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The Case of Cambodia

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TABLE OF CONTENTS

EXECUTIVE SUMMARY 5
1. Introduction 11
1.1 Cambodia's historical and economic background 12
1.2 How is green growth understood in Cambodia? 13
1.3 Inclusivity 13
2. Cambodia's motivations for making growth green and inclusive 14
2.1 Socio-economic benefits 15
2.2 Environmental protection 16
2.3 Creating and strengthening institutions 16
3. Green growth processes and achievements 16
3.1 Showcasing selected green initiatives in Cambodia 18
4. Enabling and disabling conditions for making growth green and inclusive in Cambodia 24
5. Way forward: discussions and recommendations 26
5.1 National level 26
5.2 International level 31
6. Conclusion 36
ANNEX I: CONSULTATIONS CONDUCTED IN PRODUCING THIS COUNTRY CASE STUDY 38
REFERENCES 40

Tables

Table 1. Existing Laws and Policy Initiatives Related to Green Growth in Cambodia 18
Table 2. OECD Measurement Framework for Green Growth 30
Table 3. Summary of key areas of future improvements at national and international levels on green growth in Cambodia 33

Figures

Figure 1. Rating Motivations for Green Growth: Summary Scores 15
Figure 2. Projection of electricity installation from various sources in Cambodia 20

Boxes

Box 1. Energy framework of Cambodia 21
Box 2. Direct contracts for bird nest protection in the Northern Plains of Cambodia 23
Box 3. Enabling and Disabling Factors to Pursue Making Growth Green and Inclusive in Cambodia 24
Box 4. Development Co-operation for Green Growth At a Glance.....31

EXECUTIVE SUMMARY

Developing countries have collectively displayed relatively high growth rates in the last decade. Although large disparities still persist in standards of living, low and middle income countries averaged economic growth of 6.2% between 2000 and 2008, pulling 325 million people out of poverty (World Bank, 2010). Global growth has been accompanied by environmental degradation and in some cases there are growing numbers of people still living in poverty. Key questions for development planning today in countries include:

- Can developing countries strike a balance between economic growth, societal well-being and environmental protection?
- Can inclusive, green growth be a way forward?

This report presents a case study on Cambodia designed to answer these questions. It was led by the OECD, in collaboration with the International Institute for Environment and Development (IIED), with support and input from the Ministry of Environment of the Royal Government of Cambodia (RGC), and the National Council on Green Growth of Cambodia. The case study draws on several sources of information to compile a "snapshot" of the situation today. In particular, qualitative information was gathered through a two-day, multi-stakeholder workshop and through bilateral interviews conducted with relevant actors from both public and private sectors. It also draws on relevant literature to present a balanced picture of the state of play on green growth in Cambodia.

The overarching objectives of the case study are to:

- assess Cambodia's enabling conditions (policies, frameworks, and other tools and mechanisms) for making growth green and inclusive;
- reflect on current progress in advancing its National Green Growth Roadmap; and
- explore policy options and identify potential areas of improvements to realise country-specific green growth opportunities.

Perceptions of green growth in Cambodia

Sustainable use of Cambodia's natural resources is a key contributor to the country's long-term development. According to the World Bank, to date three-quarters of the population in Cambodia are directly engaged in agriculture and depend upon the land for their daily subsistence. Agriculture and forestry contribute nearly 40% of the country's GDP. Tourism, which is based on the country's cultural and natural reserves, also contributes significantly to economic development by bringing job opportunities and significant foreign revenues. Reliance on these industries means that sustainable management of natural resources and other aspects of the environment are vital to create the enabling conditions for economic growth in the country. Green growth, a concept which suggests an alternative growth path that is consistent with the protection of the environment and a sustainable use of scarce natural resources, is relatively new to an average Cambodian citizen and to the government (OECD, 2013a and 2013b). In 2009 the RGC established the Inter-Ministerial Green Growth Working Group (GGWG) chaired by the Ministry of Environment, with representatives from nineteen ministries. The working group then adopted a National Green Growth Roadmap in 2010 and finalised its National Strategic Plan on Green Growth with an outline of a detailed implementation agenda designed to achieve the goals identified in the Roadmap. In addition, the RGC has taken several initiatives that contribute directly and indirectly to the achievement of green growth – some of which predate the start of the green growth process. These governmental initiatives are helping to establish a foundation for the National Green Growth Roadmap and to implement it.

The multi-stakeholder consultation revealed that green growth in Cambodia is seen as part of a continuum where the aim is to transition from the current conventional pattern to a "greener" pattern of growth. Consulted stakeholders aspire to move to the "greener" end of the continuum in order to achieve better societal well-being, reduce poverty, and foster a more inclusive economic development while sustainably managing their natural resources. "Inclusion" is implicitly represented in the National Green Growth Roadmap, where the seven principles of Cambodian Green Growth objectives, such as providing universal access to energy and water, known as "seven accesses" goals are ultimately about improving the living conditions and well-being of all citizens, including the poorest and most vulnerable. A key finding of the case study is that there is a need for the RGC to establish clearly defined indicators to objectively measure progress in achieving more inclusive green growth.

Motivations for green growth

The multi-stakeholder consultation also revealed that the motivations of the government and other stakeholders for the pursuit of green growth include:

- socio-economic benefits (economic growth, poverty reduction and more employment and investment opportunities);
- environmental protection; and
- opportunity to create institutions and create a platform where stakeholders can participate, engage, and shape decisions for sustainable development.

However, the importance attributed to each of these benefits and their sub-components is different. Poverty alleviation, institution building and economic growth benefits were ranked as essential outcomes of the transition towards green growth. Environmental protection, improved social well-being and investment opportunities were ranked as secondary outcomes.

Enabling and disabling conditions for making growth green and inclusive in Cambodia

There are several existing government initiatives and policies that are already contributing to the achievement of green growth in Cambodia. A few of these initiatives were developed by deploying pricing instruments, such as electricity price differentiation, eco-taxation, or tax breaks. Emerging evidence show that these pricing instruments have been widely used in green growth strategies worldwide, but these instruments are also often complemented by regulations or subsidies to address market and information failures and to make them more politically acceptable (OECD, 2013b).

The consultation indicated that a number of key enabling conditions are already in place to nurture the transition towards green growth. These include: political stability; good economic performance; adequate state capacity; relatively low-carbon lifestyle; availability of untapped natural resources and advancement in technology development and innovation.

Political stability is often cited as a prerequisite for economic development and for the creation of conditions conducive to robust trade and investment. Cambodia is a young democratic country, which is evolving rapidly, where it is widely recognised that growth and development can only be realised with political stability. There has been a relative and gradual improvement in political stability since 1990s. This trend is likely to continue. Continued high rates of economic growth has accelerated and expanded the range of economic and job opportunities. The availability of micro-financing has also expanded significantly and helped poor households to access capital. The RGC has, at the same time, considerably improved both its technical and institutional capacities to foster inclusive policy processes, including the

ability to enforce existing regulations (e.g. through provision of incentives) and allowing more participatory approaches for public consultation (e.g. engaging a wide range of stakeholders). Even though such capacity is still far from sufficient, the political commitment to fill institutional capacity, knowledge and skill gaps is strong.

Furthermore, underexploited natural resources such as bamboo, rattan and silk, can become inputs for sustainable production as the country is adopting greener production techniques and diversifying its resource use to prevent over-exploitation of resources. Exploiting the potential for small scale energy solutions, such as mini/micro-hydro and passive solar technologies, can help to reduce resource and energy intensity. Sustainably managing natural resources will also present green job opportunities for local communities taking up these new practices and innovation and technological development are expected to be a critical factor in stimulating green growth at the local level.

Consulted stakeholders also identified several disabling factors, which will certainly slow or constrain any transition towards green growth if not addressed appropriately. These factors include a lack of public awareness of the implications for the environment and natural assets of the current growth pathway, limited institutional co-ordination to support coherent policy making, and insufficient investments in green sectors to create a critical mass to enable change.

Potential areas of improvements

Based on the multi-stakeholder consultation workshop and interviews, and lessons learnt from elsewhere, the following areas of improvements at national and international levels were identified (summary table below) along with challenges the RGC may face throughout the policy implementation process.

Summary of key areas of future improvements at national and international levels on green growth in Cambodia

Current status	Areas of improvements	Challenges
NATIONAL LEVEL		
1. Mobilising resources for green growth		
1.1 Greening national budgetary process		
Failure to take into account the negative impacts of development policies on the environment. Also fail to reflect the green growth priorities in the current national budget allocation	Greening national budget allows the government to make informed decisions that minimise negative impacts on the environment, and it incentivises line ministries and local governments to set out work plans designed to deliver positive environmental benefits.	- Financial constraints that often make trade-offs between culture, social, economic and environmental objectives inevitable - Limited data availability - Limited technical capacity to monitor environmental impacts
1.2 Securing seed financing, possibly through setting up national fund to mobilise local resources		
High dependence on unsustainable international financial support	To ensure continuous financing to support the realisation of programmes and policies identified in the Roadmap and Strategic Plan, it is crucial to have sustainable sources of financing, possibly by mobilising domestic resources (e.g. pollution tax revenues) or through setting up a national revolving fund system that could be designed to stimulate private sector engagement.	- Requires policies and also policy enforcement to ensure sufficient domestic resource mobilisation to secure public funding - May also require innovative ways of raising finance that may not be familiar to the country so far
1.3 Greening the financial sector		
Limited engagement by banks to provide loans to "green" initiatives	Establish policy incentives and regulations to make green projects more profitable so to stimulate both commercial banks and micro-finance institutions to promote investments that deliver both environmental and social benefits. Also to work through regional co-operation to ensure harmonised banking regulations to strengthen Cambodia's business competitiveness by strengthening local financial capacity, lowering borrowing and other financial costs.	- Limited capacities and knowledge of staff working in the banking sector on green growth projects - No clear indication from the government on the importance of transiting from brown to green lending and limited action to date to establish strong and clear incentives for the financial sector to support green initiatives
2. Governing and developing capacity for green growth		
2.1 Improving governance for more inclusive green growth		
Current governance structure needs to be strengthened to cope with integration of green growth into development challenges	More effort to fight corruption and foster a more transparent, accountable and inclusive governance structure	- Practical challenges remain on how concerned stakeholders can respond to, and "meaningfully" engage with, green growth initiatives

