



## FAO/GEF PROJECT DOCUMENT



<b>Project Title: Strengthening capacity in the agricultural and land use sectors for enhanced transparency in implementation and monitoring of Cambodia's Nationally Determined Contribution (NDC)</b>	
FAO Project symbol:	GCP/CMB/041/CBT
GEF Project ID:	9837
-Recipient Country(ies):	Cambodia
Executing partners:	Ministry of Environment; Ministry of Agriculture, Forestry and Fisheries; National Council for Sustainable Development
Expected EOD (Starting Date):	September 2018
Expected NTE (End Date):	August 2021
Contribution to FAO's Strategic Framework: (Indicate as appropriate)	<ul style="list-style-type: none"> <li>Strategic Objective 2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner.</li> </ul> <p>Outcome 204: Stakeholders make evidence-based decisions in the planning and management of the agricultural sectors and natural resources to support the transition to sustainable agricultural sector production systems through monitoring, statistics, assessment and analysis.</p> <ul style="list-style-type: none"> <li>Regional initiatives: Regional Rice Initiative, Climate Change, One Health, Blue Growth</li> </ul>
Contribution to GEF TF Focal Area Strategic Objectives and Programs:	<ul style="list-style-type: none"> <li>OI3: MRV systems for emissions reductions in place and reporting verified data;</li> <li>OI7: Number of countries meeting convention reporting requirements and including mitigation contributions</li> </ul>
Environmental and Social Risk Classification	Low risk
Gender Marker	G0 <input type="checkbox"/> G1 <input type="checkbox"/> G2a <input type="checkbox"/> G2b <input type="checkbox"/>
Financing Plan: GEF/LDCF/SCCF allocation: Co-financing:	<p>GEF Trust Fund financing: US\$863,242</p> <p>US\$ 59,800 (MoE) (in-kind)</p> <p>US\$ 78,600 (MAFF) (in-kind)</p> <p>US\$ 125,000 (ICAT) (cash)</p> <p>US\$ 1,867,931 (FAO) (cash)</p>
Sub-total co-financing	US\$ 2,131,331
<b>Total budget:</b>	<b>US\$ 2,994,573</b>

## Executive Summary

The Paris Agreement aims to strengthen the global response to the threat of climate change by limiting a global temperature rise this century to a maximum of two degrees Celsius above pre-industrial levels and to pursue efforts further to limit the temperature increase to 1.5 degrees Celsius. It also seeks to strengthen the ability of countries to respond and adapt to climate change.

It is critical for countries to establish robust MRV systems to track the implementation of their NDCs transparently and, more broadly, to assess the impact of climate change actions and policies. To this end, Article 13 of the Paris Agreement provides for the establishment of “an enhanced transparency framework [ETF] for action and support, with built-in flexibility which takes into account Parties’ different capacities and builds upon collective experience...”.

Cambodia’s agriculture and land-use strategies, policies, and investments are crucial for addressing the nation’s poverty, food security, and its ability to respond and adapt to climate change. Enhancing monitoring and planning systems for agriculture sector activities to adapt to climate change impacts and to address drivers of anthropogenic GHG emissions are crucial for fostering more sustainable development for Cambodia.

The need for action in the agriculture and land-use sectors to address climate change impacts and drivers is reflected in Cambodia’s first Nationally Determined Contribution (NDC), which was submitted to the UNFCCC on 6 February 2017. Cambodia’s NDC sets forth a clear framework for action to address both the impacts and drivers of climate change in the agriculture and land-use sectors and the basis for the development and strengthening of monitoring and reporting systems and processes pursuant to the requirements of the ETF.

A number of barriers are facing the effective implementation of ETF requirements in Cambodia. Addressing these barriers will enable Cambodia to produce more timely and accurate reports for UNFCCC processes and particularly the reporting requirements under the Paris Agreement ETF.

The GEF alternative scenario is to develop and implement a capacity building program that will draw upon the CBIT fund to ensure that by 2020 Cambodia is preparing reports from the agriculture and land use sectors consistent with the requirements of the ETF, including more up-to-date inventories of emissions sources and sinks using advanced IPCC guidance and information necessary to track progress against priority actions identified in Cambodia’s NDC.

Project components and outcomes are as follows:

Component 1: Institutional arrangements to coordinate preparation of ETF reports for agriculture, land-use and other relevant sectors enhanced.

Outcome 1.1: Increasingly accurate and timely information and data are being collected by sub-national and national authorities responsible for the agricultural and land use sectors and are being incorporated into reporting under the ETF

Outcome 1.2: Best practices on ETF reporting processes, information gathering, system infrastructure, methodologies in the agriculture and land-use sectors disseminated to relevant priority sectors (e.g. energy, industry/trade, transportation).

Component 2: Capacity to assess and report emissions and removals from the agriculture and land-use sectors and to design and monitor related emission reduction activities

Outcome 2.1: Reporting on inventories of emissions sources and sinks and mitigation activities from agriculture and land-use sectors strengthened

Component 3: Capacity to monitor and report adaptation activities in agriculture and land-use sectors strengthened

Outcome 3.1: Monitoring and reporting of NDC priority adaptation actions in the agriculture and land-use sectors strengthened

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## LIST OF ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
AFOLU	Agriculture, forestry and other land-use
AGRIS	Agricultural Integrated Survey
ASPIRE	Agriculture Services Programme for Innovation, Resilience and Extension
AWP/B	Annual Work Plan and Budget
BH	Budget Holder
BUR	Biennial Update Report
CARDI	Cambodia Agricultural Research and Development Institute
CBIT	Capacity Building Initiative for Transparency
CBNRM	Community-based Natural Resource Management
CCCA	Cambodia Climate Change Alliance
CCTWG	Climate Change Technical Working Group
CSO	Civil Society Organization
CTA	Chief Technical Advisor
DCC	Ministry of Environment's Department of Climate Change
DEX	Direct Execution
ELC	Economic land concession
ETF	Enhanced Transparency Framework
EX-ACT	Ex-Ante Carbon-balance Tool
FA	MAFF's Forestry Administration
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FiA	MAFF's Fisheries Administration
FNC	First National Communication
FPMIS	Filed Programme Management Information System
GDA	MAFF's General Directorate of Agriculture
GDANCP	MoE's General Department of Administration for Nature Conservation and Protection
GDP	Gross Domestic Product
GHG	Greenhouse gas
GIS	Geographic Information System
HCVF	High Conservation-value Forests
INDC	Intended Nationally Determined Contribution
IPPU	Industrial Processes and Product Use
LoAs	Letters of Agreement
LTO	Lead Technical Officer
MAFF	Ministry of Agriculture, Forestry and Fisheries
M&E	Monitoring and evaluation
MIS	Management Information System
MoE	Ministry of Environment
MoP	Ministry of Planning
MoU	Memorandum of Understanding
MOWRAM	Ministry of Water Resources and Meteorology
MPGs	Modalities, procedures and guidelines
MRV	Measure, Report and Verify
NAPA	National Adaptation Programme of Action for Climate Change
NBSAP	National Biodiversity Strategy and Action Plan
NCSA	National Capacity Needs Self-Assessment for Global Environmental Management
NCSD	National Council for Sustainable Development
NDC	Nationally Determined Contribution
NFMP	National Forest Management Plan
NFMS	National Forest Monitoring System
NGO	Non-governmental organisation
NIS	National Institute of Statistics
NPD	National Project Director

NPM	National Project Manager
NRS	National REDD+ Strategy
NTFPs	Non-timber forest products
PIR	Project Implementation Review
PMT	Project Management Team
PPG	Project Preparation Grant
PPRs	Project Progress Reports
PRA	Participatory Rural Appraisal
PSC	Project Steering Committee
PTF	Project Task Force
PWG <sub>s</sub>	Provincial Working Groups
RUA	Royal University of Agriculture
REDD	Reduced Emissions from Deforestation and Forest Degradation
SFM	Sustainable forest management
SLM	Sustainable land management
SNC	Second National Communication
TE	Terminal Evaluation
TNC	Third National Communication
ToRs	Terms of Reference
TWG <sub>s</sub>	Technical Working Groups
TWG-CCAFF	Technical Working Group for Climate Change for Agriculture, Forestry and Fisheries
UNCCD	United Nations Convention to Combat Land Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development

## 1. PROJECT RATIONALE

### 1.1. Context analysis

#### 1.1.1. Global context

1. The Paris Agreement was adopted at the Twenty-First Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). It entered into force on 4 November 2016. The landmark agreement aims to strengthen the global response to the threat of climate change by limiting a global temperature rise this century to a maximum of two degrees Celsius above pre-industrial levels and to pursue efforts further to limit the temperature increase to 1.5 degrees Celsius. Additionally, the Paris Agreement aims to strengthen the ability of countries to respond and adapt to climate change.
2. The Agreement requires all Parties to communicate their efforts to the UNFCCC through Nationally Determined Contributions (NDCs). A country's NDC sets out its efforts to combat climate change, including both its national contribution to global mitigation efforts as well as adaptation goals and means of implementation. At the national level, NDCs will be implemented through individual policies and measures, which will undergo national and international processes of measuring, reporting and verification (MRV). Information regarding individual policies, actions and measures will be used nationally to monitor the level of achievement of the mitigation and adaptation goals stated in the NDC, thereby contributing to the reporting of progress in implementing NDCs. Each Party to the convention is required to communicate an NDC once every five years. In addition, it may at any time revise its existing NDC in order to enhance its level of ambition. In the run up to the Paris COP, 119 Intended Nationally Determined Contributions (INDCs)<sup>1</sup> were submitted, covering 147 Parties to the Convention. All Parties included information on their mitigation contributions. According to the UNFCCC INDC synthesis report, 100 included an adaptation component (United Nations, 2015).
3. It is critical for countries to establish robust MRV systems to track the implementation of their NDCs transparently and, more broadly, to assess the impact of climate change actions and policies. To this end, Article 13 of the Paris Agreement provides for the establishment of “an enhanced transparency framework for action and support, with built-in flexibility which takes into account Parties’ different capacities and builds upon collective experience...”<sup>2</sup>
4. With respect to transparency of action, the stated purpose of this Enhanced Transparency Framework (ETF) is...

