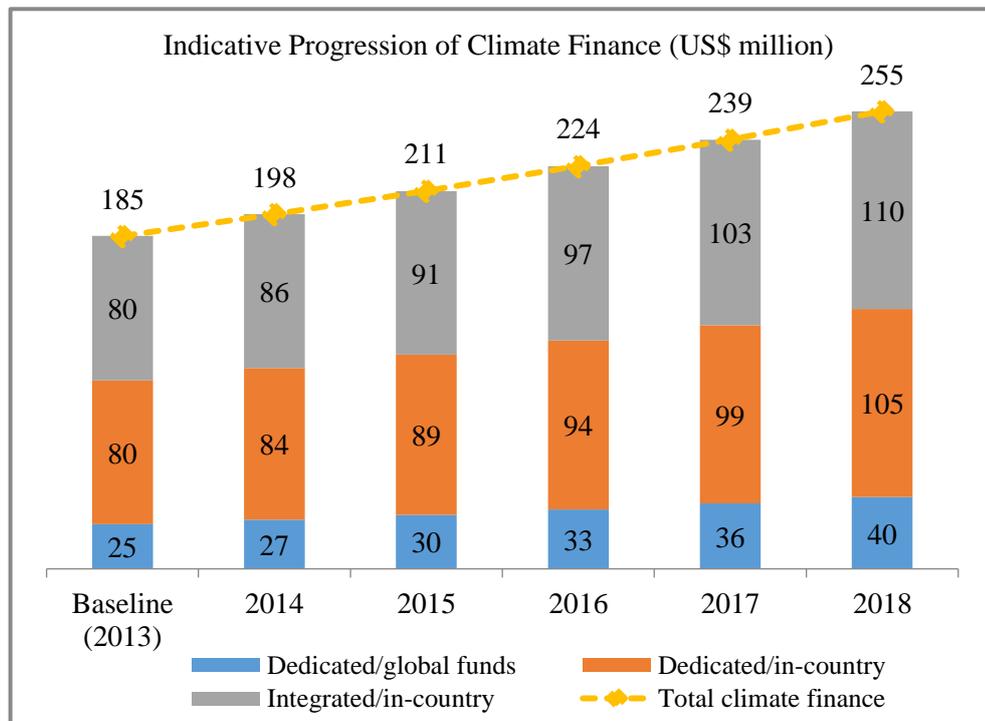


Scenarios for Future Climate Financing in Cambodia 2014-2018



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List of Acronyms

AF	Adaptation Fund
CBA	Cost and Benefit Analysis
CC	Climatic Change
CCAP	Climate Change Action Plan
CCCA	Cambodia Climate Change Alliance
CCCSP	Cambodia Climate Change Strategic Plan
CCFF	Climate Change Financing Framework
CDC	The Council for the Development of Cambodia
CDM	Clean Development Mechanism
CIF	Climate Investment Fund
COP	Conference of the Parties
CPEIR	Cambodian Public Expenditure and Institutional Review
FCPF	Forest Carbon Partnership Facility
GCF	Green Climate Fund
GCF	Green Climate Fund
HLAG	High Level Advisory Group
JDM	Joint Development Mechanism
LDCF	Least Developed Countries Fund
MAFF	Ministry of Agriculture, Forestry and Fisheries
MICs	Middle-Income Countries
MIME	Ministry of Industry, Mines, and Energy
MOE	Ministry of Environment
MOEYS	Ministry of Education, Youth, and Sport
MOH	Ministry of Health
MOWA	Ministry of Woman's Affairs
MOWRAM	Ministry of Water Resources and Meteorology
MPWT	Ministry of Public Work and Transport
MRD	Ministry of Rural Development
NCCC	National Climate Change Committee
NCDM	National Committee for Disaster Management
ODA	Overseas Development Assistance
OECD	Organisation for Economic Co-operation and Development
SCCSP	Sectoral Climate Change Strategic Plan
SPCR	Strategic Programme for Climate Resilience

Summary

In response to climate change, Cambodia's line ministries are developing the Climate Change Action Plan (CCAP) to operationalise their Sectoral Climate Change Strategic Plan (SCCSP) under the framework of Cambodia Climate Change Strategic Plan (CCCSP) 2014-2023. In this regard, this paper on future climate finance is meant for contributing to the development of the Climate Change Financing Framework (CCFF), which is an instrument to inform the development of Climate Change Action Plan (CCAP) 2014-2018. The estimation and projection of indicative scenarios for future climate financing is based on the review of national and international literatures, public expenditure review 2009-2012, direct discussions with key stakeholders in Cambodia, and reviews by national and international experts.

The analysis found that the volume of climate finance in Cambodia was approximately \$185 million in 2013: \$25 million from dedicated global funds and \$80 million each from dedicated in-country funds and integrated in-country funds. In prospect, climate finance in Cambodia from all three sources will continue to increase over the next 5-10 year timeframe although the expansion of each source will experience different paces and slower over a longer-run. The overall surge in the low-increase scenario will likely be around 7% per annum while 10% is expected from a high-increase scenario. The flow of public climate finance will rise to around \$225 million by 2018 and \$400 million by 2023 on a low-increase scenario; while high-increase scenario foresees an annual flow of \$300 million and \$500 million respectively by 2018 and 2023. The contribution of climate finance from the private sector is difficult to assess, but seems to be more limited through adaptation means; while the potential is shown through investment opportunity in renewable energy and energy efficiency.

1. Background

In response to climate change, Cambodia has produced a Cambodia Climate Change Strategic Plan (CCCSP) 2014-2023 and Sectoral Climate Change Strategic Plan (SCCSP) in 9 priority line ministries and agencies, namely MAFF, MIME¹, MOWRAM, MPWT, MRD, MOH, MOEYS, MOWA, and NCDM. For the operationalisation of these sectoral plans, the National Climate Change Committee (NCCC), with financial and technical assistance from the CCCA² in cooperation with EU, Sweden, Denmark and UNDP, is supporting those line ministries to develop their Climate Change Action Plan (CCAP) with an approach to promote the integration of climate related programming into their respective mainstream planning process.

