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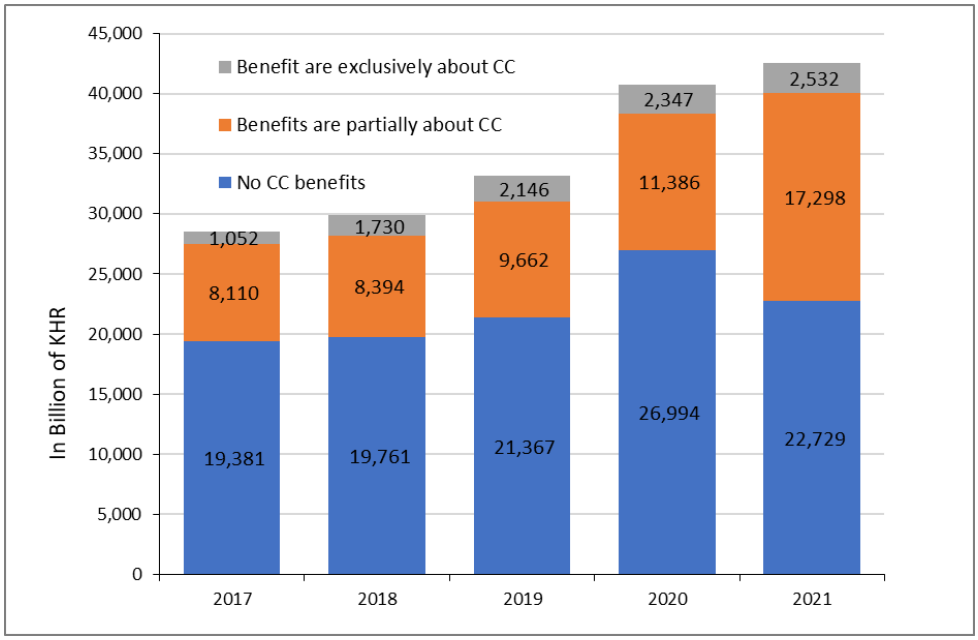
Ministry of Economy and Finance
ធានានូវកំណើន និង អភិវឌ្ឍន៍ប្រកបដោយចីរភាព
Ensure Sustainable Growth and Development



Cambodia Climate Public Expenditure Review 2021

September 2022

Preface

As one of the countries most affected by climate change, Cambodia has committed to address this challenge both locally and internationally. Cambodia submitted its updated Nationally Determined Contribution (NDC) to the UNFCCC on December 30, 2020, and a Cambodia Climate Change Strategic Plan (CCCSP, 2014-23) is in place with action plans in 14 ministries and agencies. Since 2017, Ministry of Economy and Finance has included guidance on climate change in annual budget circulars, and in 2019 climate change was recognized as a key challenge to be addressed both in the debt policy and in the budget of the Government. Key ministries have also started to integrate climate change in the way they prioritize activities for the national budget with technical supports from our partners.

This report provides an update on climate finance trends, including data up to fiscal year 2021, to monitor to what extent Cambodia and its development partners are effectively supporting national climate change priorities.

In 2021 expenditure, climate change expenditure remains high at 2.3% of GDP (from 2.2% in 2020) or KHR 2,530 billion. The main component remains climate-proofing of infrastructure as part of the measures against floods, and Covid-19 measures. In addition, the government intervention climate change resilience co-benefits for the most vulnerable on through social protection cash transfer to the vulnerable groups and the poor, amounted to KHR 1,176 billion or around US$ 294 million.

In the current Government mandate (2019-23), climate change is better reflected in the National Strategic Development Plan. This has to be translated into sectoral strategies and budgets. While the level of climate-relevant public expenditure keeps increasing, it is still below the levels required to address the climate change issues that Cambodia is facing. Continued infrastructure development against flood and drought is required, as well as interventions in livelihoods, water supply and social sectors.

This report also takes a look at gender issues in the climate change response. Partial data indicates that gender issues remain under-addressed in climate change programmes. Case studies of specific climate change programmes show that initiatives have been taken to address these gender issues, but comprehensive information on the effectiveness of these efforts is not always available. This is an area where progress needs to be made, so that the most vulnerable groups are effectively protected and that women and men can contribute to increased resilience and low carbon development.

The Ministry of Economy and Finance will continue to be actively involved in these efforts to assess the effectiveness of climate finance, alongside the National Council for Sustainable Development and the Council for the Development of Cambodia.

Ros Seilava
Secretary of State
Ministry of Economy and Finance

Acknowledgment

The Ministry of Economy and Finance would like to express its gratitude to the extended cooperation and contribution from the National Council for Sustainable Development (NCSD), the Cambodia Climate Change Alliance (CCCA) and the regional project on the Governance of Climate Change Finance (UNDP/Sweden) in providing technical support and to the Cambodian Rehabilitation and Development Board (CRDB) in providing data from the Cambodia ODA database as an input to this report.

The Cambodia Climate Change Public Expenditure Review report has been developed with technical support from the NCSD and CCCA (Mr So Polen, Mr. Julien Chevillard, Ms. Ye Sokvutheavy), by the Climate Change Technical Team of the Ministry of Economy and Finance with support of their technical officials from General Department of International Cooperation and Debt Management (GDICDM) and General Department of Budget (GDB), and technical officials of Council for the Development of Cambodia (CDC).

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List of Abbreviation and Acronyms

ADB	Asian Development Bank
ASPIRE	Agricultural Service Programme for Innovation, Resilience and Extension
PB	Programme-based
CBR	Cost Benefit Ratio
CC	Climate Change
CCCSP	Cambodia Climate Change Strategic Plan 2014-2023
CCAP	Climate Change Action Plan
CCFF	Climate Change Financing Framework
CDC	Council for the Development of Cambodia
CRDB	Cambodia Rehabilitation and Development Board
CPER	Climate Public Expenditure Review
CPEIR	Climate Public Expenditure and Institutional Review
KHR	Khmer Riel
CRI	Climate Relevance Index
DI	Department of Investment
DBF	Department of Budget Formulation
DCC	Department of Climate Change
FA	Forestry Administration
FCPF	Forest Carbon Partnership Facility
FiA	Fisheries Administration
FMIS	Financial Management Information System
GCF	Green Climate Fund
GMAGs	Gender Mainstreaming Action Groups
GDP	Gross Domestic Product
GDANCP	General Department of Administration for Nature Conservation and Protection
GHG	Greenhouse Gas
MPTC	Ministry of Posts and Telecommunications
MAFF	Ministry of Agriculture, Fisheries and Forestry
MCS	Ministry of Civil Service
MEF	Ministry of Economy and Finance
MRD	Ministry of Rural Development
MOH	Ministry of Health
MoEYS	Ministry of Education, Youth and Sports
MPWT	Ministry of Public Work and Transport
MIH	Ministry of Industry and Handicraft
MISTI	Ministry of Industry, Sciences, Technology, and Innovation
MME	Ministry of Mines and Energy
NCCC	National Climate Change Committee
NCDD	National Committee for Sub-National Democratic Development
NCDDS	National Committee for Sub-National Democratic Development Secretariat
NCDM	National Committee for Disaster Management
NRS	National REDD+ Strategy
MWA	Ministry of Women's Affairs
MoWRAM	Ministry of Water Resources and Meteorology

MoInf	Ministry of Information
MoT	Ministry of Tourism
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MoE	Ministry of Environment
MIS	Management Information System
NCSD	National Council for Sustainable Development
NGO	Non-Governmental Organization
NSDP	National Strategic Development Plan
ODA	Official Development Assistance
PB	Program-based
PFM	Public Financial Management
PFMRP	Public Financial Management Reform Program
REDD+	Reducing Emissions from Deforestations and Forest Degradation, and Foster Conservation, Sustainable Management of Forests, and Enhancement of Forest Carbon Stocks
RGC	Royal Government of Cambodia
SIS	Safeguard Information System
SoI	Summary of Information of the Safeguards System
SNA	Sub-National Administrations
SNIF	Sub-National Investment Fund
WRI	World Resources Institute

Executive Summary

Key messages for the 2021 CPER:

- **The share of climate change expenditure in GDP in 2020 and 2021 were 2.2% and 2.3% respectively, mainly infrastructure development, general health intervention and cash distribution in the social protection to the poor and the vulnerable, although some development projects have been continued to be impacted by the Covid-19 response measures; 2021 was the widely spread of Covid-19 that had started to have the fatal cases.**
- **Climate change spending financed by domestic resources kept increasing in 2021 and represented 48% of total climate change expenditures, up from 46% in 2020;**
- **The climate change concessional loans disbursements in 2021 rebounded by 11%, while the overall ODA dropped by 20%, due to the drop in mega development project disbursement, including the Covid-19 response;**
- **Climate change integration in "hard" infrastructure investments continues to grow as part of the government fiscal expansion during the Covid-19 measures, while the crucial "soft" expenditure, for the social protection on the vulnerable group and poor has been continued through cash transfers with US$ 294 million in 2021, or amounted to US$ 683 million since the beginning until May 2022.**

In 2021, infrastructure ministries (MPWT, MoWRAM and MRD) shared 56% of the climate change expenditure compared to 58% a year earlier, due to the continue fiscal expansion as part of the Covid-19 measures, and infrastructure against flood and draft.

In this connection, MPWT continues to take the largest share with 27%, of the climate change expenditure in Cambodia, growing by 7% in 2021, compared to the already high investment in 2021. The increase was contributed by the continued investment in climate proof infrastructure, especially on national road improvements by increasing the heights of the roads and fitting roads with bridges or drainages for water ways or flood management, as well as government decision to construct and rehabilitate city roads in Kampong Som Province (34 roads) and Siem Reap Province (38 roads). In addition, the highway construction on national road No. 4 is underway and to be complete by 2022.

The second largest share of climate expenditure is MoWRAM, representing 21% in 2021, followed by MRD for 8.4%, MAFF (7.5%), MoE (6%), MoH (4.8%), MISTI (2.9%), and NGO (1.5%) MoEYS (1.3%), while other ministries share less than 1% of the total climate spending.