2.2 Strengthening inter-sectoral co-ordination		
Very limited inter-sectoral collaboration or co-ordination	Through the strong government leadership and the already established National Council on Green Growth, there is clear potential to foster inter-ministerial/inter-sectoral collaboration and coordination	- Easy to say but hard to implement especially when conflict of interests occur between sectoral ministries - Clear green growth opportunities need to be identified, presented and discussed with all ministries to build common understanding and support for these
2.3 Raising public awareness		
Limited public awareness about environmental conservation in general and green growth in particular	More initiatives to raise awareness of the public (especially the youth) by mainstreaming environmental issues in national educational curriculum and through the use of mass media and/or social media channels	- Awareness raising is not a one-off activity, it requires financial resources and government commitments - It also takes time for changes to happen
3.Sustainable transportation for cities		
Lack of sustainable transportation systems in major cities.	Introducing sustainable transportation into the urban master plan in the capital to demonstrate the benefits of mass transit, and scaling this up to other major cities. This would reduce the levels of both air and noise pollution in cities, improve labour productivity and human health to be a cost-saving strategy	- Requires a stringent commitment and funding from the government, first to raise public awareness about the social (health), economic and environmental benefits of public transport and second, to plan and implement such a system - Need to consider social impacts and risk of social unrest from those whose livelihoods are threatened (e.g. Tuk-Tuk drivers). Complementary policies could ensure benefits to this segment of the population, e.g. aiming to retrain those put out of work for jobs in in other economic sectors
4. Designing indicators to measure the achievement of green growth		
There are no clearly defined indicators to objectively measure the achievements of green growth	Clearly defined goals and indicators should be used to inform public debate and gauge how well policies are performing	- Limited data availability to objectively measure progress - Requires an investment in data collection but also in developing agreed indicators through which to assess progress
INTERNATIONAL LEVEL		
5. Development co-operation support		
Disconnect between support from development co-operation and national priorities for more	Donor support needs to be twin-tracked to: i) strengthen domestic enabling conditions such as	- Different donor agencies may have different focused areas in Cambodia; although they share common

inclusive, green growth	awareness raising, technical and institutional capacity building as well as domestic policy reforms, e.g. to put green policies in place and strengthen enabling conditions for private sector engagement; and ii) to help strengthen intra-governmental institutions for governance for green growth e.g. to enhance co-ordination between donor agencies to avoid unnecessary overlaps and enhance synergies to implement green growth.	development goals, specific policy objectives can differ, which makes coordination more difficult - Time consuming and requires collective commitment and engagement by the Cambodian government as well to work in a pro-active manner with donors and seek donor harmonisation and co-ordination
6. International trade		
Cambodian's main trading sectors have significant environmental implications and may lose its competitiveness with growing environmental standards from its trading partner countries without timely reforms	Growing demand for equitable (fair trade) and environmentally friendly products in the international market.	- Requires technical capacity to adopt alterative production methods - May need start-up capital to purchase equipment - Also requires both policy and technical capacities in ensuring Cambodian production standards can gradually match the international and regional standards in light of global discussions on sustainable consumption and production
7. Science and technology cooperation		
Good science and technology cooperation to date, however, requires accelerated efforts in making real change happen and to support green sector opportunities	Innovation and technology co-operation can stimulate new ideas (both at national and level levels) to delivery more inclusive green growth outcomes.	- No systematic national innovation policies currently targeting inclusive green growth - Requires technical capacities and financial support to kick off projects and initiatives

1. Introduction

Developing countries have collectively displayed relatively high growth rates in the last decade although large disparities still persist in standards of living. Between 2000 and 2008, low and middle income countries averaged economic growth of 6.2% pulling 325 million people out of poverty (World Bank, 2010). However, this has come at the cost of the environment. During the same period, many developing countries have witnessed alarming rates of environmental degradation. There is broad agreement amongst governments worldwide on the need to strike a balance between economic growth, social transformation and environmental protection to achieve long-term sustainable development (UN, 2012). One of the ways to achieve this is by promoting equitable and socially inclusive green growth. In recent years, the Organisation for Economic Co-operation and Development (OECD) has been a thought-leader in the area of green growth and a growing number of governments – both OECD countries and some of its partner developing countries – have endorsed its green growth strategy.

The OECD recently extended its green growth work to engage directly with a selection of developing countries. By partnering with the Ministry of Environment of Cambodia, its aim is to gather evidence to gain a better understanding of the implications of green growth in its particular country context. This case study also takes into account views from a range of stakeholders in the decision making process of green growth policy settings (a participatory approach) and to consider the distributional effects of policies on all segments of the society, with particular attention to the poor. Such a deliberate focus on 'inclusion' is because it is consistently raised by developing countries as a main concern about the impacts and potential benefits delivery of green growth. Indeed, one of the RGC's objectives in working with the OECD is to develop a better understanding of how, through pursuit of green growth, the country can identify solutions that maximise the number of 'winners' and minimise potential 'losers'. Through this exercise, the RGC is keen to identify potential areas of improvement in its efforts to support green growth to sustain over time the widest range of economic sectors and improve the livelihoods for the greatest number of households and individuals.

The specific objectives of the country case study are to:

- assess Cambodia's enabling conditions (policies, frameworks, and other tools and mechanisms) for making growth green and inclusive;
- reflect on current progress in advancing its National Green Growth Roadmap; and
- explore policy options and identify potential areas of improvements to realise country-specific green growth opportunities.

This paper integrates the reflexions and outcomes of a multi-stakeholder workshop which was held in Phnom Penh in November 2012. It brought together representatives from more than ten Ministries, as well as the private sector, civil society organisations and academia. In order to collect more detailed information and to survey perceptions of key stakeholders, bilateral interviews were also held with individuals from line ministries, civil society groups, donor agencies, and the private sector.

This paper was written in partnership with the Ministry of Environment of Cambodia and is co-authored by the International Institute for Environment and Development (IIED), with the support of a local consultant.

The remainder of the paper is structured as follows: Section 1 includes a brief overview of the historic and economic background of Cambodia, and how green growth is understood there. Section 2 assesses the motivations of key stakeholders for the promotion of green growth in Cambodia. Section 3 showcases government initiatives and activities that could enable the achievement of green growth. Section 4 analyses the enabling and disabling conditions for green growth in Cambodia. Section 5 presents potential areas of improvement and provides recommendations to fill current gaps both at national and

international levels which may become barriers for green growth. Finally, Section 6 presents concluding remarks.

1.1 Cambodia's historical and economic background

After a period of relative peace following independence in 1954, Cambodia experienced civil war and genocide (1975-1978). In 1979, the National United Front for Salvation of Kampuchea, with the support of the Vietnamese, overthrew the Khmer Rouge regime. Armed conflict continued until the late 1990s when the country finally gained full peace. The government has since made efforts to build the necessary institutional and economic structures to protect citizens from further conflict and to establish the conditions for a market-based economy to thrive. The country has demonstrated strong economic growth over the past decade. Currently there is relative political stability and democratic institutions are more firmly established.

Cambodia's GDP quadrupled from USD216 per capita in 1992 to USD909 per capita in 2011. From 1994 to 2011, Cambodia experienced an average growth rate of 7.7%. Between 2004 and 2007, the economy grew above 10% annually (Kingdom of Cambodia, 2012). The economy is dominated by a few industries, mainly agriculture, agro-industry, tourism, construction and garment manufacturing. Industry and services have significantly increased their share of employment from 2% in mid-1990s to 18% in 2009. Sustainable use of Cambodia's natural resources is expected to be a key factor to the country's long-term development. Approximately three-quarters of the population are directly engaged in agriculture and depend upon the land for their daily subsistence. Agriculture and forestry contribute to nearly 40% of the country's GDP. Tourism, which is based on the country's cultural and natural wonders, also contributes significantly to economic development. Reliance on these industries means that the sustainable management of natural resources and other aspects of the environment are vital for improving rural livelihoods and for economic growth (World Bank, 2013). Export of milled rice is also an important source of foreign revenue, with more than 205,000 tonnes exported in 2012 (Kingdom of Cambodia Ministry of Agriculture, Forestry and Fisheries, 2012). It also exported rubber products with a volume of 42,000 tonnes in 2010, compared to the exports of 20,808 tonnes in 2009 (Kingdom of Cambodia Ministry of Planning 2011). However, current export products and trends are being challenged by a lack of comparative advantage relative to its neighbouring countries such as Thailand and Vietnam, including the lack of infrastructure investment, which raises costs of production and hinders movement of products markets (e.g. through high costs of electricity, land, petroleum products, poor transport systems, etc.).

The prevalence of poverty has dropped from nearly 100% in 1979 to 39% in 1993, and 30.1% in 2007 (Statistical Yearbook of Cambodia, 2008). The Royal Government of Cambodia (RGC) is considering readjusting the definition of the official poverty rate and has set up a national committee tasked to provide a more conservative and realistic definition (Kingdom of Cambodia, 2012).

The RGC and its development partners have identified a number of critical issues in environment and natural resources today. These are:

- surface water management, both due to limited investment in basic infrastructure in the past decades, other investments made on the Mekong river by neighbouring countries, and the implications of climate change;

- land allocation and use, especially on forested state land; this includes forest degradation and loss of forest area, primarily due to unsustainable logging and concessions for resource extraction; and

- degradation of soil driven by unsuitable agricultural practices (European Union, 2012).

To overcome these problems, the RGC has adopted a series of public policies with the aim of improving the management of natural resources. This is achieved through redistributing land rights to

households whom previously had no access to these lands, hence to incentivise their behaviour towards land and water resources management. These include the "Old Policy New Action on Land and Forest Management" programme, which allocates use of public land to farmers along with the obligation for sustainable management (see below). In this way, the government aims to ensure a balance of economic development with sustainable management and conservation on 9.2 million hectares, or 57% of the total forest cover. The government also introduced significant reforms in fishery sector. These contribute to more effective and sustainable land, forestry and fishery management. For water security, the government has a policy and strategy on integrated water resources management. Climate change and extreme weather events are also being recognised as an urgent challenge to the country.

1.2 How is green growth understood in Cambodia?

Green growth is defined as a means to foster economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies (OECD, 2011a) and is a relatively new concept in Cambodia. Given that the main economic sectors in Cambodia, such as agricultural production and tourism are highly dependent on its natural resource provision, moving towards a greener growth path can be seen as a short-term cost to the country. Agricultural production may be more costly if more stringent environmental regulations are put in place However, in the longer term, the sustainability of environment and natural resources can ensure continuous job opportunities in these key economic sectors, and green growth can bring added value to these sectors. The National Green Growth Roadmap for Cambodia (NGGR) proposes a number of possibilities for *win-win* situations between economy, environment, society and culture to show that rapid economic growth, environmental sustainability and human well-being can be achieved with minimal (yet sometimes inevitable) trade-offs. The multi-stakeholder consultation process revealed that green growth is seen as a continuum – from the conventional growth model to a "greener" growth pattern. The aspirations of stakeholders are, therefore, to move to the 'greener' end of the continuum in order to achieve more sustainable livelihoods, better societal well-being, reduce poverty, and foster a more inclusive economic development. A more comprehensive explanation is provided in Section 2.

There is growing interest among different stakeholders to understand the potential benefits to be delivered by transiting to green growth pathway and to integrate the concept of green growth in Cambodia's development planning. An inter-Ministerial Green Growth Working Group (GGWG) was established in 2009 and is making progress on raising awareness and formulating policies at ministerial levels. There are also many existing strategies and policies that can potentially be adapted or used to contribute to green growth (see Section 3). For instance, the National Strategic Development Plan (NSDP) incorporates inclusive and sustainable policies such as the Decentralization and Deconcentration Strategy which aims to strengthen and expand local democracy and promoting local development, the Rectangular Strategy which focuses on agriculture development, infrastructure, private sector engagement and human capital development,[1] and a Poverty Reduction Strategy. Capitalising and building on existing policy frameworks and instruments is widely believed to be the best way forward to achieve green growth in Cambodia.

1.3 Inclusivity

Inclusion is a concept that is widely represented in the policies mentioned above. It is expressed in the Poverty Reduction Strategy, the NSDP and the Rectangular Strategy. However, the idea of 'people-centred' or inclusive growth, as compared to solely focusing on growth in GDP or income is still unfamiliar to most. Current mainstream development and macroeconomic analysis, which focus on economic outputs and inputs, are preferred in government plans due to the simplicity in measuring results

[1] The *Rectangular Strategy for Development* has four components: 1) enhancement of the agricultural sector; 2) rehabilitation and construction of physical infrastructure; 3) private sector development and job creation; and 4) capacity building and human resource development to facilitate growth, employment, equity and efficiency.

for broad political reasons. Reconciling people-centred or a more inclusive growth is deemed to be challenging, in particular in the short-term. Nonetheless, the stakeholders consulted perceive that "inclusivity' is very important for long term and for sustainable economic growth, poverty reduction, and the political stability of the country.