To help ensure that the ministries' action plans take into account likely financing scenarios and modalities for the delivery of climate finance, this paper on future climate finance is meant for contributing to the development of the Climate Change Financing Framework (CCFF), which is an instrument to inform the development of Climate Change Action Plan (CCAP) of all nine line ministries and agencies, plus the Ministry of Environment (MOE).

2. Objectives and Methodology

The primary objective of this paper is to define several climate funding scenarios to inform the CCFF. A secondary objective is to build on the research undertaken to generate awareness amongst officials, the private sector, and civil society of the latest evidence on likely climate finance opportunities.

The estimation and projection of the future climate finance scenarios involves the following four approaches:

Literature Review: This involved a review of major national and international works and websites of key sources related to climate finance in order to capture a global picture and dynamic of climate finance both at the present and for the future.

¹ MIME was later split into two separate ministries: ministry of mines and energy and ministry of industry and handicraft. This assignment was that time considering MIME as a single ministry which included these two ministries.

² Cambodia Climate Change Alliance (CCCA)

Personal Interview: The assignment undertook direct discussion with key stakeholders in the government, development partners, and private sector. The interviews were intensively held between 12th and 22nd Aug 2013 while some other interviews were possible in later dates due to their availability. Request letters were sent to 23 stakeholders, but 1 rejected the meeting, 1 didn't respond, and another one was too busy during the time. Overall, the discussions were held with most of the key players.

Public Expenditure Review: The study, specifically the projection of the integrated climate finance, largely benefit from update of the public expenditure review, led by Polen So and Kit Nicholson, who built on their work on the Cambodian Public Expenditure and Institutional Review (CPEIR) in 2012. The update includes the revised public expenditure figures for 2009-2011 and adds a new expenditure figure for 2012.

Consultation and Expert Review: A consultation workshop was held with key stakeholders in order to provide them the opportunity to react and comment on the draft financing scenarios. On top of that both national and international experts were involved to provide a peer review on the draft and final draft of climate finance estimation and projection.

With regard to the classification of the climate relevant expenditure/projects, this paper builds on the classification of CPEIR 2012, which defined climate relevance in the following three categories:

- (1) High relevance programmes have clear primary objectives of delivering concrete and visible outcomes that improve climate resilience or contribute to mitigation. They include mitigation and adaptation to expected climate trends or extreme climate events and provision of climate services, such as awareness, information, planning and regulations.
- (2) Mid relevance programmes make strong contributions to the adaptation or mitigation but are motivated primarily by broader development concerns. They include economic forestry, biodiversity, and many water programmes and infrastructure that have a strong climate proofing element. They may also include mixed programmes with a variety of activities that cannot be easily distinguished.

- (3) Low relevance programmes contribute to the adaptation and mitigation only indirectly. They include livelihoods programmes and more general infrastructure and planning capacity.

3. Scenarios of Public Climate Finance

This section estimates the climate finance that is currently active in Cambodia and considers scenarios of possible future climate finance that could be available to Cambodia. The section covers both international funds and the contribution of domestic financing, including both recurrent and development expenditure. The availability and flow of climate finance are expected to come from the following three major sources.

- (a) Dedicated global funds are finances available from global institutions and mechanisms for CC, for instance, CIF (including SPCR), GEF, LDCF, AF, FCPF³, UN-REDD⁴ and the upcoming GCF, that are dedicated to addressing CC through either mitigation or adaptation reasons.
- (b) Dedicated in-country funds are the portion of climate funds that is dedicated for addressing climate issues and that is directly financed by the Cambodian government through its annual budget means and by bilateral and multilateral donors active in Cambodia. This type of funds also includes projects that are managed by donors' regional offices.
- (c) Integrated in-country funds refer to the type of resources financed by the government and donors in Cambodia that is not primarily meant for climate issues, but involves some degree of relevance (low and mid relevance) to CC either explicitly or implicitly. In this type of finance, the climate aspect is integrated or embedded in the mainstream development projects.

³ Forest Carbon Partnership Facility

⁴ United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation

The Baseline

The literature related to global climate finance was reviewed and personal interviews were held with key donors, implementing partners, private sectors, and concerned government institutions in order to discuss the current and future scenarios of resources to finance climate activities in Cambodia. From all these sources, the estimated amount of annual commitments to climate finance in Cambodia is about \$185 million in 2013. Around \$25 million are available from dedicated global climate funds such as CIF, GEF, LDCF, AF, FCPF, and UN-REDD. Another \$80 million comes from regional and in-country projects of donors active in Cambodia, and the remaining \$80 million are estimated amount of climate related expenditure that is embedded in mainstream development projects.

The CIF, through SPCR, is the largest source of dedicated global climate funds to Cambodia. The SPCR fund is currently set at \$91 million, of which \$55 million is grant and \$36 million is loan. With an expected completion date of 2018, the SPCR will involve expenditure of about \$20 million per year. Other dedicated funds include around \$3 million from GEF and about \$1 million per year from each of LDCF, AF, FCPF, and UN-REDD. The SPCR involves one TA project for capacity development and coordination support and 7 investment projects (4 to infrastructure, 1 for irrigation, and 2 in agriculture). The implementing agency, ADB, uses the fund to support its existing portfolio to Cambodia. For instance, the SPCR finance is incorporated into a \$70 million loan agreement between ADB and the RGC to promote the country's rice and financial sectors. Of the loan, \$55 million is the Climate-Resilient Rice Commercialisation Sector Development Program, aimed at transforming Cambodia's rice sector from subsistence farming to commercially oriented value-chains, and \$15 million are allocated from SPCR.