...to provide a clear understanding of climate change action in the light of the objectives of the Convention as set out in Article 2, including clarity and tracking of progress towards achieving Parties individual nationally determined contributions under Article 4, and Parties adaptation actions under Article 7, including good practices, priorities, needs and gaps, to inform the global stocktake under Article 14.<sup>3</sup>
5. Regarding transparency of support, the stated purpose of the framework is...

...to provide clarity on support provided and received by relevant individual Parties in the context of climate change actions under Articles 4, 7, 9, 10 and 11, and, to the extent possible, to provide a full overview of aggregate financial support provided, to inform the global stocktake under Article 14. (United Nations Environment Programme, 2016)<sup>4</sup>

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<sup>1</sup> According to “Understanding Paris,” the relationship between INDCs and NDCs has been described by one source as follows: “If a goal / target is submitted prior to submission of the instrument of ratification / acceptance / approval / accession, it will be termed an INDC. If such a goal/target is submitted with the instrument of ratification/ acceptance/ approval/accession, it will be termed an NDC.”

<sup>2</sup> Paris Agreement. Article 13, paragraph 1.

<sup>3</sup> Paris Agreement. Article 13, paragraph 5.

<sup>4</sup> Paris Agreement. Article 13, paragraph 6.

6. The Paris Agreement defined the following process, whereby the nature and contents of reporting to take place under the ETF, paragraph 13 of Article 13 would be further specified:

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall, at its first session, building on experience from the arrangements related to transparency under the Convention, and elaborating on the provisions in this Article, adopt common modalities, procedures and guidelines, as appropriate, for the transparency of action and support.

7. In line with the above, in November 2017 the Ad Hoc Working Group on the Paris Agreement (APA) held a series of discussions regarding “modalities, procedures and guidelines” (MPGs) of reporting under the ETF.<sup>5</sup> An informal note prepared by the co-facilitators (Co-facilitators of the Ad Hoc Working Group on the Paris Agreement, 2017) presents an overview of the discussions. In particular, the note contains what may be seen as informal outlines of the major elements of reporting that might be included under the ETF. These outlines are presented in **Figures 1-4** below, together with brief accompanying discussions. They represent the most up-to-date overview of the contents of overall reporting expected under the ETF, as follows:<sup>6</sup>
- **Figure 1** presents a tentative outline of what Paragraph 7a of Article 13 of the Paris Agreement describes as:
    - ...a national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases, prepared using good practice methodologies accepted by the Intergovernmental Panel on Climate Change and agreed upon by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.
  - **Figure 2** presents a tentative outline of a report on implementation of NDCs which, as discussed above, would contribute to the global stocktake on this crucial topic.
  - **Figure 3** presents a tentative outline of a report on climate change impacts and adaptation, as called for by Article 13, Paragraph 8 of the Paris Agreement.<sup>7</sup>
  - **Figure 4** presents a tentative outline of a report on financial, technology transfer and capacity building support needed and received by developing countries, as called for under Articles 9-11 of the Paris Agreement.<sup>8</sup>

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<sup>5</sup> The Paris Agreement notes that the MPGs “...will build upon and eventually supersede the measurement, reporting and verification system established by Decision 1/CP.16, paragraphs 40 to 47 and 60 to 64 and decision 2/CP.17, paragraphs 12 to 62 immediately following the submission of the final biennial reports and biennial update reports.” See Paris Agreement Adoption Note, para. 99.

<sup>6</sup> Tables of contents presented in Tables 1-4 are preliminary outlines drawn from the APA report, shown here for illustrative purposes and to guide the scope of the present project’s design only. Significant changes to the contents of these reports would of course be taken note of by the project as they occur and reflected in the nature of technical support to be provided.

<sup>7</sup> This paragraph reads: “Each party should also provide information related to climate change impacts and adaptation under Article 7, as appropriate.” This is different than the language used in paragraph 7 for reporting of national emissions inventories and implementation of NDCs (ref. tables 1 and 2 above), which uses the word “shall” rather than “should.”

<sup>8</sup> Article 13, paragraph 10 reads: “Developing country Parties should provide information on financial, technology transfer and capacity-building support needed and received under Articles 9, 10 and 11.” Again, this language means that reporting under this item is recommended rather than required.



**Figure 1: Possible Outline of ETF National Inventory Report on Anthropogenic Emissions by Sources and Removals**

B1.	Objectives and principles
B2.	Definitions
B3.	National circumstances and institutional arrangements (inventory planning, preparation and management)
B4.	Methods
a.	Methodologies, parameters and data
b.	Key category analysis
c.	Recalculations
d.	Uncertainty assessment
e.	Assessment of completeness
f.	Quality assurance / quality control
B5.	Metrics
B6.	Reporting guidance
a.	Information on methods
b.	Sectors and gases
c.	Time series
d.	Frequency
B7.	Constraints and capacity building needs
B8.	Improvement plans
B9.	Submission process and reporting formats and tables

Source: Based on 14 November 2017. “Draft elements for APA agenda item 5: Modalities, procedures and guidelines for the transparency framework for action and support referred to I Article 13 of the Paris Agreement. Informal note by the co-facilitators – final version.”

**Figure 2: Tentative outline of information necessary to track progress made in implementing and achieving nationally determined contribution under Article 4 of the Paris Agreement**

C1.	Objectives and principles
C2.	National circumstances and institutional arrangements
C3.	Description of a Party’s NDC under Article 4, including updates
C4.	Progress made in implementing and achieving its NDC under Article 4 to date; a) Indicators to track progress made in implementing its NDC under Article 4
C5.	Progress made in achievement of the Party’s NDC under Article 4 for the target year/period; indicators to track progress made in achieving its NDC under Article 4
C6.	Mitigation policies and measures, actions, and plans, and other actions with mitigation co-benefits resulting from adaptation actions, related to the implementation and achievement of an NDC under Article 4, including effects (historical and expected), barriers and costs
C.7.	Summary of greenhouse gas emissions and removals
C.8.	Projections of greenhouse gas emissions and removals, as applicable
C.9.	Information on Parties’ accounting under Article 4, paragraphs 13 and 14
C.10.	Information related to Article 6, as applicable
C.11.	Other information, where applicable and appropriate
C.12.	Capacity-building needs
C.13.	Improvement plan
C.14.	Reporting format

Source: 14 November 2017. “Draft elements for APA agenda item 5: Modalities, procedures and guidelines for the transparency framework for action and support referred to I Article 13 of the Paris Agreement. Informal note by the co-facilitators – final version.”

**Figure 3: Tentative outline of information related to climate change impacts and adaptation under Article 7 of the Paris Agreement, as appropriate**

- D.1. Objectives and principles
- D.2. National circumstances and institutional arrangements
- D.3. Vulnerabilities, risks and impacts, and methodologies used
- D.4. Adaptation policies, strategies, plans and actions and efforts to mainstream adaptation into national policies and strategies
- D.5. Information related to loss and damage
- D.6. Adaptation priorities, barriers, costs and needs
- D.7. Progress on implementation of adaptation
- D.8. Monitoring and evaluation of adaptation actions and processes
- D.9. Cooperation, good practices, experiences, and lessons learned
- D.10. Effectiveness and sustainability of adaptation action
- D.11. Recognition of adaptation efforts
- D.12. Reporting formats

Source: 14 November 2017. “Draft elements for APA agenda item 5: Modalities, procedures and guidelines for the transparency framework for action and support referred to I Article 13 of the Paris Agreement. Informal note by the co-facilitators – final version.”

**Figure 4: Tentative outline of information on financial, technology transfer and capacity-building support needed and received under Articles 9–11 of the Paris Agreement**

- F.1. Objectives and principles
- F.2. National circumstances, institutional arrangements and country-driven strategies
- F.3. Underlying assumptions, definitions, and methodologies:
- F.4. Information on financial support needed by developing country Parties under Article 9
- F.5. Information on financial support received by developing country Parties under Article 9
- F.6. Information on technology development and transfer support needed by developing country Parties under Article 10
- F.7. Information on technology development and transfer support received by developing Parties under Article 10
- F.8. Information on capacity-building support needed by developing country Parties under Article 11
- F.9. Information on capacity-building support received by developing country Parties under Article 11
- F.10. Information on support needed and received by developing country Parties for implementation of Article 13 and transparency related activities
- F.11. Information on support needed and received by developing country Parties for the building of transparency-related capacity
- F.12. Reporting format

Source: 14 November 2017. “Draft elements for APA agenda item 5: Modalities, procedures and guidelines for the transparency framework for action and support referred to I Article 13 of the Paris Agreement. Informal note by the co-facilitators – final version.”