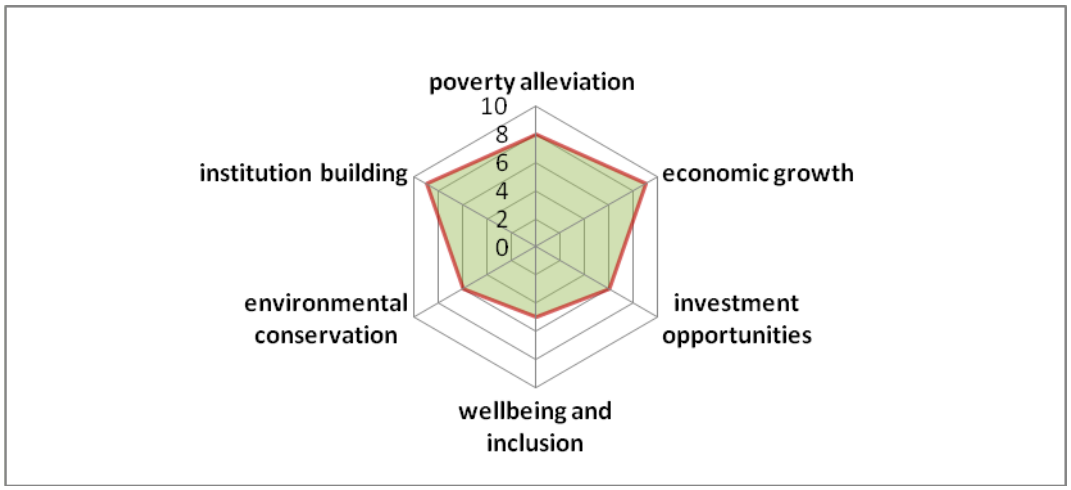
A key finding emerging from the consultations is the need for RGC to establish clear definitions and indicators to objectively measure inclusivity in the context of green growth. It is equally important that green growth measures and indicators are built into existing policies and frameworks so that they can be easily mainstreamed into the development planning process. Perhaps the best indicator of inclusiveness or the lack of it is inequality, something that is glossed over in the discussions of GDP figures, through use of the Gini Coefficient, or Gini Index[2]. The Gini Coefficient figure of Cambodia has reduced from 0.42 in mid-2000s to today's 0.38, slightly lower that its neighboring countries, such as the Philippines (0.43) and Thailand (0.40) (OECD, 2013c). Many stakeholders also view the Cambodian Millennium Development Goals (CMDG) indicators as proxies to measure inclusivity. However, two key constraints with such an approach are: firstly, the MDG in general and CMDG in particular do not give adequate attention to 'inclusive growth'; secondly, with only three years left before the target year of the MDGs, there is a need to formulate strategies, goals and identify clear indicators that are relevant and have paramount importance for the post-2015 era.

2. Cambodia's motivations for making growth green and inclusive

The case study revealed insights into the motivations of government agencies, civil societies and the private sector for green growth. An assessment of perceived benefits of green growth was carried out during the multi-stakeholder workshop and through an in-depth interview with the national focal point on green growth. The assessment looked across six major areas of potential benefits, including: poverty alleviation, economic growth, more investment opportunities (or foreign direct investment, FDI), wellbeing and social inclusion, environmental conservation, and strengthening and/or creating institutions. The results of the consultative rating of all these perceived benefits according to importance are presented in the radar chart below (Figure 1).

[2] Gini coefficient / index measures the extent to which the distribution of income or consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. More information can be found at http://data.worldbank.org/indicator/SI.POV.GINI.

Figure 1. Rating Motivations for Green Growth: Summary Scores



Notes: The higher the radius the higher the rating. Innermost hexagon = not perceived as the main motivation. Outermost hexagon = most perceived as the main motivation. These ratings correspond to general opinions of the stakeholders consulted. While the perceived benefits of green growth in terms of creating institutions, alleviating poverty, and boosting economic growth is relatively higher as compare to environmental protection, social well-being and inclusion, and investment opportunities benefits. Lower or higher perceived benefits are ranked based on the progress the country has made so far, and how green growth initiatives may advance these achievements. Higher ratings of perceived benefits should be interpreted as – where the green growth strategy and its implementation can deliver more visible outcomes in the status-quo scenario. On the other hand, lower ratings of perceived benefits may mean that the RGC has already made significant progress in addressing those issues, or could continue making progress in these areas without a green growth strategy; therefore, the role of green growth in enhancing those achievements are relatively lower. The stakeholders believe that the RGC has already made significant progress in environmental protection (e.g. restoring forest cover, and greening the energy sector), improving human well-being and social inclusion (e.g. allocation of at least 5ha of land to each rural household), and boosting investment opportunities (e.g. increased renewable energy investments).

2.1 Socio-economic benefits

The perceived potential socio-economic benefits of green growth from the Cambodian perspective include: economic growth, poverty reduction, potential employment and investment opportunities. These are all connected to, and dependent on, each other. A growth path that is greener and more inclusive can potentially attract higher quality investments and create jobs that benefit the poor, such as investments in green agricultural production and renewable technologies. Better employment opportunities mean that many poor households will be able to earn decent incomes and be equipped with different skills, and as a result their livelihoods and living standards can be improved over time.

While poverty levels and the prevalence of hunger have declined by as much as 50% (from 1990s to 2000s), inequality between the rich and the poor has had mixed results. While inequality in urban areas has narrowed down, there is a rising inequality among the rural poor. Therefore, green growth strategies can be tailored to address the problems associated with inequality without compromising economic growth.

The RGC, like national governments in many developing countries, faces stringent financial constraints that often subject decision-makers to make significant trade-offs between different causes. More investment opportunities can be potentially translated into higher national income or GDP growth. This would enable the national government to have more resources to build necessary infrastructures and be able to deliver services that are identified as the "seven accesses" in the National Roadmap for Green Growth (see Section 3 below).

2.2 Environmental protection

There is a genuine interest to conserve natural resources and use them sustainably to ensure both the sustainability of its economy and to maintain or improve the well-being of citizens as described in Section 1. The rapid economic growth in Cambodia has taken a toll. Natural resources are used both as an input (rubber, timber, cotton, etc.) and a sink to assimilate waste from economic systems. The levels of air pollution (especially in urban areas) and environmental degradation such as deforestation and over exploitation of fish resources have been alarming. For example, Cambodia's primary rainforest cover declined from over 70% in 1970 to 3.1% in 2005. In total, Cambodia lost 2.5 million hectares of forest between 1990 and 2005, 334,000 hectares of which were primary forest. According to the latest available data, less than 322,000 hectares of primary forest remain intact (FAO, 2007). To address this problem, the RGC introduced the Old Policy New Action initiative, through which farmers have access to individual land titles with an obligation to invest in their ability to sustain current and future livelihoods. This enables the government to effectively manage public assets, namely forest resources (permanent forest, protected forest and protected areas).

Fish contribute up to 70 to 90% of total animal protein consumed in Cambodia. According to official fish catch estimates, inland fisheries production was 405,000 tonnes in 2010, compared to 390,000 in 2009. The fish caught by community fishermen and inundated rice field fishing increased by 4.35% from 115,000 tonnes in 2009 to 120,000 tonnes in 2010 (Kingdom of Cambodia Ministry of Planning, 2011). However, an increase in catch level does not indicate that the status of fish stock is increasing. Many fishery communities claim that catch levels per unit effort have been declining in Cambodia. The causes for the perceived decline in catch level are believed to be mainly due to widespread unsustainable fishing practices; over-fishing caused by an increasing number of fishermen; and ineffective fishing management regimes (Baran and Myschowoda, 2008).

The RGC has introduced some reforms to regulate fishery resources. Prior to the reform limited incentives for sustainable resource management were provided through fishery policies, and nearly all fish resources were managed by owners of private fishing lots, all of whom thought only about individual profits rather than social benefits to the community. Yet the business model for fishing affects people's livelihoods. In the deep fisheries' reform undertaken by the RGC, the government decided to remove all private fishing rights and arranged all existing fishing areas into fishing conservation areas and public fishing areas. It has also expanded the fishing water surface to over 10,000 hectares. As a result, fish resources have increased sharply for the last two years, thus reducing the price of fish (Un, 2011).

2.3 Creating and strengthening institutions

In addition to some apparent social, economic and environmental gains, some stakeholders see green growth as an opportunity to create or strengthen institutional frameworks for sustainable development. Creating institutional frameworks can potentially enhance the efficacy of the implementation of existing initiatives and activities and create a platform where concerned stakeholders can participate, engage, and shape decisions for sustainable development. The National Council on Green Growth (NCGG) and the General Secretariat for Green Growth was established by the Decree and Sub-Decree signed by the King and the Prime Minister respectively. The establishment of the NCGG will serve as a platform that brings all concerned stakeholders, both public and private, to work together and coordinate their efforts towards achieving green growth in Cambodia, in particular in designing an action-oriented ten-year National Green Growth Master Plan to achieve goals outlined in the Roadmap. In December 2012, a law passed allowing the Kingdom of Cambodia's membership of the inter-governmental organisation, the Global Green Growth Institute (GGGI).

3. Green growth processes and achievements

The Inter-Ministerial Green Growth Working Group (GGWG), chaired by the Ministry of Environment, with representatives from nineteen ministries, was established in 2009. The Working Group

adopted a National Green Growth Roadmap (NGGR) in 2010, with its vision: "*…to create prosperity and sustainable livelihoods and to make Cambodia a liveable and lively country that Cambodians love and are proud to call home* [***sic***]." The GGWG has received support from the highest levels of the government, and being an inter-ministerial working group, the Group has been playing a major role in raising the awareness, and understanding of, green growth among government officials.

The NGGR outlines a framework to promote green growth in the context of Cambodia with its main goal to: "… foster sustainability of economic growth by enhancing sustainable consumption and production, greening markets and businesses, by creating favourable investment climate for the establishment of sustainable infrastructure that in turn can enable the population to enjoy increased access to crucial goods and services, and ensuring equal access to resources to men and women." The goals and aspiration of NGGR, which are also reflected in the "motivations" for green growth in Cambodia, have an "inclusivity" element. It explicitly mentions equal access to resources by all – including women, who are currently seen as a marginalised group within society and who can potentially benefit significantly from green growth policies.

The roadmap is guided by "seven accesses" goals. These are carefully tailored to meet the needs of the poor and marginalised communities who have no or limited access to them. The seven accesses are (UNESCAP, 2009):

- Access to water resources management and sanitation
- Access to agriculture (food security and non-chemical products)
- Access to sustainable land use
- Access to renewable energy and energy efficiency
- Access to information and knowledge
- Access to means for better mobility
- Access to finance and investments

The roadmap sets the vision and proposes pathways to achieve the seven access goals. The pathway to implementation is outlined in two temporal stages. The first stage is targeting the medium term (5-10 years), which explicitly focuses on sustainable rural development through the implementation of the *Decentralization and Deconcentration Strategy* to foster local democracy and development. In the long term (10-20 years), the focus will be on the CMDG's economic development and social and environmental stability. A National Green Growth Master Plan was finalised in March 2013 and this identifies actions required to achieve these seven accesses goals for the Cambodian government. It is noteworthy that the RGC puts more emphasis on, and gives high importance to, the "cultural" dimension of green growth, which is usually (if not always) understated in the global green growth discussion. Cultural values and traditional practices have contributed significantly to preserving natural capital and creating sustainable livelihoods. The government therefore strongly believes that these values should be maintained and scaled up to successfully implement and achieve an alternative green development pathway.