Dedicated in-country climate finance is almost entirely dependent on donors, with little contribution from the government budget. In 2013, bilateral and multilateral donors in Cambodia have disbursed about \$75 million to activities with the primary objective of addressing CC and around \$5 million have come from regional projects addressing climate issues. Major bilateral contributors to regional projects are USAID, followed by AFD, plus SIDA and the Swiss Agency for Development and Cooperation (SDC). ADB also funds regional projects, especially in the transport and energy sectors, but all the ADB regional funds for each recipient country are divided and recorded at the national level.

Table 1: Overall Climate Financing Scenarios (US\$ Million)

Scenarios	Total climate finance			(a) Dedicated global funds			(b) Dedicated in-country			(c) Integrated in-country		
	Miti.	Adapt.	Total	Miti.	Adapt.	Total	Miti.	Adapt.	Total	Miti.	Adapt.	Total
(0) Current/ Baseline (2013)	9	176	185	3	22	25	2	78	80	4	76	80
				Global CC Finance flow: \$12 Bln Cambodia thru int'l CC inst.: \$25m or 0.2% of global flow			In-country donors: \$75m Regional projects: US\$5m			CC weights Low relevance: 3% (\$30m) Mid-relevance: 25% (\$50m)		
(1) 5-Year Low-Increase (By 2018)			^[\$70m up] 255			^[\$15m up] 40			^[\$25m up] 105			^[\$30m up] 110
	19	236		7	33		4	101		8	102	
				Global target: \$40 Bln, Achieve 50%: \$20 Bln Cambodia share holds: 0.2%			30% increase from baseline			CC weights hold ODA: 25% increase (4.6% p.a) Domestic finance: 9-10% up p.a.		
(2) 5-Year High-Increase (By 2018)			^[\$115m up] 300			^[\$25m up] 50			^[\$40m up] 120			^[\$50m up] 130
	30	270		10	40		8	112		12	118	
				Global target: \$40 Bln, Achieve 60%: \$24 Bln Cambodia share holds: 0.2%			50% increase from baseline			CC weights hold ODA: 40% increase (7% p.a) Domestic finance: 14-15% up p.a.		
(3) 10-Year Low-Increase (By 2023)			^[\$215m up] 400			^[\$65m up] 90			^[\$80m up] 160			^[\$70m up] 150
	55	345		20	70		15	145		20	130	
				Global target: \$50 Bln, Achieve 85%: \$43 Bln Cambodia share holds: 0.2%			100% increase from baseline			CC weights hold ODA: 50% increase (4% p.a) Domestic finance: 9-10% up p.a.		
(4) 10-Year High-Increase (By 2023)			^[\$310m up] 500			^[\$80m up] 105			^[\$120m up] 200			^[\$110m up] 195
	75	425		25	80		20	180		30	165	
				Global target: \$50 Bln, Achieve 100%: \$50 Bln Cambodia share holds: 0.2%			150% increase from baseline			CC weights hold ODA: 60% increase (5% p.a) Domestic finance: 14-15% up p.a.		

Source: Authors, based on literatures and interviews with key stakeholders

About CR 4,000 billion (or \$1 billion) of the domestic public expenditure in 2012 was climate relevant, with either low or mid relevance. Based on the cost and benefit analysis (CBA) exercise, approximately 3% of the benefits generated by low relevance expenditure are from adaptation and/or mitigation and the equivalent figure for mid relevance expenditure is 25%. Assuming that the share of expenditure that is categorised as climate relevant is proportional to the share of benefits that come from adaptation and/or mitigation, the total climate relevant expenditure is around \$80 million in 2012, or about 8% of the total expenditure on categories that have some degree of relevance to CC. About \$30 million of this was low relevance and \$50 million was mid relevance. This has great potential to increase in the future.

Of important note, the methodology used to understand and measure how CC is integrated into development (i.e. estimating CC%) is something that is still gaining experience and acceptance. Given the likelihood that integrating CC into development will become increasingly important, this area of work will be really important in the next 5 years.

Indicative Scenarios

The prospect is the climate finance in Cambodia available from all sources will continue to increase over the next 5-10 year timeframe although its expansion will move at different paces. Nonetheless, the increase in any sources is expected to slow down over a longer-run. The overall increase in the low-increase scenario will likely be around 7% per annum while 10% will be expected from a high increase scenario over the next 5-10 year timeframe.

The resource from dedicated global funds for climate intervention is currently small, but it has great potential to increase faster than other sources if the global commitment to CC is fulfilled. The Climate Policy Initiative (CPI, 2013) estimates that the climate finance flow from governments averages around \$12 billion in 2012 of which \$1.6 billion was through climate funds, majority of which was through loan instrument and for mitigation intervention (CPI, 2013). While the UK, Japan, Germany, and the US are the top four contributors of the funds, the major recipients of the funds include Bangladesh, the Philippines, Brazil, and Thailand, and followed by India, China, and Mexico. Of note, sectors that have benefited most from the climate funds are agriculture, forestry, land use and livestock management, renewable energy, disaster risk management, transport, and energy efficiency. Among other recipients, Cambodia has received about \$25 million per annum through global climate funds, which is about 0.2% of the total climate finance internationally available.

From recent developments at COP19 in Warsaw (Nov 2013), it appears that the GCF, which is one of the key mechanisms to mobilise \$100 billion per annum to finance climate related expenditure in developing world by 2020, will struggle to meet this target. According to the High Level Advisory Group on Climate Finance, of the \$100 billion pledge, private sector is expected to contribute half and thus about \$50 billion per annum are supposed to come from public sources {HLAG, Nov 2010 #733}. On a moderate increase, if the allocated share for Cambodia remains 0.2% and around 50% of the target is realised, the flow to Cambodia would amount to just \$40 million by 2018 for a low-increase scenario. A more optimistic

scenario would give approximately \$50 million by 2018, if developed countries disburse 60% of their pledge. Assuming that the international community is more ready and able to adhere to their commitment in a 10-year period, where 85% and 100% disbursement rates of the mark are respectively expected, Cambodia would likely get \$90 million for a low-increase scenario and \$105 million flow for the case of a high-increase scenario by 2023.