Investment in climate-relevant rural infrastructures (small irrigation, rural water and sanitation, and rural roads), under MRD dropped by 4% in 2021, mainly due to lower disbursements on a large climate resilience project on rural infrastructure and rice commercialization.

The climate spending in irrigation system and dams under MoWRAM increased by 8% in 2021, contributed by the rise on rehabilitation of irrigation, with moderate investment on water resource management and infrastructure, on river dams or other reservoir rivers.

In the agriculture, forestry and fisheries sectors climate change expenditure turns to be declined by 21% in 2021, compared to the 35% growth in 2020. The main sources of finance on the agriculture sector was mainly driven by the external finance, which represented about 92% in 2021, reflecting high donor support for climate action in agriculture. . However, this source of financing has shown more volatility in recent years, and the travel restrictions related to the global pandemic may also have impacted the implementation in the field of several large development projects.

The climate change expenditure in the social sectors (education, health and gender) obtained a higher share of 6.6% in 2021 compared to 2% in 2020, mainly due to higher level of health intervention in 2021. The climate change spending in the much smaller shares in social sectors, education sector under MoEYS and gender under MWA increased by 3 folds and 3.8 folds respectively in 2021, , contributed by the investment on the new mode of learning using online resources, climate investment in school infrastructures, and by the gender mainstreaming and economic empowerment projects.

MoE shared about 6% of the total climate spending and rebounded by 38% in 2021 from a decline of 18% in 2020. MoE's sources of finance are 46% from recurrent expenditure, whereas the 54% external sources include projects on forest carbon partnership, biodiversity and conservation and environmentally sustainable development.

The water supply and sanitation sector under MISTI, shares about 2.9% of the total climate spending in 2021 with an increase of 1.5 folds compared to 2020, mainly contributed by the higher investment in clean water supply and sanitation.

Climate change spending in the energy and mining sectors under the MME represents 0.9% in 2021, or a 56% drop from 2020 due to lower investment in energy sources and transmission lines. In this sector, much larger investment is done by the private sector.

SNAs represent about 3.3% of the total climate change spending, increasing by 1% in 2021.

For the implementation of the "Cash Transfer for the Poor and Vulnerable Households during COVID-19" from 25th, May 2020 to May 2022, 687,372 households have received cash relief benefits that total over KHR 2,735 billion (or US$683 million) from the national budget. This special social assistance program has protected the livelihoods of the poor and vulnerable households impacted by the pandemic. In 2021, this social programme contributed to the livelihood adaption response in climate expenditure about KHR 1,176 Billion (or around US$294 million).

I. Climate expenditure

1.1 Overall trend

The share of the overall climate change-related expenditure which was either fully or partially delivering climate change benefits in 2021 jumped to 46.5% of government expenditure, from 33.7% in 2021. During the period 2017-2021, the average share is 36%.

Once climate change relevance weights are applied to this expenditure, climate change expenditure[1] constituted 5.9% of the total public expenditure in 2021, a 0.2% increase from 2020. The proportion of climate change expenditure to GDP is 2.3% in 2021, compared to 2.2% in 2020. In absolute terms, the climate change expenditure has increased from KHR 2,347 billion in 2020 to KHR 2,530 billion (about USD 632 million) in 2021.

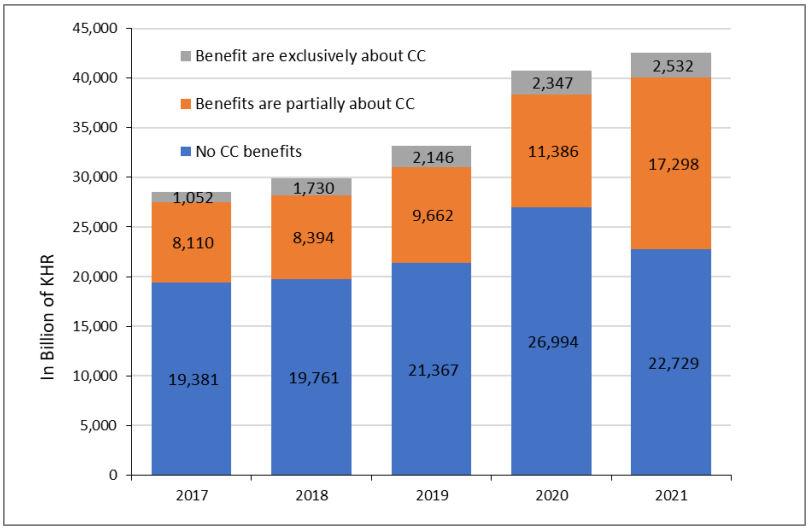
This is mainly due to additional investments in social sectors during the peak year of the COVID-19 pandemic in Cambodia, including general health investment and intervention, and the delivery of cash transfers as social protection to the poor and the vulnerable, as well as infrastructure investment. These investments were not necessarily designed with climate change as their main purpose, but they contribute to addressing climate change impacts for the most vulnerable groups.

Table 1: Proportion of climate change expenditure to total public expenditure and GDP

	2017	2018	2019	2020	2021
Public expenditure with CC benefits vs. total public expenditure	32.1%	33.9%	35.6%	33.7%	46.6%
CC public expenditure (weighted) vs. total public expenditure	3.7%	5.8%	6.5%	5.8%	5.9%
CC public expenditure (weighted) vs. GDP	1.17%	1.8%	2.0%	2.2%	2.3%

Source: NIS, MEF, CDC & expert team calculation.

Figure 1: Public expenditure with CC benefits vs. total public expenditure (in billions of KHR)

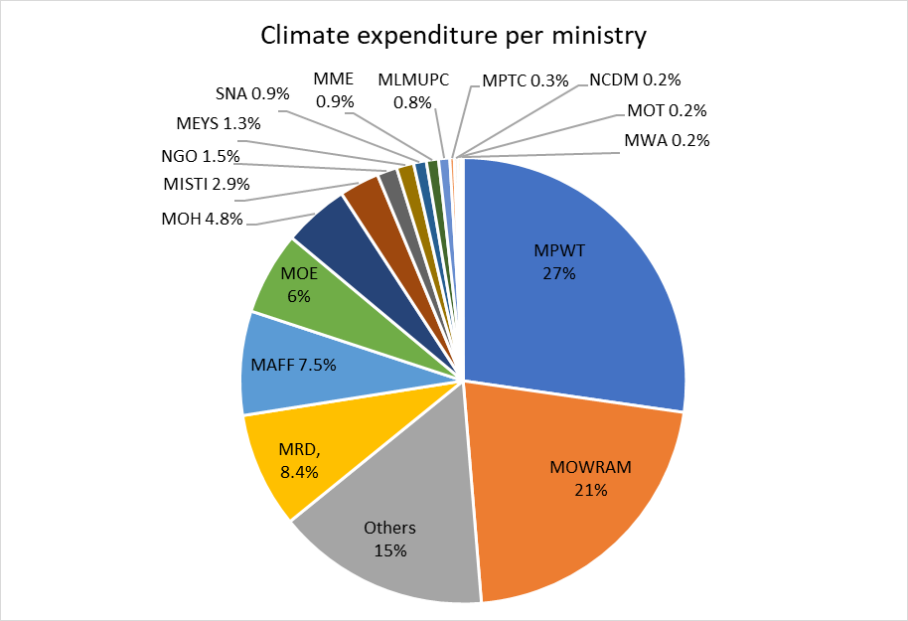


Source: MEF, CDC, and expert team calculation.

[1] In this report, "climate change expenditure" refers to public expenditures that deliver climate change benefits, once they have been weighted for climate change relevance.

1.2 Sectoral allocation of climate change-related expenditure

Figure 2: Allocation of climate expenditure per ministry in 2021



Source: MEF, CDC, and expert team calculation.

In 2021, infrastructure ministries (MPWT, MoWRAM and MRD) shared 56% of the climate change expenditure compared to 58% a year earlier, due to the continued fiscal expansion as part of the Covid-19 measures, and infrastructure against flood and drought.

In this connection, MPWT continues to take the largest share with 27%, of the climate change expenditure in Cambodia, growing by 7% in 2021, compared to the already high investment in 2020. The increase was contributed by the continued investment in climate proofed infrastructure, especially on national road improvements by increasing the heights of the roads and fitting roads with bridges or drainages for water ways or flood management, as well as the government decision to construct and rehabilitate city roads in Kampong Som Province (34 roads) and Siem Reap Province (38 roads). In addition, the highway construction on national road No. 4 is underway and to be complete by 2022.

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The climate change expenditure in irrigation system and dams under MoWRAM increased by 8% in 2021, contributed by the rise on rehabilitation of irrigation, with moderate investment on water resource management and infrastructure, on river dams or other reservoir rivers.

In the agriculture, forestry and fisheries sectors climate change expenditure declined very significantly by 21% in 2021, compared to the 35% growth in 2020. The main sources of finance in the agriculture sector are linked to the external finance, which represented about 92% in 2021, reflecting high donor support for climate action in agriculture. However, this source of financing has shown more volatility in recent years, and the travel restrictions related to the global pandemic may also have impacted the implementation in the field of several large development projects.

The climate change expenditure in the social sectors (education, health and gender) obtained a higher share of 6.6% in 2021 compared to 2% in 2020, mainly due to higher level of health-related interventions in 2021. The climate change spending in the much smaller shares in social sectors, education sector under MoEYS and gender under MWA increased threefold and 3.8-fold respectively in 2021, contributed by the investment on the new mode of learning using online resources, climate investment in school infrastructures, and by the gender mainstreaming and economic empowerment projects.

MoE managed about 6% of the total climate spending and rebounded by 38% in 2021 from a decline of 18% in 2020. MoE's sources of finance are 46% from recurrent expenditure, whereas the 54% external sources include projects on forest carbon partnership, biodiversity and conservation and environmentally sustainable development.

The water supply and sanitation sector[2] under MISTI, shares about 2.9% of the total climate spending in 2021 with a 50% increase compared to 2020, mainly contributed by the higher investment in clean water supply and sanitation.

Climate change spending in the energy and mining sectors under the MME represents 0.9% in 2021, or a 56% drop from 2020 due to lower investment in energy sources and transmission lines. In this sector, much larger investment is done by the private sector.