The RGC has also undertaken several initiatives, which contribute directly or indirectly to the achievement of green growth. Some of the activities and initiatives pre-date the start of the green growth process in 2008. Some of the key government policies and initiatives are outlined in the table below (Table 1).

Table 1. Existing laws and policy initiatives related to green growth in Cambodia. (*This table summarises government initiatives only)*

Year	Activities and/or initiatives	Brief description
Before 2000	Environmental Protection and Natural Resource Management Law 1996, 1993	Law to suppress any acts that cause harm to the environment.
2001	Land Law 2001	The law determines property rights.
2002	Forestry Law 2002	To ensure sustainable management of forests for their social, economic, and environmental benefits.
2005	National Policy on Water Resources Management and the Strategic Plan on Water Resources Management and Development (2005-2008)	To protect, manage, and use water resources in effective, equitable, and sustainable manner.
2006	National Strategic Development Plan (2006-2010)	A strategic plan for national development to be implemented across all branches of government.
2007	The Tonle Sap Authority (TSA) by Royal Decree in September 2007	Coordinating the management, conservation, and development of the Tonle Sap region.
	The Law on Water Resources Management (2007)	To foster the effective and sustainable management of water resources in Cambodia.
	Fisheries Law 2007	To ensure sustainable fisheries management and development.
2008	Protected Areas Law 2008	To ensure the management, conservation, and development of protected areas.
	Rectangular Strategy (2008-2013)	Strategy for development for all sectors of government.
2009	GG roadmap drafted	Fostering sustainability of economic growth by enhancing sustainable consumption and production, greening markets and businesses, by creating favorable climate for the establishment of sustainable infrastructure that in turn can enable the population to enjoy increased access to crucial goods and services, and ensuring equal access to resources to men and women.
	Cambodia REDD+ Roadmap drafted	Climate change mitigation plan for Cambodia.
2010	National Forestry Program (2010- 2029) finalized	To promote the conservation and sustainable use of forest resources in Cambodia.
	National Action Program to combat Land Degradation (2010-2020)	To combat soil degradation and desertification.
	Action Plan for UNCBD, UNFCCC and UNCCD, National Self-Capacity Assessment (NSCA)	Self-assessment of plan to promote biodiversity, combat climate change, and desertification.
	National Adaptation Program of Action to Climate Change (NAPA)	Programme to plan adaptation to climate change.
	Strategy for Agriculture and Water (SAW) for 2010- 2013	Rehabilitation and construction of physical infrastructure, management of water resources and irrigation.
	Cambodia Climate Change Alliance (CCCA) programme	
2011	MoU with the Ministry of Environment of Korea	Government of Korea has been very supportive of Cambodian GG efforts
	Cambodia joined the Global Green Growth Institute (GGGI)	GGGI is now an international organization to promote green growth agenda.
2012	National Council on Green Growth established	The result of which is presented in this report
2013	National Green Growth Master Plan 2013-2020	Adopted with outline on specific strategic directions for Cambodia to realise green growth goals

3.1 Showcasing selected green initiatives in Cambodia

There are several existing government initiatives and policies that are already contributing to the achievement of green growth in Cambodia. Several of those initiatives are starting to bear fruit. In this paper we briefly review four initiatives and make suggestions for improvement.

- greening the energy sector;
- tax holiday/exemption for environmentally friendly investments;
- direct incentives for natural resources conservation such as payments for ecosystem services (PES) and reduction of emissions from deforestation and forest degradation (REDD+); and
- forest management and conservation.

Some of these initiatives were developed by deploying pricing instruments, such as electricity consumption price differentiation, eco-taxation, or tax breaks. Emerging evidence show that these pricing instruments have been widely used in green growth strategies worldwide, but these instruments are also often complemented by regulations or subsidies to address market and information failures and to make them more politically acceptable (OECD, 2013b)

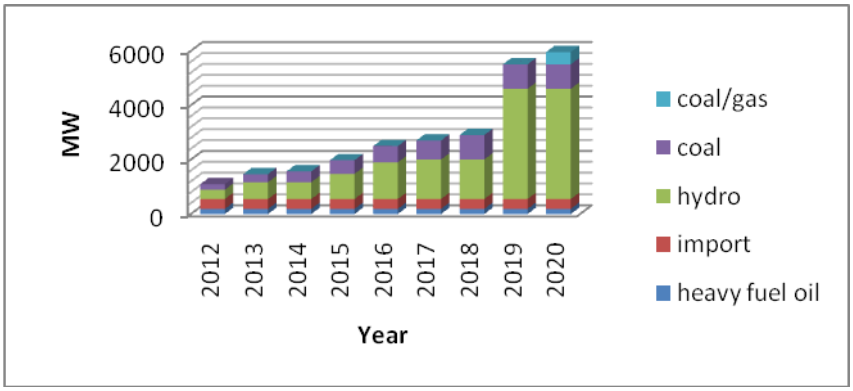
3.1.1 Greening the energy sector

Electricity provision in Cambodia is one of the most expensive in the world. The average price of electricity for household use can be as high as USD 0.18 per kilowatt hour (KWh) due to lack of high voltage transmission systems and large losses in distribution, as opposed to USD 0.06 to 0.1 per KWh in neighbouring country Vietnam, and USD 0.04 to 0.09 per KWh in Thailand. The total domestic production of electricity in 2008 was 1,461GWh. In terms of energy source, oil contributed the largest portion (1,410GWh), followed by hydropower (46GWh). The country also imported 374GWh of electricity in the same year (SERN, 2012). The proportion of electricity to be generated from hydropower is expected to increase significantly in the coming decade (Figure 2). According to the latest available data, the annual electricity consumption was 1,639 GWh in 2008 and with the projection of strong economic growth. Cambodia is expected to face a significant increase in demand for power in the years to come with electricity demand projected to grow from 946 GWh in 2003 to 3,478 GWh in 2020 (Reegle, 2012). This will mainly be driven by population increase, accelerated economic activity, and rural electrification.

The RGC is seeking to meet its growing energy demands without compromising social and environmental priorities. As clearly stipulated in the Environment Protection and Natural Resource Management Law, which was ratified in 1996, all power generation projects are subject to Environmental Impact Assessment (EIA) requirements. This means that the government body, which authorises energy projects has to be satisfied by the project's EIA before it is granted permission.

Cambodia has considerable potential for hydroelectric power generation, more than 10GW is currently under development. Around 50% of these resources are located in the Mekong River Basin, 40% on tributaries of the Mekong River, and the remaining 10 % in the South-western coastal areas. As in many tropical countries, it also has a great potential to produce solar energy. In 2012, total installed solar power capacity in Cambodia was 1.5MW (REN21, 2013). Some solar energy is being generated (mainly in remote rural areas) to supply electricity to local health centres, vocational training centres, schools, worship places (pagodas), and telephone companies.

Figure 2. Projection of electricity installation from various sources in Cambodia



Source: Choumnit, 2010.

The RGC is working towards incentivising the private sector to invest in renewable energy so that it will play a significant role in greening the energy sector. Within the framework of the Renewable Electricity Action Plan 2002-2012, there has been an increase in the implementation of small-scale energy production to meet energy demand in rural and remote areas. This includes small-scale biomass and household biogas from animal waste. Moreover, some upland areas have potential for wind power and there are some locations where micro-hydroelectric power would be feasible and this potential is reflected in national energy supply projections (Figure 2; Choumnit, 2010). However, more investment needs to be made to fully utilise its renewable energy resources. The main challenge of expanding renewable energy further has been the lack of consistent policy incentives to stimulate investments in alternative energy sources. Policies such as feed-in tariff, capital subsidies, tax incentives and energy production payments could be used in combination and in a time-bound manner to stimulate and scale up green energy sector.

Box 1. Energy framework of Cambodia

Power Sector Strategy 1999-2016

Access to sustainable energy services is a critical factor in Cambodia for reaching its MDGs, as well as the targets in the National Strategic Development Plan 2006-2010 (NSDP) for reduction of fuel wood dependency and poverty. Prior to that, in 1999, the Government approved the Cambodia Power Sector Strategy 1999-2016. The objectives of this policy are:

i. To provide an adequate supply of energy throughout Cambodia at affordable price;
ii. To ensure a reliable, secure electricity supply at prices which facilitate investment in Cambodia and development of the national economy;
iii. To encourage exploration and environmentally and socially acceptable development of energy resources for all sectors of the Cambodian economy;
iv. To encourage the efficient use of energy, and prevent detrimental environmental effects resulting from energy supply and use.

The Energy Efficiency and Conservation (EE&C) goals submitted to the 5th East Asia Summit Energy Ministers Meeting, held on 20 September 2011 in Brunei Darussalam, stated that the country uses Final Energy Demand as the EE Indicator, and aims at 10 % energy intensity reduction from Business as Usual by 2030. The action plans to achieve the EE&C goals cover the usage of energy by industry, transport and commercial & residential such as the introduction of energy efficient equipment and EE labelling as well as the promotion of EE awareness of the public.

Rural Electrification by Renewable Energy Policy

In 2006, the government approved the Rural Electrification by Renewable Energy Policy. Its main objective is to create an enabling framework for renewable energy technologies to increase access to electricity in rural areas. The policy acknowledges the Master Plan on Rural Electrification by Renewable Energy in the Kingdom of Cambodia as the guiding document for the implementation of projects and programmes. The Master Plan aims:

i. To achieve a 100 % village electrification, including battery lighting by 2020;
ii. To achieve a 70 % household electrification with grid connected quality electricity by 2030.
iii. In addition, Cambodia aims at providing 15% of rural electricity supply from solar and small hydropower by 2015

The Rural Electrification Fund (REF) has been setup and continues to provide grant assistance to licensees for new connections to households in rural areas. The fund was set up by the RGC through a loan from the World Bank.

Source: Reegle Policy Database (2013), Energy Data in Cambodia, available at http://www.reegle.info/policy-and-regulatory-overviews/KH#energy_studies, accessed on 30 July 2013.

As part of its commitment to achieve energy efficiency and conservation (EE&C) goal (Box 1) the RGC has introduced differentiated energy tariffs. This was introduced to encourage efficiency in generation and distribution of electricity and incentivise households and industries to rationalise their energy consumption. A certain tariff is applied for up to 50 KWh of electricity consumption. For each additional KWh of power consumed beyond the above threshold per month, a higher rate per unit of electricity consumed is applied. For example, the average cost of electricity up to 50 KWh for household use in Phnom Penh is USD 0.15 per KWh. If more than 50 KWh is consumed, the unit cost increases to USD 0.18 per KWh.

However, there have been some challenges hindering the progress of greening the energy sector in Cambodia. As shown in Figure 2 above, the RGC aims to meet its growing energy demands by mainly increasing investments in hydroelectric power plants. While this will play a significant role in greening the energy sector, it may have some unintended negative social and environmental impacts, such as displacement of households and ecological habitats for hydropower plant construction. If well designed, however, the potential negative social and environmental impacts can be avoided or minimised through use of comprehensive strategic impacts assessment, consultation with households and communities subject to displacement and through pro-active policies and measures to address the problems identified in these assessments and consultations.