8. In summary, the ETF, as further specified under the emerging MPGs, are creating important ongoing and new challenges for developing countries. Whereas the reporting described in **Figures 1 and 2** is required under the Paris Agreement, that described in **Figures 3 and 4** are not actual requirements for developing countries and will be described in the present document as recommended.
9. Finally, Article 14.1 makes provision for a periodical stock take to ‘assess the collective progress towards achieving the purpose of this Agreement’, to be held every five years in order to inform the submission of subsequent NDCs. Information prepared by countries and submitted in their NDCs will feed into this global stock take.

### 1.1.2. Country/regional context

10. Cambodia has a total land area of 181,035 km<sup>2</sup>. Its topography consists of plains in the central part of the country, surrounded by mountainous and highland regions, and a lengthy coastline in the south. Most of Cambodia falls within the Mekong River Basin with the country's hydrology dominated by the Mekong River and its major tributaries, including the Tonle Sap River. The Tonle Sap River connects the Mekong River and the Tonle Sap Lake (IFA, 2013). Cambodia has a tropical monsoon climate with a distinct rainy season, which runs from May to early October and a drier, cooler season which runs from November to March (Royal Cambodian Government, 2015). Temperatures generally average around 25 to 27 degrees Celsius throughout the year except just before the rainy season, when average temperatures can approach 30 degrees Celsius<sup>9</sup>. The country's population was 14.7 million in 2013 and is growing at an average annual rate of 1.46 percent—the latter among the highest in Southeast Asia<sup>10</sup>.
11. Agriculture and land-use activities are crucial to the livelihoods of the Cambodian people. While industrial-scale agriculture (e.g. via Economic Land Concessions (ELCs)<sup>11</sup>) is increasing in Cambodia, most farmers are still smallholder households, many of whom face constraints due to land tenure issues, inadequate access to and management of land and water resources, lack of access to improved/sustainable inputs and technology, poor farming skills and limited infrastructure (e.g. irrigation and roads). The agriculture sectors—including forestry, crop and livestock production and fisheries—employed 45.3 percent of the total labor force in 2014. Eighty-five percent of the population lives in rural areas, and over 60 percent of the population is directly and/or indirectly dependent on income generated by the agricultural sectors.
12. From 2010 to 2014, Cambodia's GDP grew at an average rate of 7 percent per year (Clear Skies-Cambodia Economic Update, 2014). The agricultural sectors are a significant source of economic activity, accounting for 28.7 percent of GDP in 2015<sup>12</sup>. Their output grew by 8.7 percent annually between 2004 and 2012. Agricultural growth over the past decade has included 'pro-poor' targeting, with the number of poor declining from seven to three million and mostly in rural areas. Key drivers of agricultural growth include large natural area and resource potentials, foreign investments, public expenditures in infrastructure, credit and activity in global and regional markets (World Bank, 2014). Recent growth has been driven by increased output of key crops, including paddy rice, maize, cassava, sugarcane and vegetables. However, recent research by the World Bank indicates that output growth in the Cambodian agricultural sectors declined markedly in 2013 and 2014. The Bank recommended that targeted public sector investments in *public good agricultural services* could help to ensure continued, needed agricultural growth (World Bank, 2015).
13. *Crops*: Crops are the major agriculture sub-sector in Cambodia and the key source of sectoral growth. The sector accounted for 14.6 percent of the GDP and 62% of total agricultural output in 2016 (Ministry of Agriculture, Forestry, and Fisheries, 2017). Cambodian agriculture has historically been anchored in fragile, subsistence rain-fed systems centered on rice production, often with inadequate access to irrigation. However, over the past decade, agricultural production has increased significantly, due to a combination of land expansion and yield increase, i.e. intensification (see **Table 1**). For example, rice cultivated area and yield have increased by 46% and 68% respectively between 2002 and 2016. Overall, cropland accounts for around 14 percent of Cambodia's total land area, or 25,000 square kilometers, with rice accounting for about 74 percent of cropped area. Wet rice cultivation is concentrated in the low-lying provinces of the southern part of the country and the Tonle Sap basin, while the higher areas in the northeast and southwest are dominated by forest, plantation and upland crops. While rice remains the most important crop for Cambodian agriculture, production of other important crops including cassava, sugarcane and maize have increased significantly (see **Table 1**). Cassava has become the second

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<sup>9</sup> IFAD, 2013, *op. cit.*

<sup>10</sup> Royal Cambodian Government, 2015, *op. cit.*

<sup>11</sup> Economic Land Concessions are long-term leases that allow concessionaires to clear land in order to develop industrial-scale agriculture. See sub-decree No.146 on Economic Land Concessions (2005).

<sup>12</sup> Royal Cambodian Government, 2015, *op. cit.*

most important crop after rice in terms of cultivated area. Planting of rubber trees has also been increasing rapidly—from just about 32,384 ha in 2002 to over 400,000 ha in 2016. Rubber output will likely grow dramatically in the near future, as these areas go into production.

**Table 1: Production, area, and yields of major crops, Cambodia, 2002-2016 (Ibid.)**

Crop	Production (t)	2002		Production (t)	2016	
		Cultivated Area (ha)	Yield (t/ha)		Cultivated Area (ha)	Yield (t/ha)
Rice (wet season)	2,915,900	1,845,135	1.706	7,636,906	2,599,586	2.959
Rice (dry season)	906,609	291,990	3.181	2,315,364	518,557	4.465
Maize	148,897	80,470	1.850	663,086	144,523	4.69
Cassava	122,014	19,563	6.237	14,820,249	684,070	21.95
Mungbean	23,925	39,802	-	64,137	50,417	1.30
Vegetables	163,175	34,433	4.739	428,847	48,748	8.80
Soybean	38,661	33,438	1.156	71,005	42,658	1.66
Sugarcane	173,105	9,581	18.068	740,870	22,237	35.08
Rubber	32,384	55,582	0.881	145,200	432,734	1.143

14. *Farm chemicals*: Use of chemical fertilizers and pesticides is growing in parallel with crop production. The World Bank has found that increased use of urea and other types of chemical fertilizers was particularly common for rice and vegetable production and expected to grow in the future while also expanding to other crops such as maize (**Table 2**). The use of chemical insecticides was also found to be growing particularly in vegetable and maize production<sup>13</sup>.

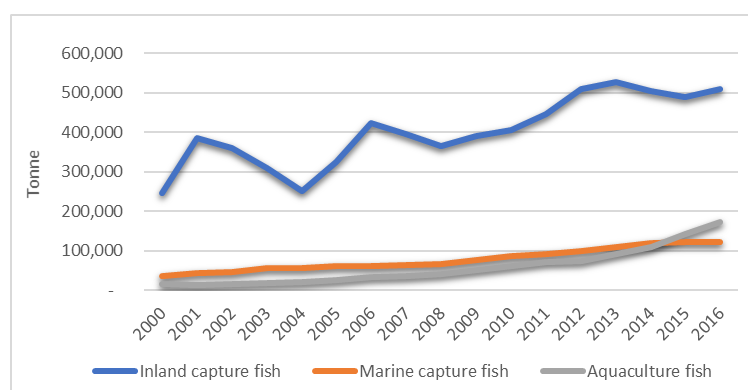
**Table 2: Illustrative use of fertilizers (kg/ha), Cambodia, 2005 and 2013 (The World Bank, 2015)**

Crop	2005			2013		
	Farm Size			Farm Size		
	Small	Medium	Large	Small	Medium	Large
Wet season rice (kg/ha)	53	94	93	72	65	63
Dry season rice (kg/ha)	133	89	40	133	127	192
Cassava (kg/ha)	-	-	-	12	-	8
Maize (kg/ha)	35	-	-	74	7	9

15. *Fisheries*: Fishing, both in freshwater bodies such as lakes, rivers and rice paddy fields and coastal water bodies, is a highly significant agriculture sector activity and an important source of food security and nutrition for Cambodian households. Capture fisheries and aquaculture are ranked 2<sup>nd</sup> in terms of their combined contribution to the total agricultural outputs, together accounting for 24 percent of the GDP in agriculture. Based on the recent agriculture census prepared by the Ministry of Agriculture, Forestry and Fisheries (MAFF) and FAO, 87.9 percent of households reported they were engaged in fishing, while 15.3 percent reported they were engaged in aquaculture activities. Most households combined fishing with crop cultivation and/or raising livestock and poultry, as well as other aquaculture activities. However, unlike with crops or livestock activities, more than 90 percent of fishing is for home consumption; thus, fishing is particularly important for household food security and nutrition in Cambodia (FAO and the Ministry of Agriculture, Forestry and Fisheries, 2013). Fish and aquatic resources provide 76

<sup>13</sup> World Bank, 2015, *op. cit.*

percent of animal protein intake, being second to rice in terms of total food intake ( Inland Fisheries Research and Development Institute, 2013). Fishing is largely conducted using netting and fish traps. Only a small proportion of households reported using boats for fishing. Cambodia’s inland fisheries catch ranks 5<sup>th</sup> in the world in terms of total catch (Navy, Sophea, & Nasielski, 2016). The inland catch ranged between 245,000 and 528,000 tonnes from 2000 to 2016. Aquaculture production has increased twelvefold from 2000 to 2016 (**Figure 5**).



