Can mobilize resources through Cambodian Red Cross to cope with natural disasters • Cambodia is surrounded by mountainous areas, which serve as a barrier to reduce risk from natural disasters such as storms | <ul style="list-style-type: none"> • Early warning on flood and drought are weak and still a challenge for the country to overcome to avoid substantial damage in property • Capacity preparedness of local community and sub-national government in the case of natural disasters is not yet ready • The government has established an institution to deal with risk from natural disasters but its communication is still questionable • Poverty is a key determinant of people's vulnerability to natural disasters and their ability to recover. But natural disasters also cause people to become poor or, in some cases, destitute • Disasters affect a significant proportion of Cambodians, irrespective of wealth |
| Agriculture and Food Security | |
| <ul style="list-style-type: none"> • Have established expert institution for agriculture and food security • Several prices of agricultural crops are increasing such as rice, soy bean, and rubber. This could trigger the country to grow more rice and rubber trees. • Agricultural land is expanded every year to meet the demand of agro-industry • Well-established agricultural market in neighbouring countries gives opportunity for Cambodian farmers to promote their production • Government has a pragmatic policy on paddy production promotion, which gives the country another player in rice market in the world | <ul style="list-style-type: none"> • The lack of proper milling infrastructure means that many poor farmers are unable to produce rice locally that is ready to eat. They are currently obliged to have their rice milled across the border in neighbouring countries. Once this is done, they have to buy it back at a much higher price • Storage facilities and irrigation systems are also typically lacking. Only 15 percent of rice fields use irrigation, while these irrigated fields account for 40 percent of the country's rice production • The surplus of paddy for export remains limited. If Cambodia wishes to export 3 to 4 million tons of rice per year, at least 10 to 11 million tons of paddy must be produced. This requires the country to address a number of challenges constraining productivity such as land management, irrigation systems, research and development and extension services |



4.2 Policy Recommendations made in National Dialogue on Rio+20

| | Economic | Social | Environment | Integrated Sustainable Development |
|-------------------|---|--|--|--|
| Strengths | <ul style="list-style-type: none"> • High levels of GDP growth • Growth of tourism, agriculture and garment sectors • Significant growth of construction sector • Increase in FDI • Increase in number of training schools supervised by Ministry of Labour • Investment in infrastructure • Improvement of Government policies | <ul style="list-style-type: none"> • ID Poor Mechanism • Many NGOs working in rural and urban areas • Harmonization in society • Means of communication • Cambodian Millennium Development Goals • National Strategy Development Plan • Natural resources • Geography • Political Stability/ national unity | <ul style="list-style-type: none"> • Many laws • Specialized committees (e.g. Climate Change) • Support from multiple national & international donors • 23 Protected Areas • Impact Assessment of development projects • Political involvement and will • Close to reaching MDG goals | <ul style="list-style-type: none"> • Various policy frameworks (land management, forest management) • Various institutions (NCDM, NCCC, and so on) • Political will |
| Weaknesses | <ul style="list-style-type: none"> • The quality of education and vocational training is limited • The population grows very fast • The capacity and skills of government staff, and private sector employees • The lack of cooperation between government, private sector and NGOs • Insufficient infrastructure • High cost of electricity and water supply | <ul style="list-style-type: none"> • Limitation of human resources • Not fully inclusive economic growth • Limitation of preventive mechanisms especially disaster management • Land use planning • Limited law enforcement • Accountability and transparency | <ul style="list-style-type: none"> • Lack of Human Resources • Less participation from stakeholders • Lack of cooperation between relevant ministries for law enforcement and legal compliance • Public awareness (especially for citizens) • Lack of public participation • Lack of regional | <ul style="list-style-type: none"> • Lack of coordination and communication • Capacity building is limited • Workload and ownership • Information sharing • Accountability and transparency • Sustainable institutions |