There have also been some efforts made to introduce biogas energy for household use. However, there has been very limited uptake of the technology. According to some civil society groups, this has mainly been due to complex technology utilisation and lack of technical capacities for maintenance.

Government officials also identified some barriers to the development of biogas and other forms of rural renewable energy as: limited information and low level of awareness; weak coordination between relevant agencies or stakeholders; lack of skilled personnel and training facilities; inadequate and unsustainable financing arrangements; and unfavourable import taxes and tariff systems. More efforts could be made to tackle these barriers in a systematic way.

3.1.2 Tax holiday/exemption for green investments

The RGC has also taken an initiative to encourage environmentally and socially friendly investments in Cambodia. One of the initiatives taken is to offer tax holidays for 'qualified investment projects'. Investors are required to undertake environmental and social impact assessments should they wish to benefit from tax holidays, i.e. investments with 'zero' negative social and environmental impacts are granted tax holidays. This is assessed and proved by the Council for the Development of Cambodia (CDC). The Cambodia Pocket Tax Book (PWC, 2010) states that '*the holidays take the form of a complete exemption from Tax on Profit. The Tax on Profit exemption period begins from the earlier of the year the qualified investment project becomes profitable or 3 years from the issuance of the final Registration Certificate. The duration of these holiday periods range from 3 to 6 years*.' Qualified investment projects can choose between a profit-tax holiday and a depreciation allowance (provides a generous tax break for investors that need to import large amounts of machinery or other capital goods). In addition, all qualified investment projects are exempted from import duties on construction materials, production equipment, and input materials (BNG Legal, 2010).

While this is meant to incentivise investors to comply with environmental and social standards, the technical capacity of the CDC to monitor and assess the proclaimed environmentally friendly practices is limited, such as evaluating the quality of investors' environmental and social impact assessments, and monitoring the real impacts of these investments on the ground. Therefore, in order to ensure such initiatives are effective, the capacity of the CDC to periodically monitor investment projects and their compliance with environmental and social standards as well as to re-assess the need for support, needs to be strengthened.

3.1.3 Direct incentives for ecosystem services

Initial conservation strategies in Cambodia focused on the use of regulatory (or command-and-control) approaches such as establishment and management of protected areas. However, these approaches did not deliver the intended conservation benefits mainly because of: (i) unspecified property rights, which limits the incentives of managing protected areas, and (ii) relatively little information on the complex ecological systems and consequently the exclusion of many areas of high importance for biodiversity conservation (Clements et al., 2010). As in many countries, this has prompted the RGC to explore the possibility of introducing market-based instruments to complement existing conservation approaches. Market-based instruments such as payments for ecosystem services and REDD could provide land or resource owners with incentives (payments, rewards or compensation) to change their destructive or unsustainable land use practices to more sustainable practices.

A Cambodian REDD Roadmap has recently been developed and is currently being implemented. A 2010 study shows a total of 2.96 Gt of carbon is stored in Cambodia's forest ecosystems, with 30 % of forest carbon stock estimated to be in Forestry Concessions (Royal Government of Cambodia, 2012). Other market-based mechanisms, such as payments for ecosystem services (Box 2), have also been deployed to create incentives for environmental goods and services provision. However, the lack of clearly defined property rights, weak institutional capacity, inequitable benefit distribution, and lack of sustainable financing mechanisms are hindering the effectiveness of such forestry schemes. These issues need to be addressed as a pre-requisite for such initiatives to be more effective.

Box 2. Direct contracts for bird nest protection in the Northern Plains of Cambodia

A Bird Nest Protection programme was initiated in 2002 to conserve the *white-shouldered Ibis* in order to locate, monitor and protect the remaining nesting sites in the Northern Plains of Cambodia. Under the programme, local people are offered a reward of up to USD 5 for reporting nests, and are then employed to monitor and protect the birds until the chicks successfully fledge. The payment level was decided through consultation processes with the local communities. The full payment is still made if it can be verified that nests failed due to natural causes, including predation.

The bird nest programme has been successful at protecting nesting sites, safeguarding over 1,550 nests of globally threatened or near-threatened species since 2002. The total cost to the implementing organisation of the programme is around USD 26,000 per year, with an average cost of USD 65-120 per nest protected. The average cost has declined as the number of productive nests has increased – benefiting from economies of scale. This cost includes the payment provided to participating households. Average payments per household are around USD 100 per year. This mainly varies depending on the number of days worked and the relative abundance of birds in the local area. Some villages, such as Antil village, earned nearly USD 14,000 over four nesting seasons. This programme and its success is a clear indication that market-based approaches can deliver both biodiversity (ecosystem conservation) and poverty alleviation benefits.

Source: Clements et al, 2008, Payments for biodiversity conservation in the context of weak institutions: comparison of three programmes from Cambodia. *Ecological Economics,* vol 69, pp. 1,283 – 1,291.

3.1.4 Forest management and conservation

Cambodia has one of the largest areas of forest cover in the region. It has 59% of forest cover, which is equivalent to 10.7 million hectares. As of 2012, 451 Community Forests and 115 Community-based Protected Areas were established (Kingdom of Cambodia, Ministry of the Environment, 2012). The aim of creating Community Forests and Community-based Protected areas was to reverse the rate of deforestation and improve the livelihoods of forest dependent communities. The RGC has committed to maintaining forest cover and forest planation at 60% of total land area in Cambodia by 2015. This has been clearly stipulated in the CMDG Goal 7.

The RGC has issued and ratified a number of laws, regulations and declarations relating to forest management and conservation. Even though these laws and regulations have been ratified and have entered into force, a number of challenges remain. Key problems include illegal logging, settlement expansions, development projects in coastal areas (resort development and expansion of aquaculture farms), and economic land concessions for mining and rubber and palm oil plantations. In addition, financing may also become a barrier as the government begins to enforce forest management and conservation. Budgetary allocation is required to implement aggressive programmes to prevent deforestation and to incentivise reforestation programmes.

To address these problems, the Forest Administration of the Ministry of Agriculture, Forestry and Fisheries prepared its National Forest Programme (2010-2029). Through this programme, the government aims to maintain forest cover and reverse the rate of deforestation by:

- Increasing community forest management: the Forest Administration aims to double the area of community forest from 1 million ha (current level) to 2 million ha by 2029;
- Increasing protected forest: currently the area of forest marked as protected area is about 1.5 million ha. According to the National Forest Programme, this will be doubled (3 million ha) by 2029;
- Intensifying reforestation: the government introduced reforestation plans. It aims to reforest additional 500,000 ha by 2029. However, the authorities from the Forest Administration recognise the financial constraints their department has and are planning to do this by engaging

the private sector to invest in REDD activities, which aims to compensate developing countries like Cambodia for maintaining their forest cover. However, REDD projects are still at pilot level and have not yet been implemented at national level.

- Strengthening the role of the private sector and promote private sector investment in the protected areas of the Core Zone[3] and conservation of the Protected Area (PA); and
- Encouraging the private sector to engage in agro-business activity at the household level.

4. Enabling and disabling conditions for making growth green and inclusive in Cambodia

As one of the first low income countries in Asia adopting a national green growth roadmap, Cambodia has already attracted the attention of the OECD and other international organisations and development support providers. This section will provide an independent view on the enabling and disabling conditions for the promotion of inclusive green growth in Cambodia, informed by the multi-stakeholder workshop and interviews authors carried out with relevant actors.

Some of the strengths or enabling factors mentioned during the consultation workshop include: political stability, good economic performance, adequate state capacity, relatively low-carbon lifestyle to date, availability of ample and untapped natural resources, and progress in information technology development and innovation (see Box 3).

The stakeholders also identified key weaknesses or disabling environments such as lack of awareness, limited institutional coordination, and limited investment in renewable energy (see Box 3).

Box 3. Enabling and Disabling Factors to Pursue Making Growth Green and Inclusive in Cambodia

Enabling Factors

- Political stability is often cited as a prerequisite for any economic development and for the creation of conditions conducive to trade and investment. Cambodia is a young democratic country, which is evolving rapidly and it is widely recognised that real growth and development can only be realised with political stability. Political stability has been built only gradually since 1990s but this positive trend is likely to continue.
- Good economic performance, notably a high level economic growth, has accelerated investment and increased job opportunities in Cambodia. Micro-finance has expanded exponentially and has helped poor households to gain easy access to capital for better income creation and livelihood improvement.
- State capacity has grown as the RGC has made significant improvements in enhancing both technical and institutional capacities. This is needed to foster inclusive policy making process, enforcing existing regulations through provision of incentives, and allowing more participatory approaches for public consultation (e.g. engaging a wide range of stakeholders). Even though such capacity is still far from sufficient, the political commitment to fill knowledge, skill and remaining institutional gaps is strong.
- Underexploited natural resources such as bamboo, rattan and silk, have great potential as inputs for sustainable production as more and more green goods are being demanded in the global green growth movement. Also exploiting the potential for small scale energy solutions such mini/micro-hydro and use of passive solar can help to reduce resource and energy intensity. Sustainably managing these resources will also present green jobs opportunities for local communities. Innovation and technological development are also expected to be a critical factor in stimulating green growth practices.
- Technological improvements have also enabled Cambodia to further explore cost-saving production methods. With World Bank funding, the Ministry of Education, Youth and Sports manages the Development and Innovation Grant program, which supports research and grassroots innovation that can provide the basis for green, inclusive growth.

[3] The General Department of Administration for Nature Conservation and Protection (GDANCP) of the Ministry of Environment (MOE) has developed a Protected Area (PA) Strategic Plan and zoning the PA into 4 zones namely: Core Zone, Conservation Zone, Sustainable Use Zone and Community Zone.

Disabling Factors

- Citizens and decision-makers lack awareness of the concept of green growth and on how to seize the opportunities it offers, such as making the economic case of investing in climate resilient urban infrastructure.
- Limited institutional coordination exists. Although inter-ministerial working groups were set up, communication and coordination for more coherent policy making takes time and requires real leadership.
- Cambodia's lack of a coherent energy plan and of investment in the sector means it depends on imported oil and hydropower even if significant domestic renewable resources exist and have the potential to be used to generate electricity and eventually make it energy independent.

Good governance is at the centre of the Rectangular Strategy, the National Strategic Development Plan (NSDP) and the Green Growth Roadmap. Yet despite recognition of the need for good governance, it is not uncommon to see evidence of poor governance and contradicting policies such as the lack of environmental law enforcement, undocumented Economic Land Concessions (ELC) (Boyle and Tithara, 2012) and lack of transparency and accountability in decision making in government activities. Recent improvements are apparent however as the government has implemented its *Decentralization and Deconcentration* (D&D) policy. The D&D is given very high priority by the RGC. It aims to achieve broad based sustainable development and strengthen vibrant local economic foundations for every citizen to provide equal opportunities to participate in local development, effective natural resource management, and delivery of quality public services to meet the needs of citizens and improve their livelihoods. According to Lepain (2011) this originates from "…the realisation that improvement in public service delivery cannot take place unless local issues and local preferences are taken into consideration and it aims at redefining powers and responsibilities of provinces, districts and municipalities."

Following the guidelines of the NSDP, and the Green Growth Road Map's "seventh access" of sustainable land use, indigenous people are supposed to be granted group ownership to the land on which they live. Without the land, indigenous peoples lose their cultural practices and their livelihoods, which also undermines the Green Growth Roadmap's "sixth access" to food security (May, 2012). The RGC recognises the importance of land entitlement of indigenous communities and has allowed them to continue living in their communities even though the land has been marked as the economic investment zones. Ultimately indigenous communities are encouraged by the government to have legal land title ownership over their village lands and farm land, as well as respect their ancestral land.