**Figure 5: Total fisheries catch and aquaculture fish, 2000-2016**

16. *Livestock*: Livestock is the third largest agriculture sector activity in Cambodia and an important source of food, income and labor for rural Cambodian households<sup>14</sup>. **Table 3** shows growth in livestock production, by animal, between 1980 and 2016. In 2016, it contributed about 12 percent of the agricultural output, and 2.8 percent of national GDP<sup>15</sup>. Around 75 percent of all households in Cambodia raise livestock and/or poultry, with 86 percent of these households keeping between two and nine animals<sup>16</sup>. Larger livestock are employed in farm labor, while smaller livestock such as pigs and chickens are used for consumption and sale<sup>17</sup>. Cattle production is predominantly smallholder-based, accounting for 99% of the total cattle production. Cattle are commonly fed on native grasses and crop residues. Cattle numbers have steadily declined since 2009, largely because of increased mechanization in farming activities and transportation. Pig production is also largely dominated by small-scale producers. Commercial farms account for about 20 percent of the total herd. The demand for pork is rising rapidly. The local production can supply about 50% of the demand; the gap is filled by imports from Thailand and Vietnam. Poultry production, mainly of chicken and duck, has been increasing rapidly. Despite this growth, domestic production could not satisfy the growing urban demand for chicken meat, leading to the import of about 3.7 million live chickens and ducks in 2016. About 79 percent of the poultry production is from small-scale producers, and 21 percent are from commercial farms.

<sup>14</sup> MAFF & FAO, 2013, *op. cit.*

<sup>15</sup> MAFF’s annual report, 2017

<sup>16</sup> *Ibid.*

<sup>17</sup> IFAD, 2013, *op. cit.*

**Table 3: Livestock production between 1980 and 2016**

Animal	1980	1990	2000	2010	2016
Cattle	772,000	2,181,000	2,992,640	3,484,601	2,920,314
Buffalo	375,000	736,000	693,631	702,074	523,514
Pig	132,100	1,515,000	1,933,930	2,057,431	2,970,624
Chicken	2,442,000	8,163,000	15,249,000	20,193,000	24,430,466
Duck	1,400,000	3,300,000	5,500,000	7,000,000	11,052,372

17. *Forestry*: Cambodia's forest cover assessment in 2014 indicated that forest cover occupied about 49.48 percent of the total land area based on the national forest definition and 46.90 percent based on forest definition for Cambodia REDD+, which excludes the area under rubber plantation and perennial crops ( Forestry Administration, 2016). Forest resources remain an important source of energy for Cambodian households, with many still reliant on fuel wood for cooking. Biomass, mainly in the form of firewood or charcoal, accounts for 36% of total energy consumption. In 2015, the consumption of fuelwood and charcoal was estimated at approximately 2.65 and 0.34 million tonnes, respectively (Ministry of Mine and Energy of Cambodia, and ERIA, 2016). Non-timber forest products are also an important, alternate source of income for rural households<sup>18</sup>. Between 1994 and 1997, Cambodia established a logging concession system, granting an estimated seven million ha (close to 70% of the forest area) to 36 concessionaires. In 1997, the logging volume was estimated at well above four million m<sup>3</sup>, or between three and eight times the estimated sustainable yield (Castrén , 1999). A logging moratorium was put in place in 2002 in order to prevent further large-scale timber harvesting (Delux, 2015). In 2012, log production was recorded at about 140,900 m<sup>3</sup>, the majority (90%) of which was from land clearing activities within ELCs (Global Forestry Services, the Forestry Administration of Cambodia, and the EU FLEGT Facility, 2014). In 2012, Directive 001 on 'Measures to strengthen and enhance the effectiveness of management of economic land concessions (ELCs)' announced a moratorium on the granting of new ELCs. In 2016 sub-decree No. 69 was issued on 'the Transfer of the Protected Forest, Forest Conservation and Production Forest Areas, and Economic Land Concessions between MAFF, and MoE', as a result of which former protected forests have been converted into various categories of protected areas under the management of the MoE, while ELCs will be transferred from MOE to MAFF. In early 2016, the government imposed a ban on the exports of timber to Vietnam amid ongoing efforts to tackle deforestation.
18. *Water resources*: Cambodia has a rich endowment of renewable water resources with the majority currently being dedicated to the agricultural sectors. Although the country is considered a "water-wealthy" country, with an annual water availability of nearly 50,000 m<sup>3</sup> per person (National Council for Sustainable Development , 2016), access to water by the rural households for farming activities and household consumption remains a major problem, particularly during the dry season. Even during the wet season when water is abundant, agriculture is prone to water shortage due to high variability in rainfall and sporadic drought, poor water harvesting / storage systems and irrigation infrastructure. In addition, over-abundance of water during the wet season often causes flooding especially in the Mekong floodplain and the Tonle Sap lowlands, affecting agriculture and livelihoods.

## 1.2. Current Situation

### 1.2.1. Main environmental threats

19. While expansion of the agriculture sectors has been, and will continue to be crucial for ensuring growth, poverty reduction and development in Cambodia, recent trends associated with the expansion of agriculture output, particularly of crops, highlight a number of environmental and climate-related threats that require greater attention and scrutiny to ensure that growth is sustainable and to address the core and inherent vulnerabilities associated with agriculture

<sup>18</sup> IFAD, 2013, *op. cit.*

livelihoods. These threats, and the linked challenges of climate change mitigation and adaptation, are discussed below.

### Deforestation and Forest Degradation

20. Cambodia's forest resources are under continuous pressure from land clearing and agricultural expansion. National-level deforestation—at 1.3 percent per annum over the period 2010 to 2015<sup>19</sup>— has reduced the productive capacity of Cambodia's forest ecosystem services and agro-ecological flows, impacted water quality and affected water availability to agriculture. Forest cover declined from 57.07 percent in 2010 to 49.48 percent in 2014, representing a 7.59 percent decrease, or about 1.378 million ha). The decline was most significant for deciduous forest, with a decline in forest cover of 5.46% (equivalent to about one million ha), followed by evergreen forests, with a decline of 2.89% (equivalent to about half million ha) between 2010 and 2014. The Asia Development Bank (ADB) estimated in 2007 that as much as 55 percent of Cambodia's forests was degraded, a figure which is likely to have increased in the interim. Forest loss and degradation are found in the hilly zones, along the mountain ranges as well as in the flatlands. Forest lands bordering Lao PDR, Viet Nam and Thailand were identified as deforestation hotspots<sup>20</sup>.
21. The National REDD+ Strategy (NRS) identified several drivers of deforestation and degradation, including as direct drivers:
- Conversion of forest lands to: the agriculture and agro-industrials development e.g. ELCs, the settlements and farm lands e.g. SLCs and Government Directive 001BB, the infrastructure development e.g. road, dam constructions, the non-compliance mining exploration
  - Forest lands encroachment: land speculation / land grabbing, and
  - Forest degradation: illegal logging, unsustainable harvesting of forest products, and non-timber forest products (NTFPs).
22. Meanwhile, indirect drivers of deforestation and forest degradation include:
- Limited governance and monitoring capacities in the forest and land use sector,
  - Lack of coordination between ministries on land use planning,
  - Rural poverty due the lack of alternative livelihoods,
  - Low levels of stakeholder participation and involvement in the forest and land use sector,
  - Lack of long term finance/ human resources to support the effective implementation of forest sector plans, and
  - Insufficient data and evidence to design effective forest crime prevention measures.

### Flood and Drought

23. Cambodian agriculture is particularly susceptible to flood and drought. Rainfall in the upper catchments of the Mekong and Tonle Sap rivers results in regular seasonal flooding in and around the Tonle Sap Lake and the surrounding provinces to the south. These floods can be aggravated by heavy rainfall associated with tropical depressions and storms. The intensity and frequency of floods have increased considerably since 1999, with major floods occurring in 2000, 2001, 2009, 2011 and 2013. The major rice-growing areas of the Mekong-Tonle Sap basin, exposed to flooding every year, have in recent years witnessed extreme flooding<sup>21</sup>. The Ketsana typhoon in 2009, along with floods in 2011 and 2013, caused estimated economic losses of over one billion USD<sup>22</sup>. Deforestation can accelerate the run-off from upper catchments and create siltation and flood risk in the lower catchments. This is evidenced by flash floods caused by repeated heavy rainfall especially in the areas along the mountain ranges. For instance, Oddar Meanchey

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<sup>19</sup> FAO, Global Forest Resources Assessments 2015

<sup>20</sup> Stibig et al. 2007, Forest Cover Change in Southeast Asia

<sup>21</sup> MAFF, 2016. Climate Change Priority Action Plan for Agriculture, Forestry and Fisheries 2016-2020

<sup>22</sup> NCDM, 2014. Post-Flood Early Recovery and Need Assessment Report



province, which had not experienced any floods for decades, has often been affected by flash floods over the last decade (PDAFF Oddar Meanchey, 2015).

24. Drought is also a major concern, with significant events in 1997-1998, 2001, 2002, 2004, 2005, 2015 and 2016 causing important losses in numerous provinces (MoWRAM and ADB, 2016; WFP, FAO, UNICEF, 2016). The weather abnormalities caused by 2015/ 2016 global El Niño event—characterized as “the worst drought in 50 years” for Southeast Asia—severely affected 2.5 million Cambodian people across 18 provinces.