| | | | | |
|----------------------|--|--|---|---|
| | <ul style="list-style-type: none"> • The subjects that students learn at university do not respond to market needs • Lack of market information | | <p>mechanism</p> <ul style="list-style-type: none"> • Protected areas and Protection forests has no adequate funding to support forest and wildlife manage leading to weak in management | |
| Opportunities | <ul style="list-style-type: none"> • Cambodia is a Member of ASEAN, WTO • We are located in a tropical area which provides opportunities for a rich agriculture. • Duty free and quotas for government exports to EU and USA • Government policy to encourage tax-free exports for agriculture investors • Regional & ASEAN integration | <ul style="list-style-type: none"> • Development potentiality (investment, physical infrastructure) • Many young people in the workforce • Many NGOs • General trade preference • Land availability | <ul style="list-style-type: none"> • Much support from donors • Rich water resources • Cambodia is one of the countries in the world with the highest share of protected areas and the country in Southeast Asia with highest share of forest cover. • There are numerous ways the private sector can play a key role in adapting to climate change, for example, the development of agriculture, hydro-power and insurance | <ul style="list-style-type: none"> • Support from donor in terms of budget and technology • Moving in the right development direction • Cambodian popularity in regional and global fora |
| Challenges | <ul style="list-style-type: none"> • Insufficient irrigation system • Landmines • Land concessions climate change & disasters • Deforestation • High levels of illiteracy | <ul style="list-style-type: none"> • Mining • Vulnerability (poor households) • Limitation of infrastructure and other social services • Drugs | <ul style="list-style-type: none"> • Climate Change Impacts • Economic and social land conflicts | <ul style="list-style-type: none"> • Limited financial and human resources • New tasks, new concept for Cambodia • Complexity of issues • Lack of coordination for new issues |



| | | | | |
|---|---|--|---|---|
| <p>Policy Recommendations by breakout groups identified in National Dialogue</p> | <ul style="list-style-type: none"> • Technology & science innovation • Improve educational system • Continue enhancing worker skills through vocational training. • Improvement of people's livelihoods | <ul style="list-style-type: none"> • Improve land management • Improve public social services (health, education, information) • Enhance legal system and law enforcement | <ul style="list-style-type: none"> • Law enforcement & law compliance • Poverty Reduction • Public participation • Establish regional Committees • Provide appropriate social land concessions | <ul style="list-style-type: none"> • Finalize watershed development plan for a more integrated development of the Tonle Sap area • National budget should be allocated in the right way • Capacity building for sustainable institutions • Behaviour change • Effective coordinating mechanism |
| <p>Other Policy Recommendations made in National Dialogue</p> | | | <ul style="list-style-type: none"> • Reduce import tariffs on environmentally sound technologies, e.g. solar panels | <ul style="list-style-type: none"> • Creation of a coordination agency to coordinate the various sectors and take decisions on trade-offs and prioritization with the aim of promoting sustainable development |



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4.3 Conclusions

Cambodia has made considerable progress in the two decades since the Paris Peace Accords of 1991 and in the decade since peace was achieved in 1999. During this time, Cambodia has evolved from being an isolated, subsistence-oriented economy to a rapidly growing and internationally integrated economy.

In the past seventeen years, Cambodia has been one of the fastest growing economies in the world, with an average growth rate of 7.7 percent from 1994 to 2011, and above 10 percent annually between 2004 and 2007.

Thanks to these sustained levels of economic growth, Cambodia has made great strides in reducing poverty and reducing the proportion of poor people from 47% in 1992 to an estimated 26.1 percent in 2009. The poverty reduction achieved in the five years since 2004 was particularly rapid, decreasing by 25 percent.

As a result of these advances, and of sustained investment in the social sectors, social indicators have improved significantly. Cambodia's Human Development Index increased by 29 percent between 1995 and 2011, which is well above the global average of 14 percent, and above the regional average of 23 percent. A similar performance can be seen for overall MDG progress, where Cambodia ranks among the fifth best performing countries in the world.

The CMDG indicators that have witnessed the most significant improvement are those related to child and maternal health and education. Child mortality is the CMDG where most progress has been achieved, dropping 56 percent, from 124 (for every 1,000 live births) in 2000 to 54 in 2010. As for IMR, the 2015 CMDG target (65) has already been reached, five years in advance. Between 2000 and 2010, the infant mortality rate dropped by 53 percent, from 95 (for every 1,000 live births) to 45, reaching the 2015 CMDG target (50) five years in advance.