SNAs represent about 3.3% of the total climate change spending, increasing by 1% in 2021.

It should be noted that the CPER only reviews in detail the expenditure of the ministries who have adopted climate change action plans. Since the 2020 climate expenditure review, with the specific context of the COVID-19 pandemic, social protection expenditure via cash delivery has expanded very significantly, with a focus on ID poor citizens. This expenditure is reflected under the Ministry of Social Affairs, Veterans and Youth rehabilitation, which for the CPER is bundled in the category "others".

Table 2: Climate change expenditure by the ministries (total donor and national) in billions of KHR

Climate Change Expenditure	2017	2018	2019	2020	2021
MLMUPC	20.8	17.5	24.0	23.1	20.5
MOT	3.4	1.5	1.8	2.6	5.8
MISTI	23.7	26.3	27.3	29.3	73.4
MOINFO	0	0	0	0	0
MPTC	5.8	10.8	10.5	7.5	8.3

[2] Water supply and sanitation network for community in the rural areas are under the MRD.

MAFF	143.0	167.6	179.6	243.1	191.4
MME	159.7	20.5	12.0	50.7	22.4
MOWRAM	168.6	408.5	528.2	503.3	543.3
MPWT	180.1	457.9	568.9	647.8	691.5
MRD	99.9	150.2	167.6	212.1	173.3
MOH	30.3	41.6	47.8	37.4	120.8
MoEYS	0.4	0.3	0.8	1.0	4.1
MoWA	4.0	5.3	3.4	2.6	3.9
NCDM	1.4	8.1	9.6	3.4	6.2
MOE	29.5	98.1	134.9	110.9	152.5
SNA	28.5	68.2	82.3	82.6	83.5
NGO	44.5	76.6	54.5	53.5	36.8
Total CC, CCFF ministries	944	1,559	1,853	2,011	2,138
Others	108.1	169.0	293.1	335.9	391.9
Total CC, all ministries	1,052	1,728	2,146	2,347	2,530
in millions of USD	262.9	432.0	536.6	586.7	632

Source: MEF, CDC, and expert team calculation.

Table 3: Climate change expenditure by ministry (total donor and national, in percentage of total climate change expenditure

Climate Change Expenditure	2017	2018	2019	2020	2021
MLMUPC	2.0%	1.0%	1.1%	1.0%	0.8%
MOT	0.3%	0.1%	0.1%	0.1%	0.2%
MISTI	2.3%	1.5%	1.3%	1.3%	2.9%
MOINFO	0.0%	0.0%	0.0%	0.0%	0.0%
MPTC	0.6%	0.6%	0.5%	0.3%	0.3%
MAFF	13.6%	9.7%	8.4%	10.4%	7.6%
MME	15.2%	1.2%	0.6%	2.2%	0.9%
MOWRAM	16.0%	23.6%	24.6%	21.4%	21.5%
MPWT	17.1%	26.5%	26.5%	27.6%	27.3%
MRD	9.5%	8.7%	7.8%	9.0%	6.8%
MOH	2.9%	2.4%	2.2%	1.6%	4.8%
MoEYS	0.0%	0.0%	0.0%	0.0%	0.2%
MoWA	0.4%	0.3%	0.2%	0.1%	0.2%
NCDM	0.1%	0.5%	0.4%	0.1%	0.2%
MOE	2.8%	5.7%	6.3%	4.7%	6.0%
SNA	2.7%	3.9%	3.8%	3.5%	3.3%
NGO	4.2%	4.4%	2.5%	2.3%	1.5%
Others	10.3%	9.8%	13.7%	14.3%	15.5%

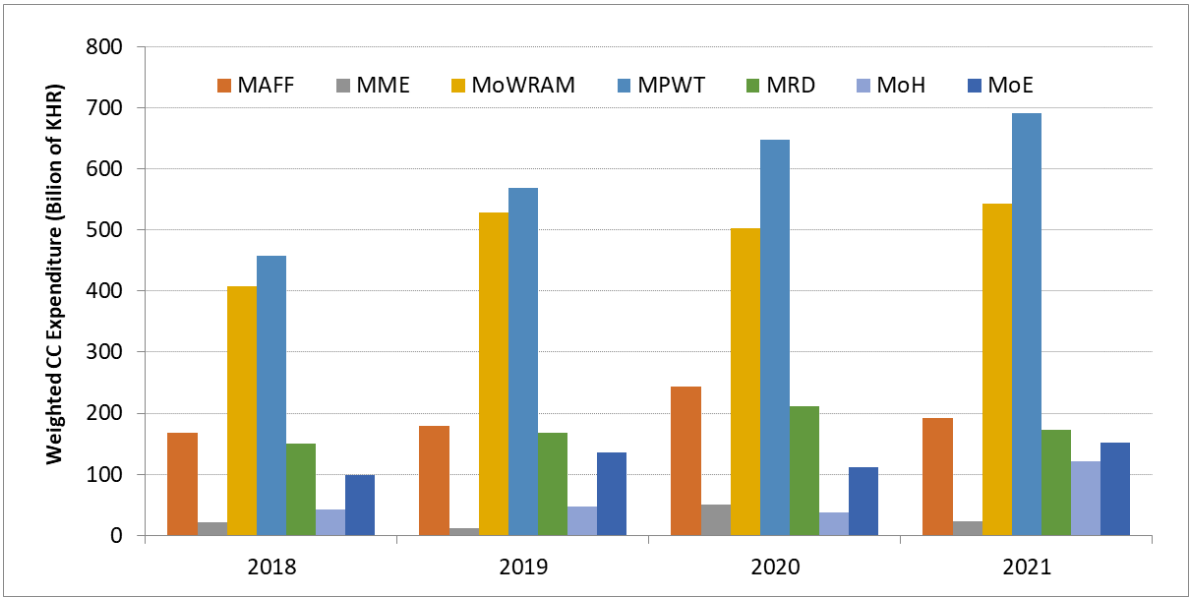
Source: MEF, CDC, and expert team calculation.

Table 4: Climate change expenditure by ministry (total, in percentage change)

Ministries/institutions	2017	2018	2019	2020	2021
MLMUPC	-45%	183%	-16%	38%	-4%
MOT		217%	-56%	23%	45%
MISTI	-49%	252%	11%	4%	8%
MOInfo					
MPTC	38%	-41%	86%	-3%	-29%
MAFF	-16%	67%	17%	7%	35%
MME	-35%	16%	-87%	-42%	323%
MOWRAM	59%	44%	142%	29%	-5%
MPWT	-13%	15%	154%	24%	14%
MRD	-62%	33%	50%	12%	27%
MOH	-34%	1%	37%	15%	-22%
MEYS		-34%	-35%	210%	25%
MWA	3%	-49%	32%	-35%	-25%
NCDM	-24%	19%	495%	18%	-65%
MOE	81%	124%	233%	38%	-18%
SNA	-28%	35%	139%	21%	0%
NGO	11%	0%	72%	-29%	-2%
Others	4%	27%	56%	73%	15%

Source: MEF, CDC, and expert team calculation.

Figure 3: Selected ministries and agencies' climate change expenditure 2018-2021



Source: MEF, CDC, and expert team calculation.

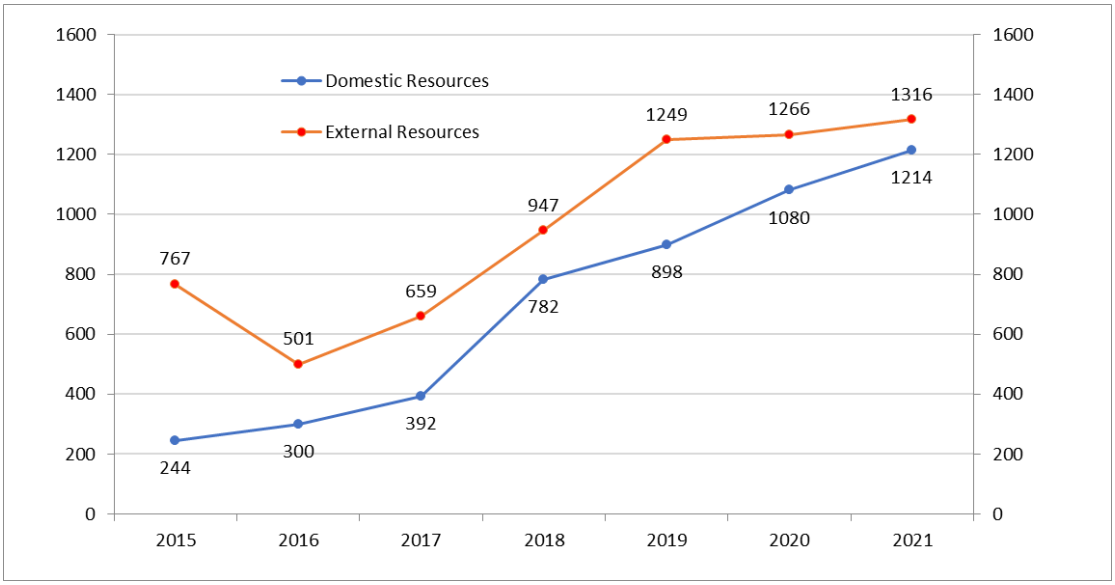
II. Sources of climate public expenditure

The amounts allocated from domestic resources (national budget), for climate change expenditure reached KHR 1,214 billion in 2021, a KHR 133 billion increase or a 12.3% rise from 2020. In 2021, the domestically financed climate change expenditure represents 48% of the total climate expenditure, while externally financed climate change expenditure shares 52% and increased by 3.9% from 2020. Domestic financing has continued to increase at a higher rate than external financing, reflecting continued difficulties to access external climate finance at the scale required to address the climate change crisis. The increase in domestic and external financed projects are related to heavy investment in infrastructure, health, and social protection as part of the Covid-19 measures.