Box 1 International Climate Finance Funds

The Adaptation Fund. The AF was created under the Kyoto Protocol by parties to the UNFCCC. It has been administered by the GEF since 2007. It is largely financed through a 2% levy on revenues from the sale of CDM credits and operates on a project basis, with project proposals being made by implementing entities to the central board.

Implementing entities could be national, multi-national bodies or regional bodies. The Adaptation Fund website lists 28 accredited implementing entities, of which 15 are national, 10 are multinational (including the major development banks and four UN agencies) and 3 are regional. The national institutions include: ministries (in Jordan and Rwanda); agencies or authorities (Uruguay, Kenya, Morocco and Chile); institutes (Senegal, South Africa, Mexico, Argentina); funds (Benin, Costa Rica); one bank (India) and one trust (Belize).

The Adaptation Fund has approved 30 projects with a total budget of about \$200 million. One of these is being implemented in Cambodia by UNEP, with a budget of about \$5 million.

The Green Climate Fund. The establishment of a GCF was agreed in Durban in 2011. It is expected to provide an important element of the medium term financing of \$100 billion annually, by 2020. After some delays, the Board of the GCF is now operational and the GCF espouses the principles of national ownership. However, there is still strong ongoing debate about the modalities that will apply. Recipient countries (i.e. developing and middle income countries) argue for strong national ownership, with fund management and project selection being delegated to government bodies, and with the GCF providing only coordination and supervision of fiduciary propriety. Funding countries (mainly developed countries) argue for a more cautious approach relying more on mechanisms more similar to those used for the Adaptation Fund, at least initially. As of end 2014, pledges to this fund amounted to over \$10 billion, and the first funding decisions are expected to be made by end 2015.

ODA is expected to continue to grow, although at a slower rate. As the economy is growing, the country will be becoming more and more reliant on mobilisation of domestic revenue to fund public expenditure and meanwhile the role of external assistance will become less important. Although Cambodia is going to join a lower middle-income group in a few years to come, it will remain a relatively poor country; therefore, the overall ODA is not expected to shrink over the next 5-10 years although its relative size to the overall GDP is expected to decline. Some donors may leave Cambodia and their departure will not much affect the gross volume of ODA as big donors are likely to stay and new partners may join, as in the case of the Swiss Agency for Development and Cooperation. Major donors like ADB, EU, France, Japan, Australia, South Korea, World Bank and China are more likely to increase their portfolio although there will be some shift in modality and terms of assistance that more will be expected through private sector and in the form of loan than grant. For instance, assistance from OECD donors is likely to be more in the form of loans. Likewise, because Cambodia will remain in early developing stage, it will need to borrow even more for investment needs such as infrastructure development.

The discussion with key donors in Cambodia suggests that the aggregate ODA may see a range of increase between 25% for a low scenario and 40% for a high scenario over the next 5 years. Because donors are likely to pay more attention to CC through dedicated than integrated projects, it is expected that the allocated share for dedicated CC finance will increase higher than the increase in integrated funding. Thus, dedicated climate finance from multilateral and bilateral donors is expected to increase at 30% for a low increase scenario and 50% for a high increase scenario by 2018. For a 10-year timeframe from the baseline (2013), a low increase scenario expects the volume of climate finance from multilateral and bilateral sources to double while there will be a 150% increase in the high increase scenario. Despite this, the actual availability of funds, especially from traditional donors will, in addition to economic recovery in home countries, be subject to Cambodia's performance with regard to democracy, respect for human rights, reducing corruption, promoting the rule of law, and protecting the environment.

Integrated climate finance that makes mainstream development projects climate sensitive will also play a major role, especially in contributing to adaptation. Although the awareness of CC

is reasonably high, it is still expected to affect sectors such as irrigation, agriculture and disaster management and is less associated with education and health, for example. As such, there is room for increasing climate expenditure through more awareness and application of climate sensitive activities across a wider development landscape. By mainstreaming CC into development projects, the contribution through the government budget is expected to increase around 9-10% per annum for the low increase scenario (which is roughly in line with the rate of nominal GDP growth and expenditure projection for 2013-17⁵) and 14-15% for a high increase scenario, if the government gives a higher priority to climate response (which is in line with the annual increase of domestic revenue 2009-11).

The contribution from donors to CC mainstreaming in low and mid relevant climate projects is expected to move in line with the overall growth of ODA. Within the next 5 years, donor funding for integrated finance is expected to increase by around 25% (or 4.6% per annum) for the low scenario and around 40% (or 6-7% per annum) for the high scenario. On a 10-year timeframe, donor disbursement will see a slower increase of around 50% (4% per annum) and 60% (5% per annum) respectively for the low and high increase scenarios. These scenarios have, in addition to evidence from the discussion with key donors, taken into account the fact that ODA to Cambodia experienced an annual growth of around 8% between 1992 and 2011, from \$250 million 1992 to \$1,235 million in 2011 (CDC, 2011⁶) and that slower growth is likely to follow in the next decade.