#### Land and Soil Degradation

25. Soil erosion and low soil fertility are evident where degradation has impacted as much as 43 percent of land area, or 7.7 million hectares.<sup>23</sup> The natural land degradation is the result of floods, drought, soil moisture and nutrient depletion. The causes of human-induced land degradation include mono-cropping practices, unsustainable farming practices such as extensive tillage, sole reliance on chemical fertilizer and abandoned returning of organic residues into soil, the drastic depletion of forest cover and mining.
26. While increased application of chemical inputs has been linked to flow-on issues including soil acidification, low soil fertility, and increased GHG emissions, the current capacity of government to monitor the purchase and use of farm chemicals remains limited. Use of chemical inputs is largely unregulated<sup>24</sup>. Mono-cropping as practiced on large part of rice fields can lead to the decrease in soil fertility and productivity. The significant surge in cassava production during the last decade (from just about 30,000 ha in 2005 to 684,070 ha in 2016) has significantly increased the risk of land degradation due to practices such as growing cassava as a mono-crop and without rotation and lack of appropriate soil fertility management and soil erosion control in cassava cultivation. The loss of forest cover gives rise to the flash floods when there is heavy rainfall, and also causes serious soil erosion particularly in the slope land. Productivity, security, and sustainability on large areas of agricultural land in Cambodia are further influenced by inherent poor soil. South-west areas are generally classified as moderately to highly vulnerable to erosion, and north-east areas are mostly classified as moderately vulnerable to erosion.

#### Water Resource Degradation and Depletion

27. Water resources in Cambodia are increasingly at risk from discharges of agriculture and industrial waste into water bodies and general deterioration of watersheds associated with unsustainable management<sup>25</sup>. A recent agriculture sector assessment by ADB indicates that fisheries resources are increasingly under threat from water pollution and hydro power development along key river systems<sup>26</sup>. Groundwater has been used for agricultural irrigation at an increasing pace. A recent study conducted by Stanford University’s Department of Earth System Science estimated that the expansion rates of groundwater-irrigated land were higher than 10 percent per year in the Cambodian Delta using LANDSAT satellite data and warned that if groundwater irrigation continues to expand at current rates, the water table will drop below the lift limit of suction pump wells, used for domestic supply by >1.5 million people, throughout much of the area within 15 years (Erban & Gorelick, 2016).

#### Climate Trends, Projections and Risks to Agriculture

28. A synthesis assessment produced by IFAD<sup>27</sup> in 2013 found that Cambodia’s climate has been undergoing a range of changes and that these will continue over the coming century. Average annual temperatures have been increasing over the past five decades and there has been an increase in the number of hot days and nights accompanied by declines in the number of cold days and nights. Recent projections indicate that, depending on the models and scenarios used, average temperatures will increase by 0.7-2.7 degrees Celsius by the 2060s and between 1.4-4.3

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<sup>23</sup> As referenced in Pheav. Sovuthy. See <http://cdn.asocon.org/LADA/Documents/Cambodia%20-%20presentation.pdf>

<sup>24</sup> ADB. Cambodia: Sector Assessment Summary – Agriculture, natural resources and rural development, 2014

<sup>25</sup> ADB, 2014, *op. cit.*

<sup>26</sup> ADB, 2014, *op. cit.*

<sup>27</sup> IFAD, 2013, *op. cit.*



degrees Celsius by the end of the century. Temperature increases are expected to be greater in the lower altitude areas of the country, which is where the bulk of Cambodia's agricultural activity is located.

29. While no significant change in precipitation patterns has so far been observed, climate projections indicate risks of greater seasonal variability in the future. In general, average rainfall is expected to increase during the rainy season and decline further during the dry season, while Cambodia's overall seasonal variability in rainfall is expected to become more pronounced. The incidence of heavy rainfall events is projected to increase. The overall anticipated impact is that uncertainty regarding the availability of water resources is expected to increase over the coming decades<sup>28</sup>.
30. The trends in agricultural production and management of natural resources, combined with anticipated climate change and persistent capacity constraints, mean that Cambodia's agriculture sectors are at high risk from adverse climate variability and climate change. Farmers relying on rain-fed production systems will face the most significant challenges. Projected increases in the seasonal variability of precipitation will combine with increased temperature and evapo-transpiration to further put additional pressure on available water resources. The incidence of heavy rainfall events, flood and drought are also projected to increase. The findings of a climate change vulnerability assessment prepared for Cambodia's Second National Communication (SNC) indicates that most of Cambodia's agriculture areas will be exposed to higher drought risks<sup>29</sup>. Meanwhile, seasonal and flash floods, particularly in the Tonle Sap River Basin will continue to present risks to key agricultural areas.
31. Rising temperatures will also affect the growth cycles of crops, leading to possible reductions in crop yields. Studies have indicated that rice yields may decline by up to 10 percent for every 1°C increase in minimum temperature during the growing season<sup>30</sup>. Changes in climate can also increase the incidence of pests and diseases, leading to flow-on implications for production yields, use of chemical inputs such as pesticides and overall human health.
32. Cambodian agriculture's largely rain-fed systems are particularly susceptible to climate variability and extreme climate events. The variable nature of water availability for agricultural production poses increased risks for farmer livelihoods and the rural economy. Unsurprisingly, given that most of Cambodia's agricultural output is still rain-fed, the incidence of rainfall, flood and drought have been highlighted by Cambodian farmers as their key concerns in agricultural production—above such issues as input prices and access to credit (Asian Development Bank, 2014).
33. Fisheries production is closely related to natural hydrological patterns and the integrity of fish habitats. The onset of the flood season acts as a trigger for migration, with fish moving along the main streams of the rivers or between the rivers and floodplains, where they migrate to breed, spawn and feed and then retreat as waters recede. The delayed onset of flood season would have unknown impacts on fish migration. The longer and drier dry season have the negative effects on brood stock fish habitat e.g. flooded forests. The shorter and wetter season will on the hand reduce season for breeding and spawning, as well as feeding – reduced opportunity for juveniles to reach suitable size and maturity to continue migration and life cycle. The increase in temperature and changes in rainfall patterns are likely to affect aquaculture. Longer dry seasons may affect freshwater availability, especially if there is increased competition from other users, thereby constraining fish production (Ministry of Agriculture, Forestry and Fisheries, 2016).
34. The high temperature increases animal dehydration stress, making them vulnerable to diseases. Animal disease outbreaks are generally widespread during the hottest months between March and April. A joint assessment conducted by WFP, FAO and UNICEF on the impact of El Niño 2015/2016 indicated that nationally, 15 percent of households reported severe water shortages for livestock. Concerns were most pronounced in the Coastal region, with 32 percent designating the situation as severe. Severe water shortages appeared to have consequences in terms of livestock

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<sup>28</sup> *Ibid.*

<sup>29</sup> Royal Cambodian Government, 2015, *op. cit.*

<sup>30</sup> IFAD, 2013, *op. cit.*

health. Overall, 5, 23 and 57 percent of households reporting severe shortages indicated that cattle, pig and chicken mortality rates were higher in that year than normal (WFP, FAO, UNICEF, 2016).

### 1.2.2. Cambodia's GHG emissions from agriculture, forests and other land uses (AFOLU)

35. The agriculture and land-use sectors are major sources of GHG emissions in Cambodia. As shown in **Table 4** Table 1, according to Cambodia's Second National Communication (SNC), which was submitted to the UNFCCC in 2015, the agriculture sector was responsible for 21.1 MtCO<sub>2</sub>eq of emissions in 2000. This figure represented about 44 percent of total emissions at the national level.
36. Forest and grassland conversion were the largest source of GHG emissions in 2000, responsible for 22.8 MtCO<sub>2</sub> of emissions and accounting for 48 percent of total national emissions. However, changes in biomass stocks and the abandonment of managed lands were reported as significant carbon sinks of -48.2 MtCO<sub>2</sub> in total. As a result, on aggregate, the land use change and forestry sectors were reported as a sink of -24.6 Mt CO<sub>2</sub>.
37. An increasing role of the agriculture and land-use sector is also visible in the trend of emissions and removals. Comparing Cambodia's SNC to its First National Communication (FNC) to the UNFCCC submitted in 2002, a 100 percent increase of emissions is noted for agriculture—from 10.6 Mt CO<sub>2</sub>eq in 1994 to 21.1 MtCO<sub>2</sub>eq in 2000 (see **Table 4**).

**Table 4: Total national GHG emissions from all sectors: 1994 (FNC) and 2000 (SNC)**

GHG by source and sink	Total net CO <sub>2</sub> eq (Mt)		Sectoral Share (%)
	GHG Inventory 1994*	GHG Inventory 2000**	GHG Inventory 2000**
Energy	1.9	3.4	7
Agriculture	10.6	21.1	44
Land Use Change & Forestry	-17.9	-24.6	
<i>emissions</i>	55.2	22.8	48
<i>removals</i>	-73.1	-48.2	
Waste	0.3	0.2	
Industry (Cement)	0.05	-	
TOTAL (excl. removals)	67.9	47.6	

\* Used 1996 IPCC Guidelines, UNFCCC Software

\*\* Used Revised 1996 IPCC Guidelines and UNFCCC Software Version 1.3.2 (2007)

38. Emissions of CH<sub>4</sub> and N<sub>2</sub>O from the agricultural sector, the second largest emitting sector, have been estimated for the following specific sources:
  - Rice cultivation
  - Domestic livestock
  - Prescribed burning of savannahs
  - Field burning of agricultural residues
  - Agricultural soils
39. The main emitting source in year 2000 was rice cultivation: in that year, rice paddy covered over 80 percent of the total cultivated land, and accounted for approximately 68 percent of total reported GHG agriculture emissions. Enteric fermentation followed as the second largest emitter, accounting for 16 percent of total emissions. More detailed information by gas emitted, share of categories and total emissions are available in Annex 13.