The RGC's social protection package provides cash transfers to the poor and vulnerable households, by using the Ministry of Planning's ID Poor, contributing indirectly to more resilience to climate change or increased adaptation capacity for their livelihoods impacted by climate change during this Covid-19 pandemic. For the implementation of the "Cash Transfer for the Poor and Vulnerable Households during COVID-19" from 25th, May 2020 to May 2022, 687,372 households have received cash relief benefits that total over KHR 2,735 billion (or US$683 million) from the national budget[3]. In 2021, this social programme was estimated to contribute to the livelihood adaptation response in climate expenditure for about KHR 1,176 Billion[4] (or US$ 294 million).

Most externally funded climate change expenditure continues to flow through the national treasury and MEF financial systems, representing 80% of the total in 2021.

Figure 4: Source of Public Climate Finance (In billions of KHR)



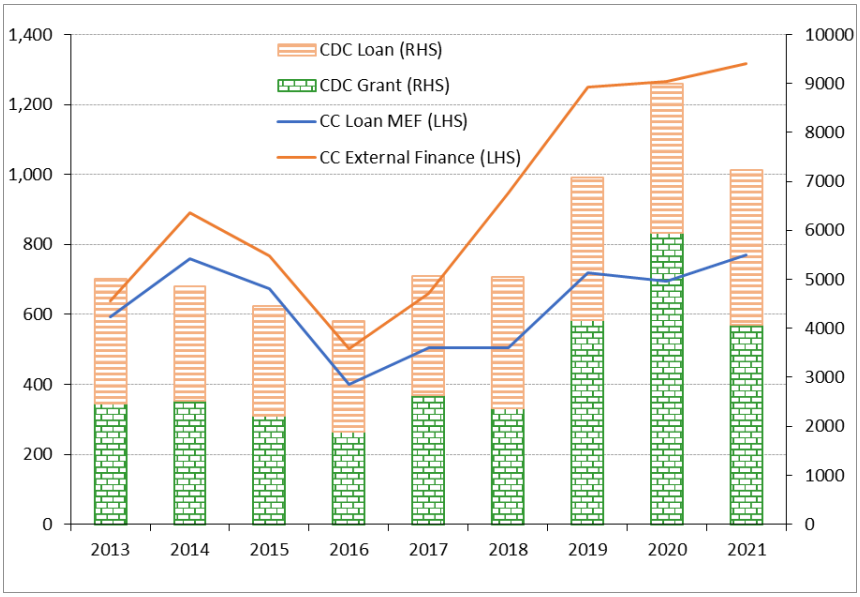
Source: MEF, CDC, and expert team calculation.

[3] MoSVY's public report on the social protection in Cambodia on June 24, 2021.

[4] The partially-CC benefits amount to KHR 1,176 billion from the national budget within 2021.

To look into loan disbursement flow, the MEF's General Department of International Cooperation and Debt Management data is a useful resource. The total concessional loan disbursements amounted to KHR 4,654 billion (or about USD 1.16 billion) in 2021, declining slightly by 4% from 2020. In term of the CC spending, the CC concessional loans rebounded to KHR 769 billion or a 11% increase. At the same time, the CDC's total ODA dropped by 20% to US$ 1,806 million from US$ 2,249 million in 2020, mainly due to the drop in some mega development partner programmes. Compared to the negative overall ODA trend in the past year, climate finance has performed relatively well.

Figure 5: Source of CC external finance (In billions of KHR)



Source: MEF, CDC, and expert team calculation.

For CC external resources, Table 5 below shows that the main donors for climate change expenditure in 2021 are ADB (20%), followed by Japan (18%), China (15%), Republic of Korea (11.9%), World Bank (6.4%), IFAD (6.1%), EU/EC (6%), USA (4.6%), France (3.1%), Australia (2.3%), Germany (1.6%), UNIDO (0.6%), UNDP and WFP (each 0.5%), while other donors are less than 0.5%.

Table 5: top 25 of Climate change (weighted) expenditure per development partner (in Billions of KHR)

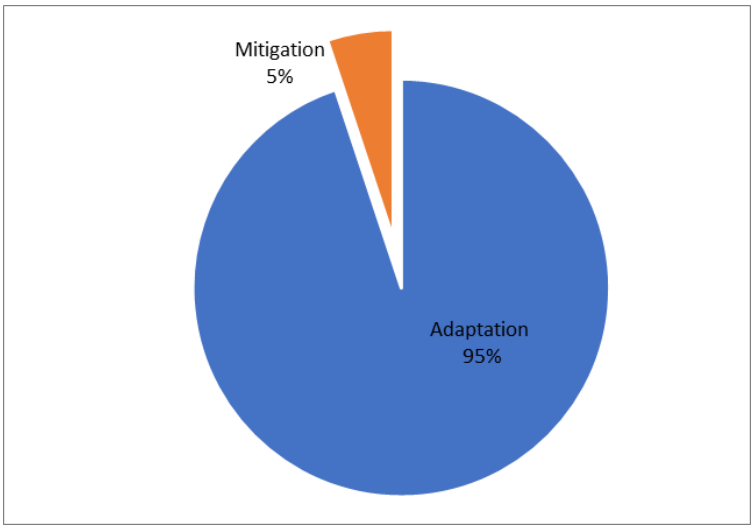
No.	Donor	2016	2017	2018	2019	2020	2021	2021 Percentage to total
1	ADB	121	149	159	370	178	191	19.9%
2	Japan	25	61	82	136	221	177	18.4%
3	China	153	182	172	245	233	145	15.1%
4	Republic of Korea	15	20	36	43	36	114	11.9%
5	World Bank	4	3	16	35	43	62	6.4%
6	IFAD	55	53	69	46	50	59	6.1%
7	EU/EC	33	26	28	39	39	57	6.0%
8	USA	32	27	67	43	53	44	4.6%
9	France	8	20	17	106	20	29	3.1%
10	Australia	27	40	37	25	18	23	2.3%

11	Germany	8	15	14	9	7	16	1.6%
12	WFP	0	0	0	3	3	7	0.7%
13	UNIDO	2	2	2	4	12	5	0.6%
14	Global Fund	3	4	2	4	4	5	0.5%
15	UNDP	10	17	25	26	13	5	0.5%
16	Sweden	5	12	13	17	21	4	0.5%
17	Switzerland	4	7	7	6	4	4	0.4%
18	FAO	1	4	5	10	4	2	0.3%
19	New Zealand	1	2	2	10	9	2	0.2%
20	UK	0	1	0	0	1	2	0.2%
21	UNICEF	0	0	0	1	1	1	0.1%
22	Czech Republic	0	0	1	1	1	1	0.1%
23	WHO	1	0	0	0	1	1	0.1%
24	UN Women	0	0	0	1	1	1	0.1%
25	UNESCO	0	0	0	0	0	1	0.1%

Source: CDC, and team expert calculation.

Mitigation expenditure represents 5% in CPER 2021, while adaptation takes a 95% share. This is broadly in line with the policy priorities of the government, where adaptation is the main priority while mitigation is a smaller but growing component of the climate change response. Mitigation is also significantly funded from the private sector, especially through investments in renewable energy.

Figure 6: Shares of Adaptation (A) and Mitigation (M) in CPER 2021



Source: MEF, CDC and Expert team calculation.

III. Assessment of Gender integration in Climate Change Programming

This section assesses to what extent gender concerns are integrated into the climate change programming, based on the quantitative data from externally funded projects, and more qualitative assessments based on a case of incorporating gender in climate change response in Livelihood and Renewable Energy in Pursat and Takeo provinces.

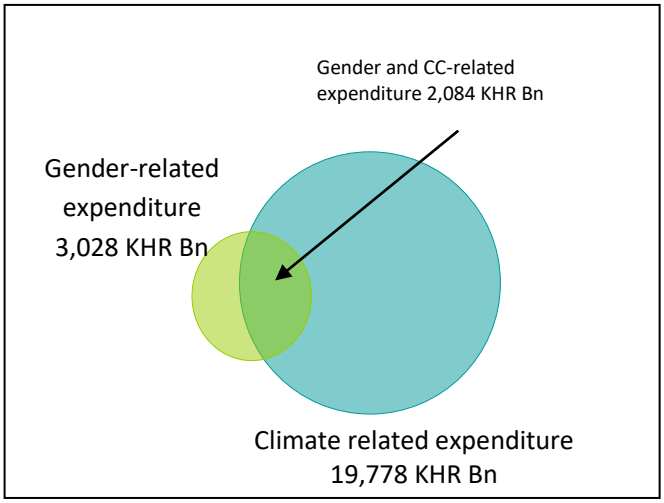
3.1 Gender in key climate change projects[5]

While relatively little data is available on climate change finance and gender linkages, this section takes a look at the evidence available from CDC's ODA database. In 2021, 42%, of the total overall external finance is tagged as gender relevant, a decline from 53% in 2020. Climate Change is one of the key focus areas for the Neary Rattanak IV Gender Strategic Plan (2014-2018). Of the gender-related programmes, 69%, are also climate change relevant, rising from 52% in 2020. This percentage increase is due to the lower level of total gender related spending programmes in 2021, with the absolute amount of expenditures on gender programmes which also climate change relevant actually declining by 16%.

On the other hand, only 11% or 2,084 billion KHR of the total climate change relevant programmes were also tagged as having a specific gender focus, a drop of this share from 18% in 2020. The decrease in gender programmes share in total climate change expenditure are primarily in health, infrastructure and social protection, reflecting the fact that climate change programmes had a positive trend in 2021 while spending on some other thematic issues (including gender) had a negative trend.

This indicates that while climate change remains a significant issue from a gender perspective, more efforts need to be made to systematically integrate gender concerns in climate change programmes, especially when these programmes are designed in the context of a global emergency like COVID-19.

Figure 7: 2021 climate and gender public expenditure (in billions of KHR, from external partners only)



Source: CDC and Expert team calculation

While gender is mentioned as one of the objectives of the Cambodia Climate Change Strategic Plan (CCCSP 2014-23), a recent mid-term review of the CCCSP indicated that there is a scope to improve the way gender is integrated into this national policy, and the way gender impacts of climate change are

[5] Gender data in the chart is based on the ODA database tag (self-reporting by development partners) and climate change data is based on expert team analysis of ODA database. Both gender and climate exchange data are unweighted (i.e. expenditure is relevant to CC and gender but not 100% allocated to these objectives).

monitored. In particular, it was recommended to better reflect gender concerns in the prioritized activities under the CCCSP, to strengthen knowledge around the climate change – gender interactions, and to build capacity to develop gender-sensitive climate change programmes.