4. Indicative Ceiling and Sectoral Allocation of Public Climate Finance

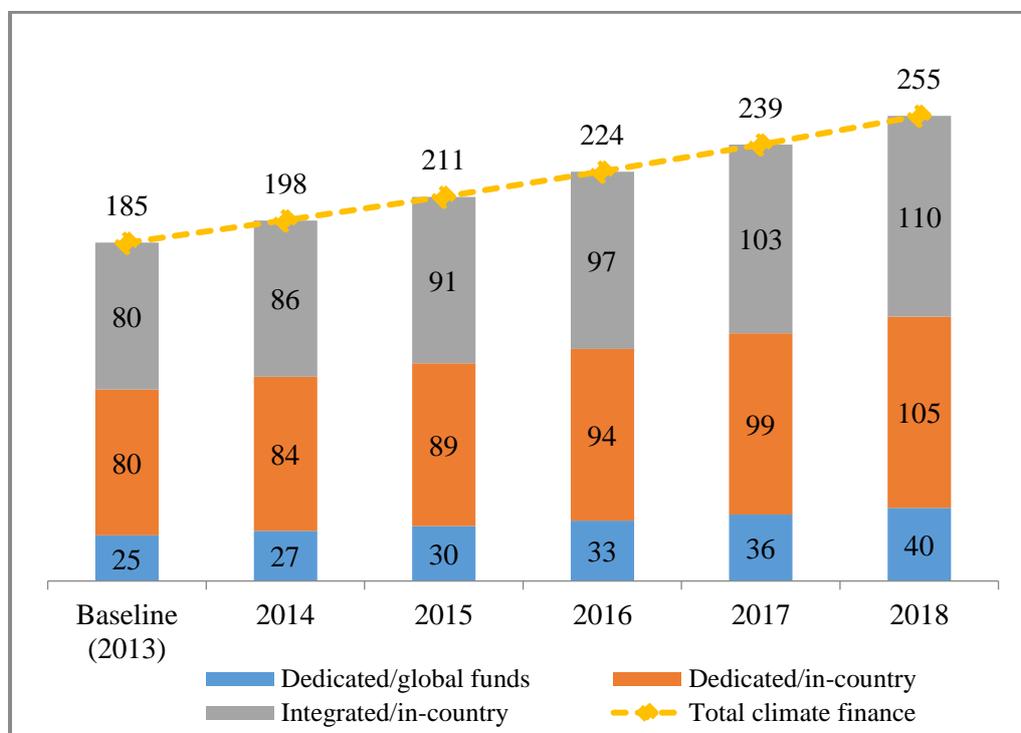
From a conservative perspective, Cambodia anticipates a flow of climate finance of \$255 million by 2018. Dedicated and integrated CC projects from in-country sources will remain the prominent features of climate finance source in Cambodia. Both make up 85% of the total and account for almost an equal share. The dedicated fund from global climate mechanisms represents a smaller share, but expects a faster rate of increase. Figure illustrates the flow of climate finance on a linear trend between the baseline (2013) and 2018. Over 5-year period (2014-18), the whole flow expects to provide a total indicative resource of \$1,127 million to

⁵ IMF (2013): IMF Country Report No. 13/2 (Cambodia)

⁶ CDC (2011) Cambodia Development Effectiveness Report 2011

be available for financing climate expenditure, \$640 million⁷ of which are expected to come in the form of dedicated climate finance.

Figure 1: Indicative Progression of Climate Finance, 2014-18 (US\$ Million)



Source: Authors, based on literatures and interviews with key stakeholders

Mitigation. The relative importance of mitigation in total CC financing normally depends on the level of development of a country. In most developing countries, adaptation is much more important than mitigation, often accounting for over 90% of CC funding. In MICs, the balance is more equal. For international climate finance, which has been devoted mainly to MICs, mitigation has taken a larger share than adaptation, although there have been suggestions that this is largely because of problems in managing adaptation funding and that a new balance should be achieved that is more nearly equal between mitigation and adaptation. In developed countries, the majority of climate finance is currently devoted to mitigation.

In Cambodia, the CPEIR suggested that over 95% of CC expenditure was motivated by adaptation. Whilst this may have been appropriate in the past, Cambodia is now becoming an

⁷ \$167 million from global fund and \$472 million from in-country source

MIC and is likely to graduate from LDC status by 2020. Cambodia will therefore be seeking, increasingly, to contribute to global mitigation. This is in line with the agreements reached at COP19 in Warsaw in Nov 2013, when all parties agreed to submit their contributions to global mitigation well before COP21 in Paris in 2015. The legal status of these contributions for MICs and LDCs has not yet been agreed, but Cambodia will play its role in the global effort, in line with the efforts made by other countries at a similar stage of development. Whilst mitigation will become increasingly important for Cambodia, it is normal for the private sector to fund an increasing share of mitigation spending, as nations develop the institutions that are capable of managing the regulations and incentives to encourage this and as private businesses appreciate the economic benefits from improved efficiency. The CCFF assumes that mitigation spending will grow at about 16% per year in nominal terms, compared to 6% for adaptation, ensuring that Cambodia gradually changes, over a period of about 35 years, to a pattern of roughly equal mitigation and adaptation spending that is more common in High Income Countries. The different growth rates for adaptation and mitigation have little effect on the balance between ministries in the next five years, but will become more important in the mid to long term.

Ministry Ceilings. Table below displays various institutions that are involved in implementing CC activities and their respective allocated share of the CC funding, which is based on 2009-12 experience. The role of MIME which works on the energy sector, has not yet been high, which reflects the fact that climate finance to Cambodia has predominantly been allocated to adaptation rather than mitigation purpose. Table also takes into account the fact that a large part of MIME spending and small parts of MAFF and MPWT spending are devoted to mitigation, which is assumed to grow faster than adaptation funding.

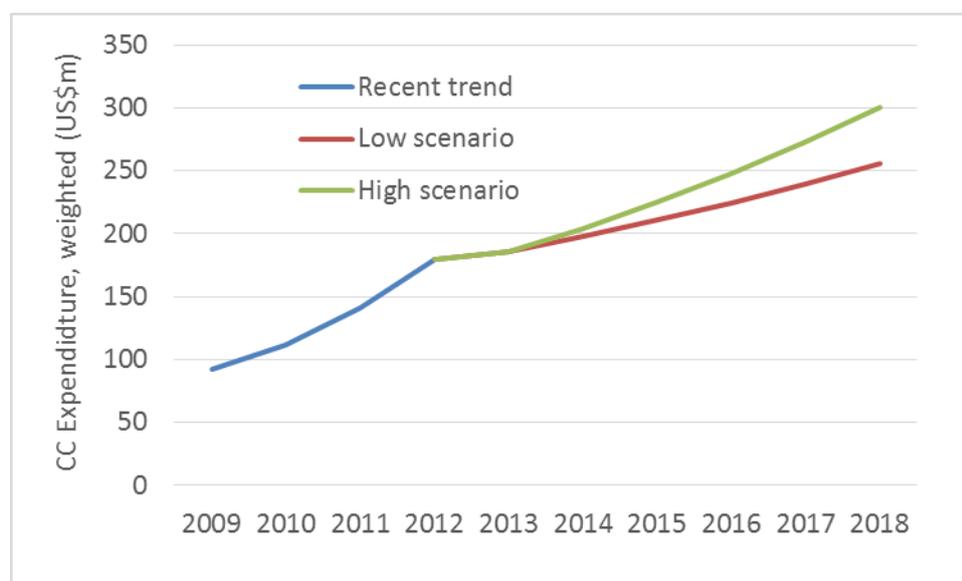
Table 2: Indicative Allocations by Implementing Agencies, 2014-18