40. The SNC associated a medium level of uncertainty to the activity data for the agriculture sector. For most of the above agricultural activities, data are collected annually, including crops and livestock production; however, the use of synthetic fertilizers is not systematically recorded.
41. Emissions of CO<sub>2</sub><sup>31</sup> emissions by the land use and land-use change sector—the largest emitting sector—have been estimated for the following sources:
  - Changes in forest and other woody biomass stocks
  - Forest land grassland conversion
  - Abandonment of managed lands
42. Most emissions originate from forest and land conversion, with a total of 23.5 MtCO<sub>2</sub>eq. Only an insignificant amount of those emissions (1 percent of the total in this category) are CH<sub>4</sub> emissions. The rest of emissions are composed of CO<sub>2</sub>. Most removals are from changes in forest and other woody biomass stocks, other 44 percent are removals from abandonment of managed lands. N<sub>2</sub>O emissions are from changes in forest and other woody biomass stocks from burning (0.07 MtCO<sub>2</sub>eq). Cambodia did not estimate emissions and removals from soils. More detailed information on gas emitted and total emissions is available in Annex 13.
43. The SNC expressed high levels of uncertainty regarding the above estimates, since there is no regular data collection happening and the biomass estimates are based on an extrapolation of the 1992/93 and 1996/97 forest assessment. In addition, there are concerns about the reliability of harvesting and logging statistics due to illegal logging activities. Finally, soil emission estimates are lacking since there is no soil classification and no field sample database available.
44. According to the initial Cambodian national forest reference level (FRL) submitted to the UNFCCC in 2016<sup>32</sup>, net emissions are estimated at 27.5 MtCO<sub>2</sub> annually over the period 2006–2010, and 131 MtCO<sub>2</sub> annually over the period 2010–2014. Cambodia's FRL estimates an average of 79.2 MtCO<sub>2</sub>eq over the entire reference period (2006–2014). This figure is considerably higher than estimates of the FNC, SNC and the FAOSTAT. Reasons for this difference are the fact that a different scope, i.e. selection of activities/categories and gases, is used to develop the FRL, which results in a conservative estimation of removals, and that more recent data and updated methodologies have been used to develop the FRL. Cambodia's FRL has gone through technical assessment, and the UNFCCC Technical Assessment report has been published in 2018. Other sources also confirm a steep increase in annual areas with tree cover loss in Cambodia, from 28,490 ha in 2000 to 182,462 ha in 2016.<sup>33</sup> Further details on the data used in the FREL and by the Global Forest Watch are provided in Annex 13.
45. FAO has developed a global inventory on greenhouse gas emissions from the AFOLU sector under the FAOSTAT database. The default Tier 1 methodology of the 2006 IPCC Guidelines is applied to derive estimates of GHG emissions associated with each activity. The dataset is based on input data from FAOSTAT and the Global Forest Resource Assessment (FRA), which contain data on agriculture and land-use change activities officially reported by countries. Statistics compiled by FAO on GHG emissions from the agriculture sector in Cambodia indicate that, in keeping with the rapid pace of expansion of Cambodian agriculture over the past decade, total emissions from the agriculture sectors have grown by as much as 34.9 percent between 2000 and 2014<sup>34</sup>. Emissions from the agriculture sector in FAOSTAT have increased from 12.8 MtCO<sub>2</sub>eq in 1994 and 14.3 MtCO<sub>2</sub>eq in 2000 to 19.3 MtCO<sub>2</sub>eq in 2014. Emissions from the land-use change and forestry sectors reported by FAOSTAT do not have a clear trend, with an estimate of 26.4

<sup>31</sup> Including a minimal contribution of CH<sub>4</sub> and N<sub>2</sub>O from biomass burning.

<sup>32</sup> Initial Forest Reference Level for Cambodia under the UNFCCC Framework, July 2016 [online]

<sup>33</sup> Global Forest Watch, Hansen Data 2013 (Hansen, M. C., P. V. Potapov, R. Moore, M. Hancher, S. A. Turubanova, A. Tyukavina, D. Thau, S. V. Stehman, S. J. Goetz, T. R. Loveland, A. Kommareddy, A. Egorov, L. Chini, C. O. Justice, and J. R. G. Townshend. 2013. "High-Resolution Global Maps of 21st-Century Forest Cover Change." *Science* 342 (15 November): 850–53. Data available online from: <http://earthenginepartners.appspot.com/science-2013-global-forest>.)

<sup>34</sup> FAO, FAO Statistics Database, Cambodia, 2017 19.3–14.3=

MtCO<sub>2</sub>eq in 1994 and 2000. The FAOSTAT estimates are net sources of emissions, meanwhile the FCN and SCN both report a net sink<sup>35</sup>.

46. Data reported by the country and by FAO on emissions and removals indicate that emissions from the agriculture and land-use and forestry sectors in Cambodia are changing and generally increasing. The different methodologies used by FAO and the Cambodia NCs might generate some difficulties when comparing and verifying. Further detailed of time series estimated by FAOSTAT and SNC are provided in Annex 13.

### 1.2.3. Baseline initiatives and policy framework

47. Cambodia's agriculture and land-use strategies, policies, and investments are crucial for addressing the nation's poverty, food security, and its ability to respond and adapt to climate change. Enhancing monitoring and planning systems for agriculture sector activities to adapt to climate change impacts and to address drivers of anthropogenic GHG emissions are crucial for fostering more sustainable development for Cambodia. Baseline initiatives in these areas are described below.

#### Cambodia's Nationally Determined Contribution (NDC)

48. The need for action in the agriculture and land-use sectors to address climate change impacts and drivers is reflected in Cambodia's first Nationally Determined Contribution (NDC), which was submitted to the UNFCCC on 6 February 2017. Preparation of the NDC was managed by the National Council for Sustainable Development (NCSDD), which is responsible for coordination of climate change activities in Cambodia and for promoting a strong, comprehensive and effective national response to climate change<sup>36</sup>. Cambodia's NDC sets forth a clear framework for action to address both the impacts and drivers of climate change in the agriculture and land-use sectors and the basis for the development and strengthening of monitoring and reporting systems and processes pursuant to the requirements of the ETF.
49. To address the drivers and impacts of climate change in the agriculture and land-use sectors, the Government of Cambodia has highlighted a number of specific actions (covering both adaptation and mitigation) based upon an assessment of key climate vulnerabilities and opportunities for emissions reduction (Royal Cambodian Government, 2017). Fourteen (14) specific actions are highlighted in the NDC and are summarized in **Table 5** below, along with an assessment of how improved capacity for monitoring and reporting—the focus of the present project—could inform and enhance achievement of these actions. Section 1.3 below will describe which of these identified opportunities the GEF funds will be targeting and how.

**Table 5: Agriculture and land-use in Cambodia's NDC**

Category	Short description of priority adapted from Cambodia's (I)NDC
<b>Mitigation</b>	<p><i>Rural energy:</i></p> <ul style="list-style-type: none"> <li>Promoting use of renewable energy and adopting energy efficiency for garment factory, rice mills, and brick kilns</li> <li>Promoting more efficient cook stoves</li> </ul> <p><i>Forestry:</i></p> <ul style="list-style-type: none"> <li>Reclassification of forest areas to avoid deforestation<sup>37</sup></li> <li>Implementation of the FLEGT programme in Cambodia</li> </ul>
<b>Adaptation</b>	<i>Planning and disaster risk reduction:</i>

<sup>35</sup> FAOSTAT Database, 2018

<sup>36</sup> Royal Cambodian Government, 2017, *op. cit.*

<sup>37</sup> A precise list of actions under reduced emissions from deforestation and degradation (REDD+) will be finalized after finalization of the REDD+ Strategy

Category	Short description of priority adapted from Cambodia's (I)NDC
	<ul style="list-style-type: none"> <li>Promoting and improving the adaptive capacity of communities, especially through community based adaptation actions, and restoring the natural ecology system to respond to climate change</li> <li>Strengthening early warning systems and climate information dissemination</li> <li>Strengthening technical and institutional capacity to conduct climate change impact assessments, climate change projections, and mainstreaming of climate change into sector and sub-sector development plans</li> </ul> <p><i>Water management:</i></p> <ul style="list-style-type: none"> <li>Developing and rehabilitating the flood protection dykes for agricultural and urban development</li> <li>Increasing the use of mobile pumping stations and permanent stations in responding to mini-droughts, and promoting groundwater research in response to drought and climate risk</li> <li>Developing climate-proof agriculture systems for adapting to changes in water variability to enhance crop yields</li> <li>Implementing management measures for protected areas to adapt to climate change</li> </ul> <p><i>Crops:</i></p> <ul style="list-style-type: none"> <li>Promoting climate resilient agriculture in coastal areas through building sea dykes and scaling-up of climate-smart farming systems</li> <li>Developing crop varieties suitable to Agro-Ecological Zones (AEZ) and resilient to climate change</li> </ul> <p><i>Aquaculture:</i></p> <ul style="list-style-type: none"> <li>Promoting aquaculture production systems and practices that are adaptive to climate change</li> </ul>