It should be noted that Cambodia's updated Nationally Determined Contribution (NDC) includes climate change commitments up to 2030. This updated version of the NDC includes a strong focus on gender issues, and gender commitments will be monitored under the NDC transparency framework.

3.2. A case of incorporating gender in climate change response in Livelihood and Renewable Energy in Pursat and Takeo provinces

The Scoping Studies[6] on "**Women's Entrepreneurship and Livelihood Generation through Renewable Energy**" and the Pre-Feasibility Studies of Empower's possible interventions for project sites have completed, as part of the Empower Women for Climate Resilient Societies project[7], jointly initiated by UN Women and UN Environment, with the support of the Swedish International Development Cooperation Agency and co-implemented by NCDDs and SHE Investment. The objectives of the Empower project is twofold: (i) to identify feasible livelihood options that make use of renewable energy and which the Empower project could support, and (ii) to design a financing mechanism that could catalyse adoption of these livelihood options by women-benefitting enterprises. The project involves in three levels of study and technology selection: scoping study, pre-feasibility and feasibility.

The purpose of the scoping study is to carry out a preliminary assessment in a cluster of villages, which have potential for developing and enhancing women's enterprise and their income generating activities through renewable energy. Then, the Pre-Feasibility Studies aim at improving the understanding of previously identified during the scoping studies and proposing livelihood options that enhance the living condition of women in Cambodia, either via renewable energy products/services provided, or via renewable energy powered enterprises.

The geographical focus of the Scoping Studies and Pre-Feasibility Studies were eight specific villages in Pursat and Takeo provinces. The two provinces were selected because they serve as good examples of the Cambodian rural context: Takeo for its proximity to the capital city and the fact that it has benefitted from long-standing governmental and international development programs; Pursat because it has the opposite profile.

The Scoping Studies identified eight livelihood options that proposed to incorporate renewable energy technology in an attempt to help women to better adapt and mitigate climate change through the use of renewable energy.

The Table below shows the proposed livelihood options and the renewable energy technologies involved. More importantly, the Pre-Feasibility Studies further explored how these livelihood options

[6] The Scoping studies and the Pre-feasibility studies were conducted by Nexus for Development in 2019 for EmPower, Women for Climate-Resilient Societies and UN environment programme.
[7] https://nexusfordevelopment.org/project-portfolio/empower-women-for-climate-resilient-societies/

could be implemented at the village level and updated the prioritisation according to the additional field learning and analysis.

Table 6: Priority actions for livelihood options for women groups

Prioritised options for improved livelihoods **Proposed livelihood option**	**Renewable energy (RE)/energy efficiency (EE) technology**
1. Rice drying	Solar rice dryer
2. Fish production	Solar fish dryer
3. Agricultural irrigation	Solar water pump
4. Vegetable preservation	Solar cooling system
5. Chicken and duck production	Solar chick incubator
6. Garment sewing	Solar panels for electricity generation
7. Grocery management	Solar panels for electricity generation
8. Retail of RE and EE technologies	Improved cooking stoves, solar devices, and other renewable energy products

Source: Nexus for Development (2020)

These livelihood options contribute to strengthening the flood resiliency capacity of communities around the Tonle Sap lake (through access to clean water, use of off-grid renewable energy and waste management) and leverage the decentralisation process to strengthen financial and institutional processes for local adaptation.

Targets: At least 30 per cent of the women are expected to increase their access to clean water and 30 per cent their access to off-grid renewable energy technology and inputs and scaled-up climate-resilient agricultural production.

They will achieve this through increased access to solar irrigation systems and other climate-resilient practices. These will promote inclusiveness, gender equality, and accountability by engaging more women in institutional arrangements for climate change and reducing GHG emissions through the off-grid street lightening of the rural municipality.

Gender mainstreaming in the process: The project indicated steps to include gender dimensions into project implementation, especially working closely not only with women community leaders, but also with the sub-national government level, local NGOs, financing institutions and other stakeholders towards scoping and laying the foundations for jointly-designed interventions.

It is more advantageous to scale both the integration of renewable energy technologies into the current livelihoods of women, and to support capacity building and knowledge development for the greater dissemination of clean energy solutions. Furthermore, in the process, a series of meetings and discussions with key renewable energy actors in the rural areas of Cambodia were held during the Scoping Studies. Possible technology providers, programs active in the sector, and other organisations with relevant experience shared the past lessons they have learned and the current status of activities. Potential women business owners, customers, individual women and some local authority representatives have also been surveyed.
In total, 189 household interviews took place, eight focus groups were staged with villagers, and four key community representative discussions were performed for the studies. The Scoping Studies, which serve as a baseline, provided valuable information to describe the characteristics of women's current

livelihoods, with key learning points on seasonality, climate change impacts and the economic profiles of livelihood activities. In parallel, focus group discussions with local stakeholders refined the outcomes of this study and helped to map the first picture of potential local partners. An analysis has been performed on the baseline study to design alternative or improved livelihood options for the targeted women. These have been prioritised according to their forecasted impact (in size and depth), contribution to women's climate change resilience, and probable economic sustainability.

Challenges and Barriers

- There is no official document describing the statistics of employment in energy-related sectors. There is, thus, no reference to gender-disaggregated data in the sector. According to the Government-Donor Coordination Committee in 2019, the distribution of employed persons aged five and over in the electricity, gas, steam and air-con supply industry is 17,388 (0.2 per cent). Males accounted for 75.7 per cent of these workers, compared with 24.3 per cent who were females.
- Renewable energy jobs are to be found in the manufacturing, construction and engineering sectors, where women are less represented. In this sector, women serve as small-scale energy users. For instance, in Cambodian businesses owned by women and focusing on agriculture, energy use is relatively low. Dave et al. (2018) and the GCCA-UNDP (2013) found fewer female-headed households had access to electricity, and women often faced energy insecurity. This, therefore, limited the access of girls to further education, and women to expanded employment opportunities.
- The policy document also highlights main barriers of the higher up-front costs and no clear target for renewable energy in the energy mix. Cambodia has not set a target for renewable energy use and this results in no specific guidance for the private sector to invest in the project and no contribution to the security of the national energy supply.

  At the same time, realising the scale-up of renewable energy initiatives significantly contributes to national sustainable energy security, environmental benefits, and climate change mitigation actions, key government institutes, such as the MME, the MoE, the MEF and the EAC, work together to develop regulations and incentives for renewable energy.
- Currently, men lead in energy decision-making in the process of the generation, transmission and distribution of energy. The experience of some SEA countries indicates that, although more women are employed in the energy sector, men are still dominant in higher positions, including in leading roles within the public sector. Furthermore, although environmental policies have addressed gender concerns in renewable energy in the Lower Mekong Region (LMR) countries, males and females remained separate and siloed. Most women are employed in the administration, finance, human resource and operation support sections while men work in higher positions. It is notable that many women run renewable energy businesses but most are from rich family backgrounds, while those in low-income households are unlikely to expand their enterprises and gain access to credit or loans. Gender norms keep those women performing dual productive work and domestic obligations.

Lessons Learnt and Policy Recommendation:

The key lessons learnt from the scoping studies:

- **Cleaner fuel and efficient technologies for cooking**: while access to clean energy cooking stoves and electricity improve the quality of health and support safety[151]. This implies that women and girls, whose primary job is to cook for a family, are more prone to health problems due to their exposure to pollutants and emissions, and inadequate ventilation structures. The ADB has suggested that the practice of gender mainstreaming in energy policy and programs could be focused on cleaner fuel and efficient technologies for cooking, an improvement in cooking stoves, biogas digester programs, the promotion of LPG for cooking, renewable energy entrepreneurs' schemes, and the expansion of electricity connection[152].
- Han, Kimura and Sandu (2020) strongly suggest that affordable access to electricity has a positive impact on welfare and the environment. However, access to, and gain from electricity is gender imbalanced among rural households in Cambodia. As indicated in Chhay and Yamazaki (2020), women are more likely to have limited access to electricity than men. The study further argues that, although rural electrification has increased non-agricultural employment, more men than women tend to be involved in non-agricultural wage employment. In contrast, the incidence of women in non-agricultural unpaid jobs is higher than it is for men.
- Strengthen coordination and collaboration with department partners, NGOs and the private sector in supporting the implementation of renewable energy projects that take gender equality into account;
- Establish gender mainstreaming within energy policy, strategic plans and programs and climate change action plans for the energy sector, including renewable energy, to ensure that gender responsiveness is aligned with the specific action plans and available budget allocations for policies supporting climate change mitigation and green growth.

IV. Public spending and NDC priorities

A macro-level alignment assessment of the total public expenditure in 2021, indicates that USD 276.7 million disbursed in 2021 were aligned with the NDC priorities (Please see the table below). The mitigation related NDC actions shows a large gap in finance with only USD 9.6 million, a small proportion comparing to adaptation measures, whereas adaptation alignment is at USD 257.5 million due to large contribution from actions on CC road rehabilitation and maintenance.

NDC financing are estimated at 276.7 USD per year on average, thus the financing gap for 2021 can be estimated at 65%[8].

[8] In Cambodia's updated Nationally Determined Contribution (2020) in section 7, the total funding required for mitigation (USD 5.8 billion) and adaptation (over USD 2 billion) for the ten-year period is over USD 7.8 billion, which is around USD 780 million in average per year.