Implementing agencies	Mitigatin/A daptation	Base share	Growth Rate	Base (2013)	Indicative Ceilings (US\$ million)					
					2014	2015	2016	2017	2018	2014-18
MAFF	Adapt.	7.8%	6.0%	14	15	16	17	18	19	86
MAFF	Miti.	2.6%	16.1%	5	5	6	7	9	10	38
MIME	Miti.	2.3%	16.1%	4	5	6	7	8	9	34
MOWRAM	Adapt.	31.3%	6.0%	58	62	65	69	73	78	347
MPWT	Adapt.	19.8%	6.0%	37	39	41	44	46	49	219
MRD	Adapt.	5.3%	6.0%	10	10	11	12	12	13	59
MOH	Adapt.	4.4%	6.0%	8	9	9	10	10	11	49
MEYS	Adapt.	0.8%	6.0%	1.5	1.6	1.7	1.8	1.9	2.0	8.9
MWA	Adapt.	0.2%	6.0%	0.4	0.5	0.5	0.5	0.5	0.6	2.6
NCDM	Adapt.	1.1%	6.0%	1.9	2.1	2.2	2.3	2.5	2.6	12
MOE	Adapt.	5.2%	6.0%	10	10	11	11	12	13	57
SNA	Adapt.	8.4%	6.0%	16	17	18	19	20	21	93
NGO	Adapt.	4.5%	6.0%	8	9	9	10	11	11	50
Others	Adapt.	6.4%	6.0%	12	13	13	14	15	16	71
Total		100%		185	198	211	224	239	255	1,127

Source: Authors, based on literatures and interviews with key stakeholders

Figure 2 compares the two scenarios for future growth in CC funding with the trend over the last 4 year. The figure suggests that the low scenario is conservative compared with recent trends and that the high scenario is not excessively optimistic.

Figure 2: Past CC Expenditure and Future Scenarios



Source: Authors, based on CCFF figures for 2009 to 2012 and then following scenario projections

Factors Affecting which Scenario Takes Place. Cambodia generally sees the prospect to benefit from increasing climate finance that is expected to be available both internationally and within the country. The extent of the increase will depend on the following opportunities and challenges.

Table 3: Challenges and Opportunities Affecting Climate Change Financing Scenarios

Challenges	Opportunities
<ul style="list-style-type: none"> • Weaker growth in traditional Western development partners could squeeze budgets 	<ul style="list-style-type: none"> • Scope for expanded bilateral partnerships (eg Japan, Korea and China)
<ul style="list-style-type: none"> • Graduation to middle income status could reduce development assistance 	<ul style="list-style-type: none"> • Most CC finance is more accessible to MICs • More scope for private investment
<ul style="list-style-type: none"> • Cambodia is more accustomed to adaptation funding than mitigation, while the majority of global CC finance is devoted to mitigation 	<ul style="list-style-type: none"> • Opportunities for low carbon development will increase as Cambodia industrialises • Cambodia is highly exposed to CC risk, which should generate strong international interest in adaptations funding
<ul style="list-style-type: none"> • Perceived lack of transparency in public administration undermines confidence in verification of carbon credits 	
<ul style="list-style-type: none"> • Uncertainty about future of carbon market price 	<ul style="list-style-type: none"> • Developing countries are a prime target for buyers of carbon credits • Develop examples of strong verification for carbon credits • Possible recovery of carbon markets by 2015, following COP21, when new reduction targets are in place
<ul style="list-style-type: none"> • Varied awareness about the importance of CC in different sectors (not always 	<ul style="list-style-type: none"> • Opportunities to mainstream climate finance into mainstream funding, in budget or through top-up funding

reflecting actual differences in importance)	
<ul style="list-style-type: none"> • Problems of institutional competition in RGC could delay agreements (e.g. REDD+ projects) 	
<ul style="list-style-type: none"> • Limited capacity to manage increased CC finance in some ministries 	
<ul style="list-style-type: none"> • Lack of confidence in public finance management reduces willingness of development partners to fund through the budget 	<ul style="list-style-type: none"> • While confidence in public finance is being established, there will be more opportunities for private finance
<ul style="list-style-type: none"> • Limited interest in and commitment to CC amongst central RGC bodies 	<ul style="list-style-type: none"> • Improved tracking of CC funding and analysis of benefits • Establishment of National Climate Fund • Accreditation of National Implementing Entity

Initial indications are that there is strong interest amongst donors in expanding financing related to CC. Examples include:

- a large agricultural project is being discussed through ASEAN, with funding from Japan, Korea and China
- SPCR projects are moving ahead, including on agriculture, roads, urban infrastructure and irrigation
- the ongoing IFAD ASPIRE project will be expanded with the new PADEE project to result in funding of about \$100 million for agriculture, including a climate change component.

5. Private Sector Participation

The role of the private sector and NGOs will become increasingly important as the country develops, especially for the investment required in mitigation and for promoting the growth in public awareness and lobbying for corporate social responsibility.