Recently, the RGC initiated a fast-track land titling programme, in which many young volunteers have spread out across the country to award land titles to residents. The progress has been very rapid and tens of thousands of individual have already been awarded with land titles. This land redistribution initiative raises confidence and satisfies people on account of having the land title, thus actively raising their participation in economic development for their family and the nation. This land titling programme also contributes to the effective and sound management of land, forests and ecosystems. The implementation process and progress made in land reform in Cambodia has been commendable (Sokheng Vong and Worrell, 2012).

Some of the enabling and/or disabling factors stem from beyond national borders. One of the most promising avenues for green growth is through international or regional collaboration and partnerships. Regional and international policy frameworks can have positive or negative spill-over effects. For example, Cambodia is signatory to a number of regional and international conventions and agreements, one of which is the Mekong River Commission. The Mekong River Commission is an intergovernmental body tasked with protecting the Mekong River and its residents; its origins stem from multi-national interests. It has been instrumental in adjudicating agreements and resolving conflicting interests around water usage in this river basis, but its weakness is in failure to enforce agreements or to find agreements that represent the majority of the national interests it represents. For example, the *Xayaburi Dam* project in Laos is objected to by most of the Commission's member countries (except China), and the commission

has not been able to stop this project. The potential negative impacts of this dam on the larger ecosystem of the river and on downstream dwellers are very significant. Therefore, strengthening the institutional capacity of regional governing bodies (beyond national jurisdictions) is extremely important if green growth initiatives are going to succeed and be safeguarded in Cambodia and in neighboring countries.

5. Way forward: discussions and recommendations

One of the objectives of this country case study is to identify policy gaps and potential areas of improvements to accelerate progress and make green growth more visible in Cambodia. It aims to provide recommendations on how existing governmental and international initiatives can be augmented, and on how national strategic planning strengthened, to support green growth and deliver better outcomes. Areas of improvement, identified by workshop participants and through bilateral interviews, can be divided into those at national level and those at international level. National level improvements can be categorised into mobilising various sources of finance for green growth; improving governance and developing capacities at both institutional and technical levels; at sectoral level, prioritising sustainable transportation for cities; and finally developing and adopting green growth indicators in order to measure progress and gauge results. At the international level, there is a need for strengthening co-operation and engagement with the international community to ensure the achievement of green growth. This can be realised mainly through: development co-operation; international trade; and science and technology cooperation (Table 3).

5.1 National level

5.1.1 Mobilising resources for green growth

Greening national budget

One of the fundamental problems with the traditional national (economic) development plans pursued by most countries is that they failed to take into account (or adequately consider) the potential impacts of the policies on the environment. As a result, many natural environments have been either degraded or converted for other uses to support economic growth. To overcome these challenges, and assign visibility and value to natural assets, it was suggested by workshop participants that greening national budgets (public expenditure, subsidies, and other forms of fiscal transfers) is fundamental. This would allow government expenditure plans to shift away from activities that waste, overuse or degrade environmental assets. This approach has gained momentum in some countries, for example, through ecological fiscal transfers to local governments in Brazil and Indonesia. The advantage of greening the national budget is twofold: firstly it allows governments to make informed decisions that minimise negative impacts on the environment; and secondly it incentivises line ministries and local governments to set out work plans that deliver positive environmental or ecological benefits. It is a first step to ensure that public funding is aligned to lead the way to demonstrate and deliver benefits from green growth.

However, it should be recognised that there are several key constraints that may hinder the process of greening national budgets in Cambodia. These are: i) financial constraints that require decision makers to make inevitable critical trade-offs between cultural, social, economic and environmental causes; ii) lack of data on the state of natural ecosystems and difficulty to make the economic case of investing in natural resources in the near-term due to limited evidence; and iii) limited capacity to monitor and assess the changes in environmental quality and how such changes can be attributed to changing public expenditure patterns.

In order to ensure that the country is on the right track towards greening its economy, the RGC will need to factor in the value of environmental "goods" (i.e. the existence value of national parks) and "bads" (i.e. water and air pollutions) in its planning, decision making, and budgeting processes for development. As mentioned above, even though the existing national development plan does acknowledge the importance of environmental quality and improvement, there is no clear strategy set out to achieve this. Therefore, it simply remains a policy statement without specific action supporting its implementation.

Nonetheless, the RGC plans to incorporate green growth pathways in the next National Strategic Development Plan (2014-2018). Therefore, this could be a good opportunity to mainstream green national budgeting.

Securing seed financing, possibly through a dedicated national fund to mobilise local resources

Sustainable financing is crucial both to help meet the up-front green growth transition costs and to ensure long-term systemic change. Some mix of market-based instruments and regulations will inevitably be needed to change incentives of producers and consumers; market-based instruments have an advantage of generating public revenues or local resources, some of which can be directed to support green investment. Most of the stakeholders consulted recognise the potential value of setting up a National Green Growth Fund, which could be used as a way of securing seed financing for green growth policies and programmes. The desire to reduce dependence on donor support is very encouraging. Cambodia has already set up a climate trust fund through "the Cambodia Climate Change Alliance (CCCA)", a donor funded mechanism that aims to support capacity development and institutional strengthening to prepare for, and mitigate, climate change risks, and to directly help vulnerable communities by enhancing their resilience to climate change and other hazards (see Box 4 below). The RGC can capitalise on this experience by drawing lessons from CCCA for a separate Green Growth Fund, or by broadening the objectives and principles of the GCCA, which currently mainly focuses on climate change adaptation and mitigation, to include other aspects of green growth. However any national green growth fund or mechanism should rely mainly on local, domestic resources. In addition to public sources of finance, innovative approaches to attract private financing should be adopted.

Greening the financial sector

By the end of 2011, the banking sector in Cambodia consisted of 31 commercial banks and 32 microfinance institutions (MFIs). According to the World Bank, in 2011 Cambodia's domestic credit provided by the banking sector was around 24% of the national GDP. Therefore, building domestic financial capacity, in particular through stronger and more regionally standardised banking regulations, can play a major role to promote green growth in Cambodia. Greening the banking sector does not mean engaging in philanthropic activities; it is rather an opportunity to promote green investments and social entrepreneurship. Some MFIs are taking the initiative to promote green investments. For example, the PRASAC (Rehabilitation and Support Programme for the Agricultural Sector of Cambodia), a leading MFI in Cambodia, is bolstering its green credentials by increasing loans for eco-friendly farming methods. More incentives should be provided to encourage local banks to offer more "green" loans – loans targeting activities which have significant positive environmental impacts, such as investment in renewable energy, climate resilient agriculture and watershed management. Establishing clear policy incentives to make such investments profitable will also help to "green" the sector.

In addition to providing incentives, the RGC could set some regulations to both commercial banks and MFIs to promote investments that deliver both environmental and social benefits. Some specific actions can potentially help to green the banking sector include:

- *Requiring the integration of environmental risk criteria in overall risk management guidance* - for instance, companies operating in highly environmental sensitive areas should be carefully examined before loans are granted, even though their activities could be financially viable;
- *Training bank staff* to understand the contributions of environmental and natural capitals to economic activities and their collateral values (e.g. renewable energy projects or forestry or watershed conservation with accounting for ecosystem services that they provide);
- *Strengthening the financial reporting systems* for business and the public sector, to incorporate full disclosure of environmental gains and losses;

- *Setting a quota or a goal on the proportion of loans* offered to households and smallholders who either act as stewards of the environment or can sustain their livelihoods through sustainable economic activities (e.g. organic farming).

Above all, regional co-operation in harmonising banking regulations is also important because more stringent environmental considerations in the evaluation of loan applications in one location versus another will mean increased costs to companies or entrepreneurs. If neighbouring countries do not have compatible regulations, then the economic competitiveness of Cambodia will likely be penalised by going green.

5.1.2 Governing and developing capacity for more inclusive green growth

Improving governance for more inclusive green growth

Inclusion is increasingly essential for the credibility or legitimacy of green growth and its success. The 'people centred' political commitment to promote growth and development in Cambodia already sets out a the favourable governance structure to empower lower income households, small landholders, women and children to both participate in economic decision making and to benefit from economic improvement. However, the governance structure needs to be strengthened to cope with new development challenges.

Even though the RGC has made efforts to improve governance, nurture democracy and create a more equal society, some gaps may hinder such efforts and therefore need to be addressed. One of the factors associated with governance in Cambodia is corruption. Therefore, it is very important that the RGC strengthen its efforts to fight corruption and foster a more transparent, accountable and inclusive governance structure.

More inclusive governance structure for green growth will provide a platform for all concerned stakeholders to participate in the implementation of the National Master Plan on Green Growth through extensive consultations and public hearings. Comprehensive livelihood impact assessments should also be carried out to both understand the potential winners and losers in the transition to green growth and the need for complementary measures to ensure the welfare and well-being of the poorest are protected. Further research is also needed to be done to understand how business, local governments and civil societies would respond to, and meaningfully engage in, green growth initiatives.

Strengthening inter-sectoral co-ordination

One of the strategic challenges impeding the success of green growth in Cambodia is rooted in weak strategic organisation, including weak inter-sectoral collaboration or co-ordination. This has led to the establishment of conflicting government policies and initiatives. For example, the Ministry of Agriculture, Forestry and Fisheries has demarcated certain forest areas as 'protected forest' in order to mitigate the deforestation rate. However, such efforts are easily annulled by counterproductive government policies such as 'economic land concessions' which are managed through another ministry. For example, in 2011 two land concessions covering a total area of more than 18,000 ha were awarded for rubber plantations. This is mainly because the law calls for the categorisation of forest areas as either 'economic' and 'non-economic' forests. The land concessions for rubber or palm oil plantations were awarded under the pretext of converting 'non-economic' forest to 'economic' forest.

This is a typical example of market failure, where the market fails to capture the economic value of forest ecosystems, especially when the goods and services provided by forests are not bought or sold in conventional markets. To correct for such market failure and for the outdated categorisation of forest ecosystems as 'non-economic', there is an immediate need to estimate the economic value of the services and amenity values provided by natural ecosystems. Ang (2007) stated that the use of economic valuation techniques and approaches in Cambodia is fairly new. Unfortunately there is limited understanding of the

importance of quantifying natural ecosystem in monetary terms and limited data on which to do so. Therefore, collaborative work by both researchers and academics, working along with policy makers, can provide policy makers with new tools to make well-informed decisions that support government policies and initiatives to achieve green growth.

Raising public awareness

There is wide consensus among all stakeholders consulted that the level of public awareness about environmental protection in rather limited and green growth in particular is very low. Even though there have been a few initiatives taken by civil society groups and academics to raise the awareness of the public (especially with youth) by encouraging people to voluntarily participate in environmental protection activities, a lot more needs to be done. Public awareness on green growth could be raised by mainstreaming environmental issues in national curriculum and through the use of mass-media. As mentioned earlier, the level of understanding about green growth among government officials is also far from a satisfactory level. Therefore, programmes to raise the level of understanding on the green growth concept among government officials working on environmental protection and social well-being should also be strengthened.