Remarkable progress has also been achieved by Cambodia in immunization coverage, increasing by 58 percent between 2000 and 2010, increasing the

percentage of children under the age of one that were fully vaccinated from 31 percent in 2000 to 73.6 percent in 2010.

The maternal mortality rate in Cambodia is one of the CMDGs that has witnessed most change, decreasing by 56 percent between 2005 and 2010 (from 472 to 206 in 2010), effectively exceeding the 2015 target ahead of time.

Cambodia has made considerable progress in reducing the spread of HIV/AIDS, decreasing the prevalence in HIV from 2 percent in 1998 to 0.7 percent in 2010.

These advances can be attributed to improved access to basic health services and education, an all-round improvement in pre-natal and post-natal care and strong performance of the national immunization program. This has resulted in increasing the proportion of deliveries at public health facilities and the proportion of births assisted by skilled health personnel, contributing to a decrease maternal mortality rates.

Education and literacy have seen significant progress in the past seventeen years. Overall literacy rates have increased by 40 percent, (from 62.8 percent in 1998 to 87.1 percent in 2009). Female literacy has increased faster (from 55.4 percent in 1998 to 85.8 percent in 2009). Enrolment rates in primary education increased from 87 percent in 2001 to 95.2 percent in 2010, and enrolment rates in lower secondary education increased by 121 percent since 1998 (from 26.5 in 1998 to 58.5 percent in 2010). Enrolment of girls in primary school has increased significantly, from 80.8 percent in 2000 to 94.6 percent in 2010, only one percentage point lower than for boys.

In addition to its economic and social assets, Cambodia has precious environmental assets. The country has one of the largest shares of protected areas and forests in the world. It also has a rich biodiversity, with 775 known species of amphibians, birds and mammals, of which 1.4 percent do not exist in any other country.



Cambodia has made significant advances in its land titling programme, distributing some 2.37 million land titles in 16 provinces between 2003 and 2011.

Cambodia has also made remarkable advances in clearing land of mines, a legacy left from the country's sequence of internal and regional conflicts from the mid 1960s until the end of 1998. The number of victims from landmines/ERW has been significantly reduced and steady progress has been made in mine clearance, with approximately 63,962 hectares of contaminated land being cleared between 1992 and 2010. This is estimated to represent around 59 percent of contaminated land, opening up access to valuable agricultural land.

Finally, Cambodia has made significant advances in establishing a coherent legal, policy and planning, and institutional framework, with key laws and policies approved for a large range of sectors and issues (environment, education, health, anti-corruption, decentralization) and the increasing integration of the national development plan with sectoral plans and the CMDGs.

Despite all these remarkable advances, there are a number of remaining challenges facing Cambodia's path to sustainable and inclusive green growth.

While significant progress has been made in reducing poverty, overall poverty levels remain high at 26.1 percent of the population. Moreover, a large number of people are clustered around the poverty line, leaving them highly vulnerable to falling back into poverty if affected by a small shock. The reduction in poverty has not been matched by an increase in equality levels, which have only slightly increased in the past sixteen years. The share of national consumption of the poorest 20 percent only increased from 7.4 percent in 1993, to 8 percent in 2009.

Large disparities remain between urban and rural areas, especially for access to water, electricity, sanitation and health services in rural areas. Hence, the indicators of child mortality, births attended by skilled personnel and births occurring in a health facility, access to water and sanitation and levels of electrification in rural areas are significantly lower than those of urban areas.

Despite significant progress in reducing infant and child mortality, child malnutrition remains a serious concern. This seemingly contradictory picture exists

due to the extension of health services being regionally selective, outreach is limited and preventive elements like drinking water and sanitation lag behind.

Gender disparities also remain in access to education and literacy. For women aged 25 and above, only 68 percent are literate compared to 82 percent of men. While the gender gap has been bridged at primary level, fewer girls than boys attend secondary school.

There are high levels of dropout and repetition rates already at primary level, significantly lowering completion rates compared to enrolment rates, especially in rural areas (where the drop-out rate is twice that of urban areas). At secondary level, enrolment rates are significantly lower than for primary level, at only 58.5 percent. Completion rates at upper secondary level are significantly lower than for lower secondary (they drop by half, down to 44.4 percent for completion of grade 6).