Table 7: NDC's related spending and annual average finance cost (in millions of USD)

No	Action	Ministry	No of Action M and A	in Millions of USD	
				Related Spending 2021	Annual Finance cost
1	Urban planning tools for climate change mitigation and the urban planning solution in three sub city	MLMUPC	M1	0	2.75
2	Improvement of process performance of EE by establishment of energy management in buildings/industries	MME	M2	0	5
3	Efficiency energy and pollution management in latex and rubber wood processing	MAFF	M3	0	0.1158
4	New sanitary landfills with LFG extraction and LFG extraction at the Dangkor Landfill. Potential for private sector engagement in financing, constructing, and operating sanitary landfill and LFG systems	MoE	M4	0	145.2
5	Composting of biodegradable organic fraction of MSW supplemented with separation of organic waste (at source). Can be done at different stages in the waste management value chain, either at household, community level or at landfill site. Private sector can invest in and operate the composting facilities	MoE	M5	0.01	Conditional action
6	Production of Refuse-Derived Fuel (RDF) from either a) fresh MSW or b) old MSW mined from the Dangkor landfill. The mechanical and biological separation and treatment of waste will be combined with an anaerobic digestion plant (generation of biogas from organic waste) to power facilities at the landfill. The produced RDF can be sold to e.g. cement industry as fuel. Private sector can invest in and manage the RDF and anaerobic digestion plant	MoE	M6	0	1.688
7	Implementation of National 3R strategy	MoE	M7	0	Variable cost
8	Bio-digesters construction (85% reduction compared to 2000)(Small size (2-3-4m3); Medium size(6-8-10m3), Large size(>10m3)	MAFF	M8	0	1.275
9	Centralized recycling facility for industrial waste from the garment sector	MISTI	M9	0	Variable cost
10	Better management of industrial wastewater in the food & beverage sector	MISTI	M10	0	Variable cost
11	Application of electrical equipment labelling & MEPS (Lighting, Cooling & Equipment)	MME	M11	0	25
12	Public awareness campaigns	MME	M12	0	2
13	Building codes and enforcement/certification for new buildings and those undergoing major renovation	MME	M13	0	2.5
14	Introduction of efficient electrical industrial motors and transformer	MME	M14	0	1.6
15	Improve sustainability of charcoal production through enforcement of regulations	MME	M15	0	1
16	Increase energy access to rural area	MME	M16	0	4
17	Roadmap study on Integration of renewable energy resources (solar, wind, hydro, biomass) into energy mix	MME	M17	0	0.03

18	Diversification of household and community energy generation sources to reduce reliance on biomass as an energy sources	MME	M18	0.23	NA
19	Reducing GHG emission through off grid street lightening of rural municipality	NCDD	M19	0	1
20	Toward Battambang city to green city	NCDD	M20	0	0.8
21	Eco-payment based on changing behavior on fire wood use of community in Angkor and Kulen Conservation Park	NCDD	M21	0	0.7
22	Cooling of public sector buildings	NCDD	M22	0	6.7
23	Promote sustainable energy practices in manufacturing	MISTI	M23	0	Variable cost
24	Actions to promote sustainable sourcing of fuel wood in the garment industry	MISTI	M24	0	1.959025
25	Implementation of National Cooling Action Plan - Direct emission reduction due F-gas transition in airconditioning and refrigeration - Indirect emission reduction due to improved cooling efficiency - Additionally, Inclusion of performance requirements of Passive Cooling Systems in Building Energy Code and implementation of "passive cooling" measures in the cities can be carried out as part of the implementation of the NCAP – see below	MLMUPC	M25	0	5
26	Inclusion of performance requirements of passive cooling systems in building energy code of Cambodia	MLMUPC	M26	0	0.075
27	Implementation of "passive cooling" measures in the cities (addressing urban heat island effect [UHIE]), public buildings and commercial buildings.	MLMUPC	M27	0	4.9
28	Promote integrated public transport systems in main cities	MPWT	M28	0.0005	NA
29	Enhance maintenance and inspection of vehicle (Piloting maintenance and emission inspections of vehicles)	MPWT	M29	0	Variable cost
30	E-mobility	MPWT	M30	0	NA
31	Establish green belts along major roads for climate change mitigation	MPWT	M31	0.09	NA
32	Shift long distance freight movement from trucks to train	MPWT	M32	0	NA
33	Increasing the effectiveness and sustainability of agricultural land management techniques (Conservation Agriculture)	MAFF	M33	0	2.4963
34	Organic input agriculture and bio-slurry; and deep placement fertilizer technology	MAFF	M34	0	0.26
35	Promote fodder production to improve high nutrient rich and high-quality forage feed value agriculture byproducts technology to support cattle production	MAFF	M35	0	0.0625
36	Promote manure Management through compost making process to reduce carbon emission	MAFF	M36	0	2.125
37	Seedlings distribute to public and local community	MAFF	M37	0.03	Variable cost
38	REDD+	MAFF	M38	0	NA
39	1. Promoting one tourist, one tree campaign	MoT	M39	0	0.2
40	2. Practicing responsible travel manner in order to protect and conserve environment, biodiversity, culture and local livelihood improvement	MoT	M40	0	NA
41	3. Always remind and practice 3R in all	MoT	M41	0	NA

	tourists´acivities				
42	4. Reducing energy use, improving energy efficiency, increasing the use of renewable energy, carbon offsetting, waste management and recycling, and water conservation	MoT	M42	0	NA
43	5. Operating sustainable destination management		M43	0	NA
44	6. Promoting adventure and green tourism activities		M44	0	NA
45	Installing air quality monitoring equipment in all provinces across the countries and establishing air quality data monitoring center with mobile application for public information and access	MoE	M45	0	NA
46	Establishing air quality monitoring and broadcasting center	MoE	M46	0	Variable cost
47	Improving urban environmental management through increasing green spaces in the city	MoE	M47	9.19	NA
48	Emission management from factories	MoE	M48	0	NA
49	Air quality management from construction sites	MoE	M49	0	0.05
50	Development of a longterm low emission strategy	NCSD	M50	0	NA
	Subtotal Mitigation Action			**9.6**	**218.5** + Other programmes' conditional cost = USD 0.58 Billion
1	Towards an agroecological transition in the uplands of Battambang	NCDD	A1	0	1
2	(Program 1: Improvement of Agricultural Productivity and Diversification and Agri-Business) Development of rice crops for increase production, improved qualitysafety; harvesting and post harvesting technique and agrobusiness enhancement	MAFF	A2	17.21	3.7122
3	Development of horticulture and other food crops for increase production, improved qualitysafety; harvesting and post harvesting technique and agrobusiness enhancement	MAFF	A3	0.03	1.5238
4	Development of Industry crops for increase in production, improved qualitysafety; harvesting and post harvesting technique and agrobusiness enhancement	MAFF	A4	5.32	1.2506
5	Improvement of support services and capacity building to crop production resilient to climate change by promoting research, trials and up-scaling climatesmart farming systems that increase resilience to CC and extreme weather events	MAFF	A5	25.36	6.9562
6	Building climate change resilience on cassava production and processing	MAFF	A6	0	0.289
7	Research for the development and enhancement of agricultural productivity, quality, and transfer through strengthening of crop variety conservation and new crop variety release responding to the impacts of climate change	MAFF	A7	0.17	0.2
8	Development of new technologies and increased yields by using new crop varieties which adapt to climate change	MAFF	A8	0	0.15
9	Development of rubber clone varieties suitable for AEZ and resilient to climate change	MAFF	A9	0	0.92486

10	Enhancing institutional and capacity development on climate change impact, vulnerability assessment, adaption measures and mitigation related to rubber sector	MAFF	A10	0.10	0.3852
11	(Program 2: Promote animal production and animal health) Improvement of animal breeding technology in Cambodia through AI which can adapt to climate change	MAFF	A11	0.13	1.25
12	Promotion of research capacities on animal genetic, animal breeding, and animal feed is strengthened to adapt to climate change	MAFF	A12	0	5
13	Strengthening capacities for risk prevention and reduction, effective emergency preparedness and response at all levels; enhancing livestock and disease-related early warning system, and integrating disaster risk reduction and climate change adaptation measures into recovery and rehabilitation initiatives in the livestock sector	MAFF	A13	0	0.625
14	(Program 3: Fishery management and aquaculture development) Promoting aquaculture production systems and practices that are more adaptive to climate change	MAFF	A14	0.15	1.56
15	Promoting climate resilience in the fisheries sector	MAFF	A15	0.02	3.35
16	Scaled up climateresilient agricultural production through increased access to solar irrigation systems and other climate-resilient practices	NCSD	A16	0.43	1
17	Developing a training manual and providing training on approaches for development of climate-smart and sustainable livelihood to rural poor people	MRD	A17	0	1
18	Protection, risk mitigation, and resilience building from marine pollution particularly caused by activities on land including marine pollution from waste and aquaculture activities.	MoE	A18	0.02	0.2
19	Effective management and protection of ecological systems of marine and costal zones to avoid adverse impacts from various factors, build their resilience and restore its functions for productive and healthy oceans	MoE	A19	0	7
20	Upgrading curriculum and training methodologies, including libraries, to include climate change subjects for primary schools	MEYS	A20	0	0.2
21	Upgrading curriculum to include climate change for nonformal education	MEYS	A21	0	0.095
22	Build centers of excellence for delivering climate change courses and research among Universities	MEYS	A22	0	0.325
23	Conduct training for education officials on climate change e.g. as a required component of teacher training	MEYS	A23	0	0.09
24	Conduct climate risk analysis for the existing electricity infrastructures and provide recommendations	MME	A24	0	0.0322
25	Climate proofing of existing and future solar/hydropower infrastructure	MME	A25	0	NA
26	Strengthen institutional capacities at national and sub-national levels to integrate gender responsiveness in climate change adaptation's policies, plans, programming, including gender budgeting	MoWA	A26	0.35	0.05