5.1.3 Sustainable transportation for cities

Transportation represents 23% of man-made CO_2 emissions globally largely because 96% of transport today is still powered by fossil fuels (OECD ITF, 2012). A sharp increase in motor vehicles has contributed significantly to air pollution issue in the Southeast Asian region (OECD, forthcoming). The Centre for Southeast Asia Environment and Sustainable Development study found that the median Phnom Penh city-wide fine and coarse particle counts are $1.07 \times 10^8/m^3$ and $1.36 \times 10^6/m^3$, respectively, which are considered critically high. The RGC with international support, mainly from Japan, is developing a master plan to introduce sustainable transportation system in the capital. This will potentially reduce the levels of both air and noise pollution in the city. The lack of a sustainable transportation system, especially in Phnom Penh, remains one of the main challenges for the country to truly move to a green growth path. To date there is no established form of public transportation available in Phnom Penh.

The RGC recognises the need to introduce a sustainable transportation system in Phnom Penh – one that is effective and efficient – with minimum environmental impacts. Projects addressing Phnom Penh transportation problems have been carried out by the Japan International Cooperation Agency (JICA), with a focus on infrastructure improvements such as traffic barriers, traffic lights, and decentralising the business districts to facilitate traffic flow to overcome congestion problems. The introduction of ambitious, sustainable transportation systems in bigger cities in Cambodia will require strong commitment from the government and raising the awareness of the public on the social (health), economic and environmental benefits of public transport.

5.1.4 Developing indicators to measure the achievement of green growth

Policies that promote green growth need to be founded on a solid understanding of its critical elements, as well as of its trade-offs and synergies. They also need to be supported with appropriate information to monitor progress and gauge results (OECD, 2013a and 2011b). Indicators can be used to inform public debate and gauge how well policies are performing. Traditional indicators, such as GDP per capita or a poverty index can no longer capture the complexity of interactions between environmental, economic and social aspects of a national development trend. An effective measurement approach to monitor progress towards implementing Cambodia's Green Growth Roadmap requires a conceptual framework that reflects the integrated nature of green growth and describes the main aspects that need to be monitored. Such a framework provides a useful tool to organise thinking about indicators and to identify relevant, succinct and measurable statistics.

The OECD has developed a measurement framework for countries with interest in understanding progress made in "going green". This indicator framework is organised into four groups (Table 2):

- indicators of environmental and resource productivity, including demand-based environmental services (footprint approaches) to track the extent to which economic growth is becoming greener (i.e. low-carbon and resource efficient);
- indicators that monitor the natural asset base and whether it is being kept intact;
- indicators of the environmental quality of life – the direct and indirect interaction between people and the environment;
- indicators that capture both the economic opportunities and the policy responses that arise from green growth.

In the context of Cambodia, given its emphasis to improve human well-being in national development plans, a set of indicators that objectively measure the social-economic context should also be used. This is a recognised dimension of the OECD measurement framework but one that has not yet been fully developed.

Table 2. OECD Measurement Framework for Green Growth

The environmental and resource productivity of the economy	• Carbon and energy productivity • Resource productivity: materials, nutrients and water • Multi-factor productivity
The natural asset base	• Renewable stocks: water, forest, fishery • Non-renewable stocks: mineral resources • Biodiversity and ecosystem services
The environmental dimension of quality of life	• Environmental health and risks • Environmental services and amenities
Economic opportunities and policy responses	• Technology and innovation • Environmental goods and services • International financial flows • Process and transfers • Skills and training • Regulations and management approaches

Source: OECD (2012), Towards Green Growth: Monitoring Process: OECD Indicators, OECD Publishing, Paris.

The table above contains some examples of indicators that could be potentially used to measure the performance of implementing the National Master Plan on Green Growth in Cambodia. These indicators could also be organised in a way to measure the seven accesses' objectives outlined in Cambodia's Roadmap. For instance, to examine progress made in achieving access in renewable energy and energy efficiency, the government could set indicators such as energy productivity, technology and innovation, energy prices, and energy regulations and management approaches to assess trends over time.

However, it is important to bear in mind that some indicators are currently not measurable due to lack of data and limited technical capacity. Initiatives to improve national statistics can provide an important opportunity to mainstream green growth into economic and social information systems.

The National Statistics Office has a significant role to play in the green growth process, though such a role has always been neglected in many countries in the past. Involving the National Statistics Office as a key governing member in the National Council on Green Growth could be a critical step forward to ensure indicators are tailored to fit the national context of green growth.

5.2 International level

5.2.1 Development Co-operation Support

In 2010, total aid disbursement in Cambodia amounted to USD 1.075 billion, an equivalent of 9.4% of GDP of that year, and an annual increase of 7.8% (CDC, 2011). Aid allocated for the environment and climate change sector amounted to USD 40 million (CDC, 2011; see Box 4 of current green growth aid support examples). There is a wide recognition that donor support needs to be twin-tracked, on the one hand to continue supporting individual projects which could bring immediate impacts to local communities, but on the other hand to support strengthening enabling conditions, such as awareness raising, technical and institutional capacity-building and private sector development to ensure all actors can participate and benefit from green growth. However, supporting green growth is not only about providing more environment and climate related aid, but also about integrating green growth consideration into all development support programmes, from infrastructure development to social protection by making them climate resilient and by taking into account the implications of these programmes on natural resource into account. There is also a need for more coordination between donor agencies to avoid unnecessary overlaps and enhance synergies to increase the effectiveness of their initiatives. It is hoped that the newly established National Council on Green Growth will create a platform to bring donors together where they can coordinate their activities and effectively work towards achieving green growth in Cambodia.

Box 4. Development Co-operation for Green Growth At a Glance

EU, UNDP, SIDA and DANIDA - Cambodia Climate Change Alliance (CCCA)

Launched in February 2010 by the EU and UNDP, the CCCA is one of several initiatives designed to strengthen Cambodia's response to climate change and also the most well-known one. It aims to support capacity development and institutional strengthening to prepare for and mitigate climate change risks; and directly help vulnerable communities by enhancing their resilience to climate change and other natural hazards. Sweden and Denmark have also joined the initiative and strengthened the budget of CCCA to EUR8.9 million for the period of 2010 to 2012 (UNDP, 2013). The CCCA includes two important mechanisms:

- a unified engagement point for development partners;
- a multi-donor financial facility, the CCCA Trust Fund, which provides grants for projects that help Cambodia adapt to climate change.

The multi-donor financial facility is the first of this kind in Cambodia and has already proven to be effective in harmonising various financial sources to support nationally-owned climate change actions (GCCA, 2013).

Source: Global Climate Change Alliance, 2013, http://www.gcca.eu/national-programmes/asia/gcca-cambodia-climate-change-alliance,accessed on 16 July 2013; UNDP, 2013, http://www.un.org.kh/undp/what-we-do/projects/cambodia-climate-change-alliance, accessed on 16 July 2013.

JICA

Japan, the largest bilateral donor to Cambodia in 2010 also provided much support in green growth related areas (CDC, 2011). This includes capacity enhancement of environmental and social considerations for forestry, transportation and resettlement; operation and maintenance of rural electrification through micro-hydroelectric power plants in Mondul Kiri Province; and freshwater aquaculture improvement and extension (JICA website, 2012).

Technical Working Group on Forestry and Environment (TWG-F&E)

The TWG-F&E provides a mechanism at technical level for Government-Donor Coordination in the forestry sector to identify sector priorities, harmonise activities, improve the utilisation and mobilisation of resources and support efforts to strengthen the sector's capacity to contribute to inclusive economic growth. Chaired by the EU and the Forestry Administration Department, this working group has strategic importance in addressing several of the 'accesses' defined in the Green Growth roadmap, including sustainable land use management, food security and water and sanitation. This Working Group is currently focusing on a range of activities from promoting payments for ecosystem services mechanism in Cambodia to strengthening the existing forestry law at national level and more localised actions such as tree seedling distribution and plantation.

Source: CDC (Council for the Development of Cambodia) (2011), *The Cambodian Development Effectiveness Report*, Phnom Penh, Cambodia; JICA (Japanese International Cooperation Agency) (2012), *Country Programme in Cambodia*, available at http://www.jica.go.jp/cambodia/english/index.html, accessed on 2 December 2012.

5.2.2 International Trade

Cambodia has pursued an open economy policy since the 1990s. Agriculture, service sector (tourism) and manufacturing make up the major portion of export volumes from Cambodia to the rest of the world. All these trade sectors however have strong environmental implications if not managed properly. For instance, the government promotes non-chemical and organic fertilizer application to increase rice yields for the long-term sustainability of farm land. There is growing interest and increasing demand in the international market for environmentally-friendly products, fair trade goods and sustainable eco-tourism, and Cambodia has a comparative advantage to compete in the international market if it could safeguard its 'trade production' and effectively brand its outputs (SIDA, 2009). Utilising integrated approaches to farming, such as rice field fisheries, can bring both natural fertilisers to the rice fields, but also allow farmers to enjoy the revenues generated from the sale of their fish, which in some cases could potentially overtake profits from the sale of rice (MoC and UNDP Cambodia, 2010). Also, better managing the environmental impacts of the tourism sector can further enhance its contribution to Cambodia's overall economy and create further employment opportunities, from family run eco-friendly guest houses to integrated waste management and processing.

5.1.3 Science and technology co-operation

Innovation is key to foster green growth and could be encouraged by a mix of policies within a coherence framework (OECD, 2013b). Science and technology co-operation, knowledge and experience exchange are some of these policies which could be used to promote cost-effective green growth implementation. At the international level, the Global Green Growth Institute (GGGI) is creating a platform for evidence-based learning and policy innovation that helps to illuminate practical opportunities for country- and industry-led progress on economic development and environmental sustainability. At regional level, science and technology co-operation within the ASEAN states is stronger than ever through university exchange programmes, joint R&D agendas and technology transfer from the front-runners countries to those currently catching up. The recently established China-ASEAN Environmental Co-operation Centre will in particular bring ASEAN members together to share technology and experience in the field of environmental industry (ASEAN-China, 2011). Such an international partnership could serve a small country like Cambodia well if the government is pro-active in its participation in this forum.