### National priorities and related co-operation

50. Actions planned by the Cambodian Government to address climate change impacts and drivers in the agriculture sector are described in the **Cambodia Climate Change Strategic Plan (CCCSP)**. The CCCSP (2014-2023), which aims to address a range of issues related to adaptation, GHG mitigation and low-carbon development, is being implemented in three phases. In phase two, currently underway, the Cambodian Government is working to mainstream climate change at the sector level—based on sector-specific plans—and to identify opportunities to finance further adaptation activities. The CCCSP sector plan for the agriculture and land-use sectors—or **Climate Change Priorities Action Plan for Agriculture, Forestry and Fisheries Sector 2016-2020 (CCPAP)**—outlines specific priorities and actions to support implementation of national contributions under the Paris Agreement, Sendai Framework on Disaster Risk Reduction and the Sustainable Development Goals.
51. Under the Reducing Emissions from Deforestation and Degradation (UN-REDD) Cambodia National Programme (2011-2015) and the Forest Carbon Partnership Facility (FCPF) Project (2013-ongoing), the Cambodian Government, in partnership with FAO, UNDP, UNEP and the World Bank, has been working to establish effective National Management Systems for the REDD+ Readiness process and stakeholder engagement. As part of this work, a National REDD+ Strategy (NRS) and National Forest Monitoring System (NFMS) have been developed. Under targeted support from the global UN-REDD programme, a national **Forest Reference Level (FRL)** has been developed and was submitted to the UNFCCC in 2016. Cambodia's FRL has undergone UNFCCC technical assessment, and the technical assessment report has been published in 2018. The FCPF programme is providing ongoing support to development of activity data for REDD+ and, with the support of an FAO technical assistance programme, a **BUR-Technical Annex** is being formulated for REDD+ results reporting over the period 2015 to 2016.

52. The Ministry of Agriculture, Forestry and Fisheries (MAFF), in partnership with FAO, has prepared the **Agriculture Census of Cambodia** (2015), which provides an important basis for much of the necessary activity data for progressively enhancing the monitoring and reporting of mitigation and adaptation activities in the agriculture and land-use sectors. The census provides time series statistical data of a wide range of agricultural activities and resources, i.e. livestock, agricultural land, fertilizers, crop productions, soil quality.
53. Since 2006, MAFF has been implementing the **National Bio-digester Programme (NBP)**, which aims to establish a permanent market-oriented and self-financed biogas sector. The programme has so far reached over 100,000 Cambodians, with 25,383 biodigesters installed as of September 2016.<sup>38</sup> The NBP provides a range of quantitative and qualitative information on GHG mitigation activities in the livestock sector in programme locations, mechanisms for planning of emission reduction and targets, and serves as an example of institutional arrangements available to potential mitigation projects.
54. The IFAD-funded **Agriculture Services Programme for Innovation, Resilience and Extension (ASPIRE)** Programme (2014-2021), which is being implemented by MAFF, aims to establish an improved model of extension services for Cambodia that will help smallholder farmers contribute to broad-based economic growth. ASPIRE is a national programme that will ultimately be implemented through Provincial Departments of Agriculture in ten provinces. Component 2 of ASPIRE is dedicated to capacity development for extension services.
55. In the area of adaptation, the **Mainstreaming Climate Resilience into Development Planning** (2012-2019) programme is developing a knowledge management system covering project-based adaptation activities being undertaken within seven infrastructure investment projects. These projects are being funded by ADB and implemented by government agencies, including the Ministry of Environment, the Ministry of Water Resources and Meteorology and the Ministry of Agriculture, Forestry and Fisheries. The monitoring and reporting framework, which is being implemented by MOE and the Asian Development Bank, is based on the framework used by the global Climate Investment Funds programme.
56. Under its global **Climate Finance Readiness Programme** (2015-2018), USAID and GIZ are supporting CCD implementation of its National Adaptation Plan. Activities being implemented under this programme include developing finance strategies and an implementation plan for the NAP, as well as efforts to strengthen whole of government approaches for integrating climate change considerations into sectoral planning and budgeting processes. While the NAP is an important process for better planning of adaptation across government, monitoring and reporting activities under the NAP are process based and provide only a basis for monitoring implementation of the NAP itself. As a result, NAP monitoring and reporting forms only one element of the overall adaptation reporting requirements of the NDC.
57. The **Cambodia Climate Change Alliance (CCCA) programme** (2014-2019)—is implemented by MOE with support from UNDP. The programme aims to strengthen national systems and capacities to support the implementation and coordination of Cambodia's climate change response. The current phase of the CCCA includes a number of activities aimed at strengthening monitoring and reporting systems for climate change action.
58. MOE and UNEP with support from the GEF Trust Fund have been supporting work to develop Cambodia's first Biennial Update Report (BUR) for the UNFCCC under the **Umbrella Programme for Biennial Update Report to the United National Framework Convention on Climate Change (UNFCCC)**. It is expected that FCPF support will also contribute here.

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<sup>38</sup> NBP (no date) *National Biogigester Programme*. Available at: <http://nbp.org.kh/Default.aspx?lang=en>; Buysman, E. (2015a) 'BIOGAS AND HOUSEHOLD AIR QUALITY Household Air Quality Impact of biogas stoves versus wood-fired stoves in Rural Cambodia Biogas and Household Air Quality'. Available at: [https://www.hivos.org/sites/default/files/biogas\\_and\\_household\\_air\\_quality\\_30-10-15\\_0.pdf](https://www.hivos.org/sites/default/files/biogas_and_household_air_quality_30-10-15_0.pdf).

## Baseline initiatives supported by FAO

59. *GCP/GLO/677/USA – Implementation of AGRIS in four pilot countries, Phase I*: FAO leads the implementation of the “Global Strategy to improve agricultural and rural statistics”, a comprehensive and coordinated effort to provide the conceptual and institutional framework for data production, establish a Minimum Set of Core Data (MSCD), develop cost-effective methodologies for data production and use, and establish the governance structures and capacities required to maintain data collection and management processes over time. One of the Global Strategy’s main outputs is the development of a new survey tool to help countries establish an integrated programme of agricultural surveys: the Agricultural Integrated Survey (AGRIS). It is envisaged that the proposed generic set of AGRIS questionnaires will generate 65 percent of MSCD requirements. Cambodia has recently confirmed its participation as one of four pilot countries in the AGRIS project, which is expected to include the design and implementation of a customized AGRIS, with the aim of accelerating the production and use of high-quality disaggregated data on the technical, economic, environmental and social dimensions of agricultural holdings in the country.
60. TCP/CMB/3602: *National Soil Information and Land Suitability Evaluation System for Cambodia* (2016-2019). Currently the capacity to carry out modern methods, including digital soil mapping, soil database design, land suitability evaluation, and information delivery via the web to multiple stakeholders, within Cambodia is limited. Therefore, the main objective of this project is to build national capacity in all phases of the design and operation of a National Soil Information and Land Suitability Evaluation System for Cambodia (CASIS). The project will develop the design and information technology infrastructure necessary for CASIS, gather existing disparate soil information into a common form and publically-accessible web site, make a limited set of field observations and laboratory measurements of soil types that are not represented in current databases, and above all train national capacity in these activities, so that CASIS can be updated with new field observations and land suitability evaluations preparation of a fully-funded follow-up project.
61. TCP/CMB/3603: *Strengthening Cambodian Land Use and Land Use Change and Forestry (LULUCF) and REDD+ reporting capacity* (2017-2018). The project envisions to contribute to strengthening the capacity of the Government of Cambodia in reporting for LULUCF and REDD+, outlining the differences in requirements for reporting both on LULUCF and REDD+; to enhance the overall consistency of data and methodologies used emission estimates, providing initial emission estimates in templates, support the government to prepare a plan of action for reporting on REDD+ and LULUCF to the UNFCCC.
62. UNFA/CMB/041/UND: *Establishment of a National Forest Monitoring System for Reducing Emissions from Deforestation and Degradation-plus (REDD+) readiness in Cambodia* (2016-2019). FAO is supporting the Government of Cambodia in building their MRV and monitoring capacities by applying international standards that meet the UNFCCC requirements for REDD+ through capacity building, and supporting the establishment of a NFMS and Forest Reference level. The specific aim of this project is to support the implementation of Outcome 4 of the FCPF project whose main outcome is “Designing Monitoring System for REDD+ with capacity for implementation”. The project will provide assistance to the government agencies to collect and collate the necessary data on land use representation and emissions factor and to establish the NFMS.

### 1.2.4. Remaining barriers

63. Barriers facing the effective implementation of ETF requirements in Cambodia have been assessed from a variety of perspectives. Each of these analyses forms essential underpinning for the GEF Alternative presented in section 1.3 below. They are presented below and in **Annex 11**.



64. In 2006, Cambodia went through a **National Capacity Self-Assessment (NCSA)** for the CBD, UNFCCC and UNCCD with GEF support. The NCSA was reviewed from the perspective of expected scope of the ETF and the potential support of CBIT. The review suggests that Cambodia has yet to achieve a number of the objective outlined in the action plan presented in the NCSA, particularly as it relates to capacity to prepare GHG inventories and mitigation and adaptation monitoring and reporting systems. Addressing the needs and gaps outlined in the NCSA report will enable Cambodia to produce more timely and accurate reports for UNFCCC processes and particularly the reporting requirements under the Paris Agreement ETF. Priority actions identified under the NCSA for reporting to the UNFCCC that would benefit from additional support to the agriculture and land-use sectors under CBIT are detailed in **Table 6** below.