27	Enhance coordination and implementing accountability mechanisms to reduce climate change vulnerabilities of disadvantaged women and other marginalized groups such as ethnic minority women and men, People with Disability (PWD), youth, and elderly	MoWA	A27	0	0.05
28	Enhance monitoring and evaluation systems of sectoral ministries to track gender outcomes in climate change initiatives with particular focus on collecting and managing sexdisaggregated data, gender indicators and budgeting, outcome-based reporting, and dissemination and up-scaling of the gender and climate change adaptation related knowledge generated.	MoWA	A28	0	0.02
29	Capacity development for GCCC members and sectoral ministries on gender analysis, gender responsive and NDC	MoWA	A29	0	0.04
30	Develop a technical guidelines for gender mainstreaming in NDC process	MoWA	A30	0	0.012
31	Market supply chain of rural women entrepreneurs resilient to climate change	NCDD	A31	0	0.8
32	Local government and Climate Change-III (LGCC3)	NCDD	A32	0	1.3185
33	Reducing vulnerability of local communities though sub-national climate governance reform (focusing on policy)	NCDD	A33	0	1
34	Enable effective decision-making for health interventions through generation of information and improved surveillance or earlywarning systems	MoH	A34	0	0.0113519
35	Enhance climate resilience in health service delivery	MoH	A35	0.10	0.0246758
36	Strengthen and provide capacity building of technical guidelines for diagnosis, detection, control, prevention and treatment of vector-borne and water-borne diseases, injuries and other food poisoning illnesses arising from climate change	MoH	A36	0.05	NA
37	Conduct water sanitation and hygiene (WASH) assessment on climate change and develop planning for communities and health facilities.	MoH	A37	0	NA
38	Strengthen institutional capacities to effectively integrate climate risks and adaptation options in health sector planning and implementation	MoH	A38	0.15	0.0107408
39	Heat stress adaptation for industrial production	MISTI	A39	0	Variable cost
40	Enhance the quality of broadcasting means and expand the capacity of coverages for raising awareness on climate change nationwide	MoINFO	A40	0	0.5
41	Training and enhancing human capacity on climate change in information sector	MoINFO	A41	0	0.075
42	Urge private media organizations to participate in covering/broadcasting the climate change topics and to complement the state broadcasting agencies.	MoINFO	A42	0	0.125
43	Urge and encourage to reduce (or ban) all forms of commercial advertisement that has negative impact on environment	MoINFO	A43	0	0.05
44	Integrating climate change response measures onto the construction design for buildings and for rural housing (use of modern integration of technology)	MLMUPC	A44	0	0.34

45	Develop resilient infrastructure of school buildings in response to climate change	MEYS	A45	0	0.195
46	Implement climate change and disaster resilient construction and infrastructure standards including for public sector and community-focused buildings covering public health, education, WASH etc.	NCDM	A46	0	0.04
47	(DLUP) Prepare spatial planning (city/district/municipality) guidelines at all levels for climate change adaptation (CLUP) Integrating climate change response measures to the commune land use planning	MLMUPC	A47	0	0.0586
48	Integrating climate change response measures to the policy of social land concession (SLC) and its procedures	MLMUPC	A48	2.41	0.186
49	Prepare modality of standardized green spaces for urban planning or new subcities to address vulnerability of urbanization.	MLMUPC	A49	0	0.786
50	Vulnerability Assessment towards the development of climate change strategic plans to respond to the impacts on land, housings, coastal management, and building due to climate change	MLMUPC	A50	0	0.256
51	Promote land use planning tools for urban houses and building construction adaptive to climate change benefits to the low-income and homeless people	MLMUPC	A51	0	0.256
52	Promote proper low cost shelters for low income households resilient to climate change, practically in the area of social land concession	MLMUPC	A52	0	3.256
53	Development of building code with mainstreaming climate change into building designs	MLMUPC	A53	0	0.656
54	Mainstream climate change response measures into coastal development planning against sea water intrusion, sea water rise and seasonal storm destruction, and rising temperature	MLMUPC	A54	0.07	Variable cost
55	Strengthening climate resilient city	NCDD	A55	0	1
56	Develop national road construction and maintenance design standards for national and provincial roads, considering climate change impact including M&E framework develop for climate proofing and low-carbon technology roads	MPWT	A56	0	0.05
57	Repair and rehabilitate existing road infrastructure and ensure effective operation and maintenance systems, considering climate change impact	MPWT	A57	154.34	1
58	Rural road rehabilitation and improvement for climate change resilience	MRD	A58	12.76	80
59	News coverage and program production for awareness raising on climate change and its impacts	MoINFO	A59	0	0.3
60	Develop and annually update national and subnational multihazard and climate risk assessments, including identification of most vulnerable communities.	NCDM	A60	0	0.15
61	National end-to-end early warning systems with focus on effective dissemination to populations at risk	NCDM	A61	0	1.5
62	Implement community–based disaster and climate risk management programs	NCDM	A62	0.75	0.6

63	Building resilience of biodiversity conservation and restoration to adapt to climate change	MoE	A63	6.91	0.1125
64	Integrated village development	MRD	A64	0	20
65	Strengthen flood resiliency capacity of communities around Tonle Sap (access to clean water, off grid renewable energy, and waste management)	NCDD	A65	0	1
66	Building climate resilient livelihood and public infrastructures in social land concession for vulnerable communities	NCDD	A66	0	1.45
67	Building climate resilience for district and commune governance through policy and strategic development plan reform (focus on implementation)	NCDD	A67	0	1
68	Mainstreaming climate change into Education Strategic Plan 2019-2023 Strategic Plan and SDG4 Roadmap for Education 2030	MEYS	A68	0	0.08
69	Strengthen the cooperation with local and International development agencies, NGOs and relevant institutions for technical and financial support to implement the adaptation planning in media sector	MoINFO	A69	0	0.01
70	Development of climate change national/capital/provincial development plans including an M&E system with specific indicators	MoP	A70	0	0.5
71	Development of a climate change public investment program for the national/capital/provincial levels	MoP	A71	0	0.3
72	Building adaptive and resilient capacity for MRD officers at national and sub-national level for mainstreaming climate change into rural development planning processes and technical design.	MRD	A72	0	1
73	Build adaptive capacity on climate change for village leaders (Village Development Committees, VDCs)	MRD	A73	0.01	1
74	Strengthen resilience and adaptation capacity to climate change in the most vulnerable provinces/districts/communes (produce vulnerability index maps at the commune level, integrate climate change into investment and development plans, demonstrate the identified actions at pilot sites)	NCSD	A74	0.03	1
75	Update and implement the Cambodia Climate Change Strategic Plan (CCCSP) for 2024-2033	NCSD	A75	0	0.5
76	Integrate climate change measures into national policies, strategies and sectoral strategies and plans	NCSD	A76	4.17	0.5
77	Enhance institutional capacity on climate change (mitigation, adaptation, policy, strategies, planning, and finance) through awareness raising, training, and advocacy	NCSD	A77	19.98	0.2
78	Provide capacity building and supports for Climate Change Innovation at the provincial along Tonle Sap River	MoT	A78	0	Variable cost
79	Raising public awareness on climate change innovation at all levels	MoT	A79	0	NA
80	Practicing smart agriculture in tourism sector	MoT	A80	0	NA
81	Establish an automated nationwide hydromet monitoring network and data transmission program, including collection of climate and hydrological data	MoWRAM	A81	0	4.79

82	Establish a centralized and standardized approach to climateresilient water management	MoWRAM	A82	5.37	4.96
83	Establish a national climate and food warning system, including a service center and flood emergency response plans	MoWRAM	A83	1.04	0.88
84	Integrated groundwater management in Cambodia	NCDD	A84	0	1
85	Establish nationally standardized bestpractice systems for irrigation	MoWRAM	A85	0	0.24989
86	Resilient and adaptive rural water supply and sanitation construction	MRD	A86	0.11	35
	Subtotal Adaptation Action			257.5	208.4 + Other programmes' conditional cost =about over USD 0.2 Billion
	Total			276.7	426.9 + Other programmes' conditional cost = about USD 0.78 billion

Source: MEF, CDC and Expert team calculation.

References

NCDDS (2019) Action Plan on Policy on Promotion of Gender Equality For Sub-national Democratic Development

MoSVY's monthly public report on the social protection in Cambodia

CDRI (2021), State of Gender Equality and Climate Change in Cambodia

EmPower, UN environment programme, Nexus for Development (2019) Scoping Studies on Women's Entrepreneurship and Livelihood Generation through Renewable Energy in Cambodia

EmPower, UN environment programme, Nexus for Development (2020) Pre-feasibility Studies of Empower's possible interventions in Cambodia

Nexus for Development (May 24, 2021), News, Insights: Could Cambodian Financial Institutions be the next impact investing catalysts? We believe So. https://nexusfordevelopment.org/blog/cambodian-financial-institutions-the-next-impact-investing-catalysts/

CDRI, MRD, UNDP (2019) Impact of Climate Change Programs in Cambodia: Vulnerability, Poverty, and Gender

Climate Law & Policy (2018) Environmental and Social Management Framework, Cambodia National REDD+ Strategy

UNDP, CFADE (2015) A methodological Guidebook on Climate Public Expenditure and Institutional Review (CPEIR). https://www.asia-pacific.undp.org/content/rbap/en/home/library/democratic_governance/cpeir-methodological-guidebook.html

UNDP, CFADE (2015) Draft Paper: Climate Change Tagging. The Case Studies of Bangladesh, Indonesia, Nepal and the Philippines.

RGC (2013) Cambodia Climate Change Strategic Plan 2014-2023. National Climate Change Committee, Cambodia

RGC (2014) National Strategic Development Plan (2014-2018). Cambodia

ADB (2016) ADB and Climate Investment Funds, Country Fact Sheets (Second Edition)

ANNEXES

Annex 1: Scope of the study and data sources

a. Scope of this study

This study updates the information provided in the last published CPER in the following way:

- Includes public expenditure **for fiscal year 2021**;
- Analyses the public expenditure data for the 14 ministries and agencies with an approved Climate Change Action Plan, and for the Ministry of Posts and Telecommunications[9] (MPTC);

b. Data sources

This CPER report follows the methodology used in the previous CPER, first identifying expenditures which deliver some degree of climate change benefits, and then weighing these expenditures based on the share of their benefits that contribute to the climate change response. Tools used for this report follow the "Methodological Guidebook: Climate Public Expenditure and Institutional Review (CPEIR)" produced by the UNDP regional programme on the Governance of Climate Finance. The sources of the data are from the followings:

- **Recurrent Spending of central government**: Since the 2019 CPER report, CPER has started to use the actual recurrent expenditure from FMIS, which allows to assess the CPER from the year 2018. the recurrent spending data was provided by the FMIS Secretariat of MEF. Data obtained for programme budget ministries was broken down to group of activities which are detailed enough to conduct the climate change tagging and assessment. Detailed data on the functional classification of the programme budget ministries' expenditures is **available for 14 CCAP ministries.**
- **Domestic financed Investment**: The sources Domestic financed investment remains actual figures, but since the 2019 report uses figures from the FMIS. In this regard, more data are be able to obtained and comprehensive, especially the counterpart funding.
- **MEF and CDC loan and grant**: **External finance** (CDC and MEF loan and grant): data on development partner disbursements was provided by the CDC/CRDB (ODA database) the General Department of International Cooperation and Debt Management. CDC/CRDB data includes all development partners' loans and grants with data templates designed by CDC/CRDB. MEF data includes actual disbursements from development partners' loans and grants under MEF management. When data on loan and grant projects came from two sources (CDC/CRDB and MEF), data from MEF is used;

[9] MLMUPC, MoT and MoInfo were added to the CCFF exercise, and MIME was split in two: MIH and MME. MPTC was included although its CCAP is pending approval.