Another important challenge continuing to affect Cambodia is landmine contamination. While progress has been made in clearing mines and reducing the number of casualties, Cambodia continues to be one of the countries with the highest rate of accidents in the world due to landmines. Large areas still remain contaminated (the exact extent is being evaluated through a baseline survey, but it is estimated to be around 64,880 hectares). The remaining contamination prevents access to agricultural land and thereby contributes to sub-optimal use of the land. Moreover, in the context of decreasing financial resources for mine action to Cambodia, there is a significant funding gap to clear the remaining land by 2019.

Land issues remain a serious constraint to the environmentally and socially sustainable development of Cambodia. Despite progress in the distribution of land titles, the pace remains significantly slower than projected, forcing a downward revision (to 43 percent) of the original target of 65 percent. Pressures include the expansion of economic land concessions and urban development projects, often resulting in forced evictions, which result in loss of livelihoods for poor urban and rural people. The number of conflicts related to land is estimated to have risen in recent years as has the number of landless people (from an estimated 13 percent in 1997 to 20-25 percent in



2007). This can represent a potential source of social conflict.

Economic pressures on land have resulted in increased deforestation, the forest cover decreasing from 70 percent in the 1960s, to 60 percent in the 1990s, to 57.59 percent in 2010. Unsustainable use of water and fisheries has also resulted in a significant decline in fish stocks.

Cross-cutting issues that affect all sectors and which were also identified in the National Dialogue on Rio+20, include weak human resource capacities in all sectors, a lack of adequate law enforcement, a lack of coherence, prioritization and coordination between sectoral plans, a lack of accurate and effective data and information systems, and poor infrastructure.

Climate change and natural disaster pose another challenges to protect Cambodia development gains.

The policy recommendations to address these challenges include:

- Promotion of integrated planning and prioritization between different sectors to ensure that environmental, social and economic goals are being harmonized.
- Investment in strengthening human resources and skills - and competitiveness - through additional investment in secondary education, a reform of tertiary education and targeted vocational and technical training.
- Strengthening of data and M&E systems across all sectors to support planning and rational decision making.
- Strengthening law enforcement, especially with regards to social and environmental impact of economic land concessions.
- Promotion of public-private partnerships for green growth, including infrastructure development and institutional coordination framework.
- Implementation of targeted policies to address urban-rural disparities.
- Need for a national targeted anti-poverty programme to provide a safety net for the poor and near poor from economic and other shocks.
- Stronger commitment of all stakeholders is needed to promote rights to health, education, gender equality; and to universal access to HIV prevention, treatment, and care.
- Put more concrete efforts to promote climate change mainstreaming, disaster risk reduction protecting biodiversity and ecosystem, effectively managing forest and protected areas, managing critical watershed areas, and promoting REDD+.
- Accelerate progress toward nationally-tailored sustainable energy for supporting all development objectives, based on country's own action plans and programmes.



Annex: List of Multilateral Agreements signed by RGC

The Royal Government of Cambodia is party to a number of international conventions and regional agreements related to sustainable development, covering environmental protection, human development and regional cooperation.

Environmental protection:

- International Convention on Civil Liability for Oil Pollution Damage, 1969
- United Nations Convention on the Law of the Sea, Montego Bay, 1982 (signed in 1983)
- International Tropical Timber Agreement, Geneva, 1994 (signed in 1995)
- Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, Chiang Rai, 1995 (signed in 1995)
- Convention on Wetlands of International Importance, especially as Waterfowl Habitat, RAMSAR, 1971 (signed in 1999, Kram dated October 22, 1996)
- International Convention for Prevention of Pollution from Ships, 1973 and Protocol of 1978
- ASEAN Agreement on the Conservation of Nature and Natural Resources, Kuala Lumpur, 1985 (signed in 1985, ratified in 1986)
- Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987 (signed in 1988, ratified in 1992)
- Convention on Biological Diversity, Rio de Janeiro, 1992 (signed in 1992, ratified in 1995)
- United Nations Framework Convention on Climate Change, New York, 1992 (signed in 1992, ratified in 1995, Kram dated October 24, 1996, Initial National Communication - 2000; Second National Communication (pending – expected 2012)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973 (signed in 1973, ratified in 1997)
- International Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa, Paris, 1994 (signed in 1994, ratified in 1997)