Table 3. Summary of key areas of future improvements at national and international levels on green growth in Cambodia

Current status	Areas of improvements	Challenges
NATIONAL LEVEL		
1. Mobilising resources for green growth		
1.1 Greening national budgetary process		
Failure to take into account the negative impacts of development policies on the environment. Also fail to reflect the green growth priorities in the current national budget allocation	Greening national budget allows the government to make informed decisions that minimise negative impacts on the environment, and it incentivises line ministries and local governments to set out work plans designed to deliver positive environmental benefits.	- Financial constraints that often make trade-offs between culture, social, economic and environmental objectives inevitable - Limited data availability - Limited technical capacity to monitor environmental impacts
1.2 Securing seed financing possibly through setting up national fund		
High dependence on unsustainable international financial support	To ensure continuous financing to support the realisation of programmes and policies identified in the Roadmap and Strategic Plan, it is crucial to have sustainable sources of financing, possibly by mobilising domestic resources (e.g. pollution tax revenues) or through setting up a national revolving fund system that could be designed to stimulate private sector engagement.	- Requires policies and also policy enforcement to ensure sufficient domestic resource mobilisation to secure public funding - May also require innovative ways of raising finance that may not be familiar to the country so far
1.3 Greening the financial sector		
Limited engagement by banks to provide loans to "green" initiatives	Establish policy incentives and regulations to make green projects more profitable so to stimulate both commercial banks and micro-finance institutions to promote investments that deliver both environmental and social benefits. Also to work through regional co-operation to ensure harmonised banking regulations to strengthen Cambodia's business competitiveness by strengthening local financial capacity, lowering borrowing and other financial costs.	- Limited capacities and knowledge of staff working in the banking sector on green growth projects - No clear indication from the government on the importance of transiting from brown to green lending and limited action to date to establish strong and clear incentives for the financial sector to support green initiatives
2. Governing and developing capacity for green growth		
2.1 Improving governance for more inclusive green growth		
Current governance structure needs to be strengthened to cope with integration of green growth into development challenges	More effort to fight corruption and foster a more transparent, accountable and inclusive governance structure	- Practical challenges remain on how concerned stakeholders can respond to, and "meaningfully" engage with, green growth initiatives

2.2 Strengthening inter-sectoral co-ordination		
Very limited inter-sectoral collaboration or co-ordination	Through the strong government leadership and the already established National Council on Green Growth, there is clear potential to foster inter-ministerial/inter-sectoral collaboration and coordination	- Easy to say but hard to implement especially when conflict of interests occur between sectoral ministries - Clear green growth opportunities need to be identified, presented and discussed with all ministries to build common understanding and support for these
2.3 Raising public awareness		
Limited public awareness about environmental conservation in general and green growth in particular	More initiatives to raise awareness of the public (especially the youth) by mainstreaming environmental issues in national educational curriculum and through the use of mass media and/or social media channels	- Awareness raising is not a one-off activity, it requires financial resources and government commitments - It also takes time for changes to happen
3.Sustainable transportation for cities		
Lack of sustainable transportation systems in major cities.	Introducing sustainable transportation into the urban master plan in the capital to demonstrate the benefits of mass transit, and scaling this up to other major cities. This would reduce the levels of both air and noise pollution in cities, improve labour productivity and human health to be a cost-saving strategy	- Requires a stringent commitment and funding from the government, first to raise public awareness about the social (health), economic and environmental benefits of public transport and second, to plan and implement such a system - Need to consider social impacts and risk of social unrest from those whose livelihoods are threatened (e.g. Tuk-Tuk drivers). Complementary policies could ensure benefits to this segment of the population, e.g. aiming to retrain those put out of work for jobs in in other economic sectors
4. Designing indicators to measure the achievement of green growth		
There are no clearly defined indicators to objectively measure the achievements of green growth	Clearly defined goals and indicators should be used to inform public debate and gauge how well policies are performing	- Limited data availability to objectively measure progress - Requires an investment in data collection but also in developing agreed indicators through which to assess progress
INTERNATIONAL LEVEL		
5. Development co-operation support		
Disconnect between support from development	Donor support needs to be twin-tracked to: i)	- Different donor agencies may have different focused

co-operation and national priorities for green growth	strengthen domestic enabling conditions such as awareness raising, technical and institutional capacity building as well as domestic policy reforms, e.g. to put green policies in place and strengthen enabling conditions for private sector engagement; and ii) to help strengthen intra-governmental institutions for governance for green growth e.g. to enhance co-ordination between donor agencies to avoid unnecessary overlaps and enhance synergies to implement green growth	areas in Cambodia; although they share common development goals, specific policy objectives can differ, which makes coordination more difficult - Time consuming and requires collective commitment and engagement by the Cambodian government as well to work in a pro-active manner with donors and seek donor harmonisation and co-ordination
6. International trade		
Cambodian's main trading sectors have significant environmental implications and may lose its competitiveness with growing environmental standards from its trading partner countries without timely reforms	Growing demand for equitable (fair trade) and environmentally friendly products in the international market	- Requires technical capacity to adopt alterative production methods - May need start-up capital to purchase equipment - Also requires both policy and technical capacities in ensuring Cambodian production standards can gradually match the international and regional standards in light of global discussions on sustainable consumption and production
7. Science and technology cooperation		
Good science and technology cooperation to date, however, requires accelerated efforts in making real change happen and to support green sector opportunities	Innovation and technology co-operation can stimulate new ideas (both at national and level levels) to delivery green growth outcomes	- No systematic national innovation policies currently targeting green growth - Requires technical capacities and financial support to kick off projects and initiatives

6. Conclusion

From a Cambodian perspective, green growth is defined as a process where a balance is struck between economic growth, environmental protection and societal well-being. The majority of the stakeholders in Cambodia see green growth as a continuum – transitioning from a 'brown' to a 'greener' growth pattern. The aspirations of stakeholders are, therefore, to move to the 'greener' end of the spectrum in order to achieve better societal well-being, reduce poverty, and foster a more inclusive economic development.

The motivations of the RGC and other concerned stakeholders for green growth include: socio-economic benefits (economic growth, job creation, poverty alleviation, etc.), environmental protection, and an opportunity to create and strengthen institutions. It is believed that green growth can create institutions that enhance the efficacy of the implementation of existing initiatives and activities and create a platform where concerned stakeholders can participate, engage, and shape decisions for sustainable development. The fact that the RGC has successfully established the National Council on Green Growth (NCGG), which will oversee the implementation of the National Strategic Plan on Green Growth, is a clear indication of this.

Even though the concept of green growth is fairly new to Cambodia, there have been commendable efforts made by the RGC in terms of policy formulation and development that would directly or indirectly contribute to the realisation of the seven principles of Cambodia Green Growth Roadmap, known as the 'seven accesses'. Some of these initiatives pre-date the introduction of green growth to Cambodia.

Four specific initiatives that have potential to contribute to green growth namely: greening the energy sector, tax holiday or exemption for environmentally friendly investments, direct economic incentives for ecosystem conservation, and forest management and conservation were further examined here. Cambodia has ample renewable energy sources such as hydropower, solar energy, and biomass energy. The RGC is therefore planning to capitalise on these untapped resources to meet its energy demands while achieving environmental sustainability and delivering social benefits. However, its progress towards greening the energy sector has been hindered mainly due to limited private sector investment, limited financial viability, lack of skilled personnel and training facilities, and unfavourable import taxes and tariff systems. A concerted effort by the government, working in partnership with the private sector, will be required to overcome these barriers and successfully green the energy sector in Cambodia.

The RGC has been providing 'tax holidays' or exemptions for socially and environmentally friendly investments. While many such awards have been made to incentivise investors, the technical capacity of the Cambodia Development Council to monitor and assess the proclaimed environmentally friendly practices is very limited. Therefore, the Council's capacity to regulate, assess, and periodically monitor the practices of the awarded investments needs to be strengthened.

In its attempt to complement the use of 'command-and-control' approaches for environmental conservation, the RGC has been exploring and piloting market-based instruments such as payments for ecosystem services and REDD. While the approach has had promising results, some challenges such as lack of clearly defined property rights, weak institutional capacity, and inequitable benefit distribution system may hinder the progress or even negate the achievements registered so far.

Through the development of this case study, the following factors were identified as enabling conditions for a successful implementation of green growth in Cambodia: political stability, good economic performance, adequate state capacity, relatively low-carbon lifestyle, availability of ample and untapped natural resources, and progress in IT and innovation. On the other hand, some of the disabling factors identified by the stakeholders include: lack of awareness, poor economic management, lack of

inter-sectoral co-ordination, pervasive inequality and sense of justice, low investments in the education sector, and limited investment in renewable energy.

To address such weaknesses and fill policy gaps, the country case study team recommends several areas of improvements which can be undertaken at national and international levels. These areas of improvement at national and international levels are identified in Table 3 in Section 5, along with challenges RGC may face throughout the policy implementation process.

ANNEX I: Consultations conducted in producing this country case study

The findings and recommendations of this case study reflect a broad consensus amongst participants at the OECD/Ministry of Environment workshop held in Phnom Penh on 14-15 November 2012. They also draw on the information kindly provided by individuals interviewed separately in the same week. However, workshop participants and interviewees acted in their personal capacity, and the case study does not necessarily reflect the views of any individual or their organisations.

Participants at the Cambodian Inclusive Green Growth Workshop in November 2012

Name	Position	Ministry / Institution
Khong Sam Nuon	Secretary of State	Ministry of Environment
Mey Bouth Withya	Under-Secretary of State	Ministry of Environment
Ing Peng long	Director of Department	Ministry of Environment
Yin Bunmane	Deputy Director of Department	Ministry of Environment
Sek Thea	Chief of Office	Ministry of Environment
Chea Leng	Vice-Chief of Office	Ministry of Environment
Sem Sambath	Project Officer	Ministry of Environment
Meng Kunthea Bopha	Project Officer	Ministry of Environment
Nop Navy	Project Officer	Ministry of Environment
Chhun Vannak	Secretary-General	National Council on Green Growth
Danh Serey	Under Secretary-General	National Council on Green Growth
Ngy Lay Mithona	Officer	Ministry of Economy and Finance
Sok Sopheap	Officer	Ministry of Economy and Finance
Tung Ciny	Deputy General Director	Ministry of Industry, Mining and Energy
Chong Bou	Office Chief	Ministry of Industry, Mining and Energy
Keo Sovathapheap	Deputy Director of Department	Ministry of Water Resource and Meteorology
Uk Raksmey	Director	Ministry of Public Works and Transport
Tim Phyriya	Deputy Director of Department	Ministry of Women's Affairs
Bou Chan Sirey	Deputy Director of Department	Ministry of Tourism
Pen Borath	Office Chief	Ministry of Land Management, Urban and Construction
Khum Keang	Deputy Director	Phnom Penh Municipality
Uon Sam Ol	Deputy Head	Forestry Administration
Seng Sochenda	Director	Cambodian Development Council
Sok Sotheavy	Admin Supervisor	Cambodian Chamber of Commerce
Im Phallay	Environment Programme Manager	NGO Forum
Sar Channtora	Human Resources	Mong Rethy Group
Kol Chamnol	Reporter	Hang Meas HD TV
Khan Lyna	Professor	Royal University of Phnom Penh
Charles Andrew Fairbairn	Professsor	Paññasastra University of Cambodia

Gary Kawaguchi*	Director, Office of Research and Development	Paññasastra University of Cambodia
Koen Everaert	Attaché	European Union
Jan Corfee-Morlot	Team Leader	Organisation for Economic Co-operation and Development
Shannon Siyao Wang*	Policy Analyst	Organisation for Economic Co-operation and Development
Essam Yassin Mohammed*	Researcher	International Institute for Environment and Development

* *Authors of this paper and facilitators of the workshop*

Supplementary interviews conducted by Kawaguchi, Mohammed and Wang:

- Srey Vuthy, Deputy Director, Department of Planning and Statistics, Ministry of Agriculture, Forestry and Fisheries
- Uon Sam Ol, Director of Forest Plantation and Forest Private Development, Ministry of Agriculture, Forestry and Fisheries
- Tek Vannara, Deputy Executive Director, The NGO Forum on Cambodia
- Im Phallag, Environment Programme Manager, The NGO Forum on Cambodia
- Ung Soeun, Climate Change Policies Monitoring Project Coordinator, The NGO Forum on Cambodia
- Tous Saphoeun, Managing Director, Creative Green Design Co., LTD
- Seng Sochinda, Director of Environmental Department, Council for the Development of Cambodia
- Andrew Charles Fairbairn, Lecturer, Pannasatra University of Cambodia
- Sam Chinho, Lecturer, Pannasastra University of Cambodia
- Rahel Boesch, Development Counsellor, Swiss Agency for Development and Co-operation
- Mattias Radek, Intern, Swiss Agency for Development and Co-operation
- Kristina Kuhnel, Head of Development Cooperation Section, Embassy of Sweden
- Soma Dor, Programme Officer, Embassy of Sweden
- Togo Uchida, Project Formulation Advisor, Japan International Cooperation Agency

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