- In the case of loan and grant programmes involving several implementing ministries/agencies, disaggregated information on the share of disbursements channeled to each implementing agency is not always available. In these cases, estimated percentages have been applied for each implementing agency based on the project/program document and past experience. It is assumed that the percentage share is constant for each year over the multi-year life of the project/program.
- Continued analysis on estimated climate change current expenditure of **Sub-National Administration expenditure** from the aggregate level of the actual spending data during the period 2018-2021; and
- Gender qualitative analysis based on CDC/CRDB database;

Analysis of the ODA database relied on the climate change sector and thematic markers (with some limitations as donor tagging of these markers is improving but not yet systematic), and on additional information available in the database on project objectives and outputs.

The CPER assignment was coordinated by the General Department of International Cooperation and Debt Management of the MEF, with support from the FMIS, the General Department of Budget of the MEF to provide and process data as well as provide inputs for the report. The Information Management Department of CDC/CRDB provided the loan and grant data of the ODA database. MEF technical officials have processed the loan and grant data, including tagging for climate change relevance and allocation of disbursements to relevant ministries and agencies.

Annex 2: Unweighted Climate Change expenditure by ministries and agencies (in billions of KHR)

Donor and national UNWEIGHTED	2017	2018	2019	2020	2021
MLUPC	143	65	70	78	101
MoT	88	9	14	19	84
MIH	459	354	488	441	996
MoInfo	0	0	0	0	0
MPTC	99	47	45	50	68
MAFF	633	418	429	527	459
MME	926	816	537	1,022	374
MoWRAM	995	1,045	1,225	1,239	1,464
MPWT	2,248	2,754	3,478	4,076	4,692
MRD	713	843	1,161	946	1,003
MoH	1,407	2,072	2,374	1,864	6,021
MoEYS	1	5	28	19	145
MWA	47	14	11	9	42
NCDM	1	15	17	4	27
MoE	92	102	145	128	192
SNA	279	607	708	677	123
NGO	132	163	156	157	192
Total CC, CCFF ministries	8,264	9,329	10,889	11,257	15,983
Others	877	795	920	2,476	3,295
Total CC, all ministries	9,141	10,124	11,808	13,733	19,278
in millions of USD	2285	2531	2952	3433	4820

Source: MEF, CDC and team expert calculation.

Annex 3: Largest Items of Climate Change Expenditure (in Billions of KHR)

No.	Donor	Official Title	CC Sector	CC%	Adatp. (a) / Mitig. (m)	2021 (weighted)
1	Japan	National Road No.5 Improvement Project (Thlea Ma'am - Battambang and SriSophorn - Poipet Section) (I)	roc	15%	a	36.5
2	Japan	National Road No.5 Improvement Project (Prek Kdam - Thlea Ma'am Section) (II)	roc	15%	a	28.8
3	ADB	(51159-002) LN 3877-CAM(COL): Irrigated Agriculture Improvement Project	IRR	25%	a	26.7
4	Republic of Korea	Irrigation Development and Flood Mitigation Project in Banteay Meanchey	drm	50%	a	20.8
5	IFAD	Accelerating Inclusive Markets for Smallholders Project (AIMS)	lvtc	100%	a	19.5
6	World Bank	Cambodia South East Asia Disaster Risk Management - IDA Credit No. 60140	drm	50%	a	18.9
7	Japan	West Tonle Sap Irrigation and Drainage Rehabillitation and Improvement Project(II)	wcc	50%	a	18.8
8	Australia	Cambodia Agricultural Value Chain Program Phase 2 (CAVAC II)	lvt	50%	a	16.1
9	EU/EC	CAPFISH-Capture: budget support component	lvt	50%	a	15.2
10	Japan	The Project for Flood Protection and Drainage Improvement in the Phnom Penh Capital City (Phase IV)	drm	50%	a	14.4
11	China	The Project on the construction of Express Way (Phnom Penh-Sihanouk)	roc	15%	a	13.3
12	USA	USAID Greening Prey Lang	fmc	100%	m	12.8
13	Japan	The Project for Urgent Replacement of Bridges in Flood-Prone Areas	roc	15%	a	10.8
14	Republic of Korea	Upgrading Of National Road No.48 Project	roc	15%	a	10.7
15	Republic of Korea	Building the Pan-Asia Partnership for Geospatial Air Pollution information (2020-2023/$4,000,000) (Multi-countries project)	drr	100%	a	10.4
16	Japan	Southwest Phnom Penh Irrigation and Drainage Rehabilitation and Improvement Project	irr	25%	a	10.2
17	USA	Feed the Future Cambodia Harvest II USAID Cambodia Bilateral program	lvt	50%	a	9.7
18	ADB	(44321-013) GR 0349-CAM: Climate-Resilient Rice Commercialization Sector Development Program (GAFSP)	lvtc	100%	a	8.6
19	World Bank	Livelihood Enhancement & Association Of the Poor (LEAP) Project (IDA Credit No. 59600)	lvt	50%	a	7.3
20	EU/EC	CAPFISH-Capture: FAO Complementary Support	lvt	50%	a	5.8
21	ADB	(44328-013) LN 3289-CAM: Uplands Irrigation and Water Resources Management Sector Project	wcc	50%	a	5.7
22	Republic of Korea	National Road No.2 and National Road No.22 Improvement Project	roc	15%	a	5.6
23	Japan	National Road No.5 Improvement Project (Battambang - Sri Sophorn Section)	roc	15%	a	4.9
24	USA	Commercialization of Aquaculture for Sustainable Trade (CAST) - USDA Vietnam Program	lvt	50%	a	4.8
25	Germany	Lower Mekong Basin Wetland Management and Conservation Project (Regional) (FC)	lvt	50%	a	4.8
26	UNIDO	Low carbon development for productivity and climate change mitigation through the Transfer of Environmentally Sound Technology (TEST) methodology	pcc	100%	m	4.5
27	ADB	(40190-013) LN 8262-CAM: GMS Flood and Drought Risk Management and Mitigation Project	drr	100%	a	4.3
28	EU/EC	CAPFISH-Capture: UNIDO complementary support	lvt	50%	a	4.2
29	Germany	Strengthening the resilience of poor population groups under climate change in selected ASEAN countries, under special consideration of COVID-19 effects	pcc	100%	a	3.7

No.	Donor	Official Title	CC Sector	CC%	Adatp. (a) / Mitig. (m)	2021 (weighted)
30	Japan	Siem Reap Water Supply Expansion Project	wqg	5%	a	3.6
31	France	AFD- Water resources management and Agroecological Transition for Cambodia (WAT4CAM) Program Phase 1 (Grant)	wcc	50%	a	3.6
32	EU/EC	Water Resources Management & Agro-ecological Transition for Cambodia - WAT4CAM	wcc	50%	a	3.4
33	EU/EC	Our Tonle Sap	bc	50%	m	3.1
34	World Bank	Road Asset Management Project II Additional Financing	roc	15%	a	3.0
35	WFP	Activity 3 - Provide technical support and backstopping to national stakeholders engaged in shock preparedness and response mechanisms and risk informed coordination	drr	100%	a	3.0
36	Australia	3i - Investing In Infrastructure	roc	15%	a	2.9
37	ADB	(40253-023) GR 0426-CAM: GMS Biodiversity Conservation Corridor Project (Additional Financing) (STCF)	bc	50%	m	2.7
38	Republic of Korea	Project for Supporting the Agricultural Center in Kratie, Cambodia	lvt	50%	a	2.5
39	Germany	Improvement of livelihoods and food security of former landless households in Kampong Chhnang, Kampong Speu, Kampong Thom and Kratie (TC)	lvt	50%	a	2.5
40	USA	Green Invest Asia program (USAID RDMA award)	pcc	100%	a	2.5
41	Japan	The Project for Sewerage System Development in Phnom Penh	wqg	5%	a	2.4
42	USA	Emergency Flood Relief - USAID Cambodia Mission Program	drr	100%	a	2.4
43	Switzerland	Partnership for Forestry and Fishery Community in Cambodia Phase 3 - PaFF 3	fmc	100%	m	2.2
44	Japan	The project for National and Sub-national capacity development of Sustainable Natural Resource Managament	lvt	50%	a	2.1
45	Australia	COVID-19 Vaccine Access and Delivery Support for Cambodia (Regional)	hg	2%	a	2.1
46	Global Fund	Rapidly march towards elimination of new HIV infections and ending AIDS as a public health threat by 2025, Increase Access to and Improve Quality of TB Diagnosis and Treatment at OD and Community levels, with linkages to TB-HV in Cambodia.	hg	2%	a	2.0
47	Republic of Korea	Installation of the Automatic Weather System(AWS) in Cambodia	drm	50%	a	1.9
48	Japan	The Project for the Expansion of Water Supply System in Takhmau	wqg	5%	a	1.9
49	USA	Cambodian Malaria Elimination Project (CMEP) USAID Cambodia bilateral program	hcc	10%	a	1.7
50	UNDP	Developing a Comprehensive Framework for Practical Implementation of the Nagoya Protocol (ABS)	pcc	100%	a	1.7

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