Carbon Market

As in the case of low public financing for mitigation, the role of private sector in climate finance is still very minimal and uncertain, especially as no binding agreement could be reached internationally and individual countries tend to diverge from current mechanisms such as CDM and try to invent their own model of carbon market. For instance, Japan is now trying to introduce a bilateral Joint Development Mechanism (JDM) as alternative to CDM. On top of that the carbon price has been very volatile and is currently low. In the case of CDM projects, the price is now only \$1-2 per tCO₂e (down from about \$20 in 1997 and \$5-8 in 2011) and around \$4-8 per tCO₂e credits of REDD projects.

10 CDM projects had been developed between 2006 and 2012, with total potential carbon credits of around 2 million tCO₂e per annum. However, 90% of these credits could be attributed to 4 hydropower projects that are still under validation stage. Only one project of 50,000 tCO₂e per annum capacity was approved by the Executive Board and is now being traded. Therefore, the contribution of climate finance through CDM will remain minimal and ambiguous at least until the COP21 to be held in Paris in 2015, which aims for the legal binding agreement. As a positive development, the recent COP19 seems to revive a hopeful prospect for the CDM as countries were called to promote the voluntary cancellation of carbon credits without double counting. This should pave the way for higher demand for the CDM projects⁸.

With regards to REDD, there has been more interest from countries such as Japan, China, and Korea and Cambodia is currently planning to have up to 15 REDD projects as of now. Nonetheless, only 2 projects are relatively advanced and thus have more substantial

⁸ www.theecologists.org: Climate action? Warsaw 2013 to Paris 2015.
http://www.theecologist.org/blogs_and_comments/commentators/2200973/climate_action_warsaw_2013_to_paris_2015.html

information for consideration – respectively, Odder Meanchey and Seima projects, which potentially sequester 1.7 million tCO₂e and 58 million tCO₂e of carbon credits over an initial 10 year period. Prey Lang project also expects 4.5 million tCO₂e. At 6 \$/tCO₂e, the three projects would generate \$38.5 million per annum, but the market prospect is not promising in the near future. There have been international investors who are ready to buy credits from, for example Odder Meanchey project, but the Cambodian government was not able to sign off.

Besides REDD, the participation of carbon credit developers is still very nascent. NEXUS is currently implementing two projects to develop carbon credits for the voluntary market. These two projects are “Ceramic water purifier” with fund support from Hydrologic and “Cook Stove” funded by GERES. Both projects are respectively expected to generate about 300,000 – 500,000 tCO₂e over 7 years and about 2 million tCO₂e over 10 years. Currently low price of carbon credits is a critical challenge for the market to operate.

Renewable Energy and Energy Efficiency

The room for Cambodia to benefit from energy efficiency is ample and promising. UNIDO conducted a project to explore the potential for improving energy efficiency, working with 12 small and medium manufacturing enterprises. The average saving per enterprise was about \$270,000, including both savings on energy and on other costs arising from the investment in improved efficiency. The project was highly appreciated by entrepreneurs, giving very high returns and suggesting that incentives should be high enough to motivate private investment. The saving in the first year already accounts for an average of 82% of the investment cost. According to Economic Census 2011, 787 enterprises currently employing more than 100 staff. If all these firms were able to achieve similar savings through improved efficiency and productivity, Cambodia would save more than \$200 million per annum from energy efficiency.

The potential contribution from renewable energy is less clear. There are now around 10 importers of solar panels, but it is difficult to track the share that has been purchased by the private sector. Nonetheless, the increasing number of solar panel importers is a positive sign and indicates the existence of more demand and competition. Moreover, the price of solar

panel has reduced from about \$4-\$5 for 1 watt-power panel in 2011 to about \$2-3⁹ as a result of lower international prices and a cut in Cambodia's tariff¹⁰ from 84% to 15%.

Through a Technology Transfer project, UNIDO invests \$1.8 million over 2012-2015 to promote the application of biomass gasification in rice mills, ice production, and garment factories with aim to contribute to low emission and at the same time help address high energy cost that is a constraint for businesses in Cambodia. Overall, the participating enterprises have saved around 50-70% of their cost on energy. Such gain should be significantly attractive for businesses to consider their investment.

6. Conclusion

Overall, the prospect for public climate finance in Cambodia available from all major three sources (dedicated global funds, dedicated in-country funds, and integrated in-country funds) will continue to increase over the next 5-10 year timeframe although the expansion of each source will experience different paces and slower over a longer-run. The overall surge in the low-increase scenario will likely be around 7% per annum while 10% will be expected from a high-increase scenario over the next 5-10 year timeframe. From the baseline of \$185 million in 2013, the climate finance will rise to around \$225 million by 2018 and \$400 million by 2023 on a low-increase scenario; while high-increase scenario foresees an annual flow of \$300 million and \$500 million respectively by 2018 and 2023. The low scenario over 2014-18 will entail an indicative total volume of \$1,127 million to be available for financing climate expenditure. Dedicated and integrated CC projects from in-country sources will remain the prominent features of climate finance source in Cambodia. Both make up 85% of the total and account for almost an equal share. The dedicated fund from global climate mechanisms represents a smaller share, but expects a faster rate of increase.

The climate finance from dedicated global funds is currently small, but it has great potential to increase faster than other sources if the global commitment to CC is fulfilled. Cambodia's receipt from this source is \$25 million in 2013 with CIF, through SPCR, as the largest contributor to Cambodia, involving approximately \$20 million per year until 2018. If just 50% of the global target (\$40 billion) is realised and Cambodia's share holds at 0.2%, the

⁹ Interview with UNIDO

¹⁰ Interview with Climate Change Department of the MOE.

fund flow from this source will increase to \$40 million by 2018 while a more optimistic scenario would bring it up to \$50 million.