- Convention on Biological Diversity (CBD)- 1995; Cartagena Protocol on Biosafety - 2003²⁷⁸
- Kyoto Protocol ratified - 2002
- Cartagena Protocol on Biosafety - 2003²⁷⁹
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) – 2011

Human and social development:

- The Royal Government of Cambodia, as member of the United Nations General Assembly, is also party to global and national commitments in the United Nations Millennium Declaration, a UNGA Resolution adopted in its 55th session on 8 September 2000. The set of commitments is a synthesis and reaffirmation of many principles the United Nations has been espousing, including those behind the UN Conference on Environment and Development (Rio de Janeiro, June 1992), that the world body deems timely as the planet entered the third millennium.
- Agreement of cooperation between the Royal Government of Cambodia and European Commission (cooperation for development, trade, environment, economic, agriculture, region...) adopted in 27th April 1999.
- International Convention on Interdiction of use, storage, production and transfer the antipersonnel mines (adopted 18 May 1999).
- The Convention on the Right of the Child, which Cambodia ratified on 22 August 1992
- The Convention on the Minimum Age or Working Children, which Cambodia ratified on 19 July 1999.
- Declaration of the World Summit on Children in Stockholm in 1996.
- Convention on the Prevention and Punishment of the Crime of Genocide, approved and proposed for signature and ratification or accession General Assembly Resolution 260A (III) of 9 December 1948.

²⁷⁸ Cambodia is not a party to the *Nagoya Protocol* on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (2010)

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- International Convention on the Elimination of All Forms of Racial Discrimination, adopted and opened for signature and ratification by General Assembly, resolution 2106 A (XX) of 21 December 1965.
- International Covenant on Civil and Political Rights, adopted and opened for signature, ratification and accession by General Assembly resolution 2200 A (XXI) of 16 December 1966. Entry into force: 23 March 1976.
- Convention on the Elimination of All Forms of Discrimination Against Women, adopted and opened for signature, ratification and accession by General Assembly resolution 34/180 of 18 December 1979. Entry into force: 3 September 1981.
- International Covenant on Economic, Social and Cultural Rights, adopted and opened for signature, ratification and accession by General Assembly resolution 2200 A (XXI) of 16 December 1966.
- Convention Against Torture and other Cruel, Inhuman or Degrading Treatment or Punishment, adopted and opened for signature, ratification and accession by General Assembly resolution of 22 August 1992.
- The Universal Declaration of Human Rights adopted and proclaimed by General Assembly resolution 217 A (III) of 10 December 1948.

Regional cooperation:

In preparing to join ASEAN, the Council of Ministers discussed the Khmer version of the Agreements to

ensure compliance with existing laws and norms. A total of 26 ASEAN agreements, 15 of which were approved by the Council of Ministers, were submitted to the National Assembly for ratification. The agreements include:

- 1) Agreement on Cooperation in Culture and Multimedia (1969)
- 2) Agreement on Media System and Cultural Activities (1969)
- 3) Agreement on Recognition of Local Driving Licenses by ASEAN
- 4) Agreement on Conservation of Nature and Natural Resources (1985)
- 5) Agreement on ASEAN Cooperation in Energy (1969)
- 6) Agreement on Establishment of ASEAN Centre for Energy
- 7) Basic Agreement on Mutual Recognition and Communiqué on Procedure of Communication
- 8) Agreement on ASEAN Investment Zones (1998)
- 9) Basic ASEAN Agreement on Facilitating Cross-border Goods Transportation
- 10) Agreement on the Recognition of Goods Transporting Vehicle Licenses and Public Transport Services granted by ASEAN member countries
- 11) Agreement on the Establishment of ASEAN Fund
- 12) Kram dated January 17, 1997 approving the Treaty on the Southeast Asia Nuclear Weapons-free Zone





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