Dedicated in-country climate finance is almost entirely dependent on donors, with little contribution from the government budget. It currently contributed around \$80 million, \$75 million of which comes from bilateral and multilateral donors in Cambodia and other \$5 million from regional projects in 2013. In prospect, the overall ODA volume is not expected to shrink over the next 5-10 years although its relative size to the overall GDP is expected to decline. Some donors may leave Cambodia but their departure will not much affect the gross volume of ODA as big donors are likely to stay and new partners may join. On the other hand, growing Cambodia signifies higher demand for external assistance to finance its infrastructure development. ODA sees a range of increase between 25% for a low scenario and 40% for a high scenario over the next 5 years. Given donors' higher attention on climate change, particularly through dedicated projects, dedicated climate finance from multilateral and bilateral donors may increase by 30% for a low-increase scenario and 50% for a high increase scenario as of 2018. For a 10-year timeframe, a low increase scenario expects to double while high-increase scenario would bring the fund up by 150% as of 2013. Nonetheless, the actual availability of funds, especially from traditional donors will, in addition to economic recovery in home countries, be subject to Cambodia's performance with regard to democracy, respect for human rights, reducing corruption, promoting the rule of law, and protecting the environment.

The contribution of integrated climate finance through mainstream development projects is high and is going to remain very significant. As of 2012, the total climate relevant expenditure through adaptation and/or mitigation means was approximately \$80 million, representing about 8% of the total expenditure on categories that have some degree of CC relevance. About \$30 million of this was low relevance and \$50 million was mid relevance. The fund has great potential to increase in the future. By mainstreaming CC into development projects, the contribution through the government budget is expected to increase around 9-10% per annum for the low increase scenario (which is roughly in line with the rate of nominal GDP growth and expenditure projection for 2013-1711) and 14-15% for a high increase scenario, if the government gives a higher priority to climate response (which is in

¹¹ IMF (2013): IMF Country Report No. 13/2 (Cambodia)

line with the annual increase of domestic revenue 2009-11). The contribution from donors to CC mainstreaming in low and mid relevant climate projects is expected to move up in line with the overall growth of ODA, around 25% (or 4.6% per annum) for the low scenario and around 40% (or 6-7% per annum) for the high scenario by 2018, and around 50% (4% per annum) and 60% (5% per annum) respectively for the low and high increase scenarios by 2023.

The climate finance in Cambodia is largely in the form of adaptation measure, accounting for 95% of the total climate expenditure in 2013, but this is common in most developing countries, where adaptation is much more important than mitigation and often accounting for over 90% of CC funding. In MICs, the share of adaptation and mitigation is more balance while mitigation makes up the majority in developed countries. In line with this trend, the mitigation fund in Cambodia will also gain its share in both scenarios in the next 5-10 years, especially in MAFF and MIME.

The role of private sector in climate finance is currently difficult to quantify but growing, with some uncertainties, especially as no binding agreement could be reached internationally. There are few projects with insignificant volume being traded. On top of that the carbon price has been volatile and is currently low, only \$1-2 per tCO₂e (down from about \$20 in 1997 and \$5-8 in 2011) for CDM projects and around \$4-8 per tCO₂e credits of REDD projects. The room for Cambodia to benefit from energy efficiency is ample and promising, given very high returns on investment (an average of 82% in the initial year), but that depends on the private sector's move. At a full scale of application across all enterprises, Cambodia would save more than \$200 million per annum from energy efficiency. The potential contribution from renewable energy is less clear due to limited availability of data.

7. Bibliography

- Buchner, B., Herve-Mignucci, M., Trabacchi, C. et al (2013) The Global Landscape of Climate Finance 2013. Climate Policy Initiative (CPI).
- Buric, B. and Gorin, P. (2011) Overview of Climate Change Financing Mechanisms in Cambodia, Lao PDR, Thailand, and Vietnam. FAO Report, Investment Centre (TCID).
- CAN (2013) Warsaw: On the Road to Paris, October 2013. Climate Action Network (CAN).
- GEF and UNIDO (undated). Project Document of Industrial Energy Efficiency Case Studies in Cambodia. Reducing Greenhouse Gas Emissions through improved energy efficiency in the industrial sectors in Cambodia. Funded by Global Environmental Facility (GEF), implemented by UNIDO, executed by NCPO Cambodia in cooperation with MIME. (2011-2015).
- IGES and MOE (2012) Experience of Carbon Market in Cambodia. Powerpoint Presentation by Mr. Uy Kamal, Head of GHG Inventory and Mitigation Office, Climate Change Department, Ministry of Environment (MOE), at Hakata General Meeting on 8-9 February 2012, Leopallace Hotel, Hakata, Japan.
- Jotzo, F., J. Pickering, and P. J. Wood (2011) Fulfilling Australia's international climate finance commitments: Which sources of financing are promising and how much could they raise? CCEP Working Paper 1115, Centre for Climate Economics & Policy, Crawford School of Economics and Government, The Australian National University, Canberra.
- ODI (2012) Cambodia Climate Public Expenditure and Institutional Review (Final Report), supported by the Cambodia Climate Change Alliance (CCCA), Phnom Penh.
- Ryan, L., Selmet, N., and Aasrud, A. (2012) Plugging the Energy Efficiency Gap with Climate Finance. The role of International Financial Institutions (IFIs) and the Green Climate Fund to realise the potential of energy efficiency in developing countries. OECD/IEA.
- UNIDO (undated) Towards Green Industry. Hot-Spot & TEST. Transfer of environmentally sound technology in the Cambodian Mekong River Basin. Implemented by UNIDO in close collaboration with MIME, funded by KOICA (2011-2012)
- UNIDO (undated): Improving peoples' lives through sustainable industrial development. (Regional Office in Bangkok (ROBKK)).
- WB (2011) Mobilizing Climate Finance. A Paper prepared at the request of G20 Finance Ministers, coordinated by the World Bank Group in close partnership with the IMF, the OECD and the Regional Development Banks (RDBs).

Consulted Websites:

www.climateinvestmentfunds.org
www.climatepolicyinitiative.org
www.climatefinanceoptions.org
www.climatefundsupdate.org
www.adaptation-fund.org
www.news.gcfund.org
www.un-redd.org



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