**Table 6: Cambodia NCSA Priority Actions and related sector-specific gaps/needs that can be addressed by CBIT**

<b>NCSA Priority Action No.</b>	<b>Description<sup>39</sup></b>	<b>Related sector-specific gaps/needs that can be addressed by CBIT</b>	<b>Relevant project Outputs</b>
<b>4</b>	Improve and strengthen ability to: <ul style="list-style-type: none"> <li>• Understand in-depth the technical aspects of GHGs</li> <li>• Undertake GHG inventory</li> <li>• Mitigation analysis and promote interagency collaboration</li> <li>• Undertake vulnerability adaptation assessments</li> <li>• Develop energy data</li> <li>• Develop and improve GHG emission factors by sector</li> <li>• Use projection methods of GHG emission and removal</li> <li>• Apply determinant factors to project crop growth/production variability.</li> </ul>	<ul style="list-style-type: none"> <li>• Capacity to clarify reporting on mitigation and adaptation targets through improved baselines and BAU projections</li> <li>• Capacity on GHG measurement, inventory and emission factor development for agriculture/land-use</li> <li>• Preparation of specific emission factors for key agriculture and land-use sector activities</li> <li>• Development of sector specific GHG inventory and mitigation knowledge management systems for the agriculture sectors</li> <li>• Capacity to understand national emission scenarios and adjust national mitigation planning processes</li> </ul>	Output 1.1.4; Output 2.1.2; Output 2.1.3;
<b>5</b>	Improve and strengthen ability to adopt appropriate technologies and sustainable development programs	<ul style="list-style-type: none"> <li>• Capacity to enhance mitigation and adaptation outcomes of target NDC interventions</li> </ul>	Output 1.2.2;
<b>6</b>	Improve and strengthen ability to advance national interests on climate change matters in international fora and negotiations, and to represent Cambodia in regional and global networks on climate change	<ul style="list-style-type: none"> <li>• Knowledge and resources to better inform government involvement in UNFCCC processes regarding transparency and sector-based target setting exercises</li> <li>• Support to engage in sub-national, national, regional and global peer-to-peer exchange on ETF reporting requirements</li> </ul>	Output 1.1.5; Output 1.2.1; Output 1.2.3;
<b>7</b>	Increase public sector financial commitment to fulfilling the obligations to the UNFCCC through raising decision-makers' awareness/understanding of national interests on conservation.	<ul style="list-style-type: none"> <li>• Capacity to assess and adjust NDC ambition levels to attract international support</li> <li>• Capacity to monitor and report donor contributions to actions to tackle climate change drivers and impacts</li> </ul>	Output 1.1.3;
<b>8</b>	Expand institutional commitment to: <ul style="list-style-type: none"> <li>• Climate change adaptation issues</li> </ul>	<ul style="list-style-type: none"> <li>• Preparation of national sector specific adaptation indicators and systems</li> </ul>	Output 3.1.1; Output 3.1.2;

<sup>39</sup> Royal Cambodian Government, *Thematic Assessments and Action Plan for the three Conventions: National Capacity Self-Assessment (NCSA) for the CBD, UNFCCC and UNCCD*, 2007



NCSA Priority Action No.	Description <sup>39</sup>	Related sector-specific gaps/needs that can be addressed by CBIT	Relevant project Outputs
	<ul style="list-style-type: none"> <li>Mainstream climate change matters in national/sectoral plans</li> <li>Develop/procure needed infrastructure, facilities and equipment to strengthen capacities to respond/adapt to climate change vulnerabilities</li> <li>Harmonize and integrate international climate change agreements into national and sectoral actions</li> <li>International collaboration</li> </ul>	<ul style="list-style-type: none"> <li>capable of measuring progress against NDC adaptation priorities</li> <li>Preparation of systems to aggregate adaptation monitoring and reporting to capture progress toward NDC adaptation priorities</li> <li>Development of sector specific adaptation data management systems</li> <li>Capacity to understand national climate-risk scenarios and adjust national sector-specific adaptation planning processes</li> </ul>	Output 3.1.4; Output 3.1.5

65. **Cambodia's** SNC prepared in 2015 indicated that—despite past and ongoing projects to build monitoring and reporting capacity for GHG inventories and mitigation and adaptation actions—insufficient technical and financial resources remain major constraints to the preparation of national communications on a continuous basis. **Table 7** below presents a number of specific constraints for effective preparation of GHG inventories and monitoring and reporting mitigation and adaptation activities, identified through a synthesis of the SNC findings regarding capacity and national consultations and stocktaking exercises with responsible ETF stakeholders in Cambodia.

**Table 7: Barriers and constraints for meeting ETF requirements in Cambodia with a focus on the agriculture and land-use sectors<sup>4041</sup>**

Requirements for national implementation of the ETF	Current Barriers and Constraints - Cambodia
<i>Awareness</i> and understanding of ETF reporting requirements.	<ul style="list-style-type: none"> <li>Lack of awareness regarding the Paris Agreement, the ETF and the need for enhanced transparency in monitoring and reporting of mitigation and adaptation activities.</li> </ul>
Clear and robust <i>institutional arrangements</i> for coordinating sector specific information for ETF monitoring and reporting exercises	<ul style="list-style-type: none"> <li>Lack of coordination amongst relevant Ministries in the gathering of data and information needed to report progress against NDC actions in the agriculture and land-use sectors</li> <li>Ineffective mechanisms for data sharing across Ministries</li> </ul>
Regular and comprehensive reporting of anthropogenic emissions <i>inventories</i> by sources and removals prepared using good practice methodologies accepted by IPCC and agreed upon by the Parties to the Paris Agreement	<ul style="list-style-type: none"> <li>Lack of activity data and local emission factors.</li> <li>Reliance on outdated IPCC methodologies for measurement and monitoring of emissions from the agriculture sectors.</li> <li>Data classification is different from IPCC Guideline categories; particularly for LUCF</li> <li>Insufficient financial support for regular inventory preparation</li> <li>Lack of national experts for GHG inventory preparation</li> <li>Lack of harmonized, national verification processes</li> </ul>
Information necessary to track progress made in implementing and achieving <i>mitigation</i> contributions in the agriculture and land-use sectors	<ul style="list-style-type: none"> <li>Limited experience with measuring, reporting and verification (MRV) systems for emissions from the agriculture and land-use sectors</li> <li>Insufficient short-term and long-term planning information and data for all sectors to conduct mitigation analysis and projections of national emissions</li> <li>Financial constraints for mitigation analysis and the implementation of identified options</li> </ul>

<sup>40</sup> Royal Cambodian Government, 2015, *op. cit.*

<sup>41</sup> FAO, *Cambodia - Country status on emissions reductions and climate change adaptation activities and reporting*, 2016

Requirements for national implementation of the ETF	Current Barriers and Constraints - Cambodia
	<ul style="list-style-type: none"> <li>• Shortage of technical experts capable of conducting MRV in the agriculture and land-use sectors</li> <li>• Absence of quality assurance or control mechanisms in the preparation and reporting of emissions inventories and emissions reduction activities</li> </ul>
Information necessary to track progress made in implementing and achieving <i>adaptation</i> contributions in the agriculture and land-use sectors	<ul style="list-style-type: none"> <li>• Lack of harmonized indicator and monitoring systems for adaptation based on national priorities</li> <li>• Need capacity to implement monitor and evaluate field-level projects and activities in the agriculture and land-use sectors</li> <li>• Insufficient relevant data and information to conduct an assessment for immediate climate change adaptation action in Cambodia under the conditions of increased likelihood of floods and droughts</li> <li>• Limited research conducted for related sectoral impact to climate change</li> <li>• Shortage of capable technical experts and financial resources for adaptation activities and accompanying monitoring exercises</li> <li>• Limited reliability of land use data, apart from area under forest cover</li> </ul>
Clarity on <i>support received</i> including information on government and donor contributions to strengthen UNFCCC monitoring and reporting activities	<ul style="list-style-type: none"> <li>• Lack of financial management mechanisms to effectively implement the adaptation and mitigation options</li> <li>• Lack of information on activities, projects and other information related to climate-friendly technology development and transfer</li> </ul>

66. Utilizing the GEF-6 CBIT rating system outlined in the Programming Directions for CBIT, the assessment of Cambodia's current performance against each indicator is presented in **Table 8** below. This assessment indicates that the baseline capacity of Cambodian Government agencies to meet ETF requirements using current systems and processes is require further strengthening.

**Table 8 Assessment of Cambodia's baseline capacity for MRV and transparency based on the GEF-6 CBIT indicator and rating system**

Indicators	Scale	Rating	Comment
<b>Quality of MRV systems tracking results related to low-GHG development and GHG emissions mitigation.</b>	1-10	<b>2</b>	Measurement systems are in place but data is of poor quality and/or methodologies are not robust. Reporting is done only on request or to a limited audience or only partially. Verification is not practiced, with the exception of the FRL that underwent UNFCCC technical assessment, .
<b>Institutional capacity for transparency-related activities</b>	1-4	<b>2-3</b>	CCD is the designated transparency institution and has some staff with some capacity to coordinate and implement transparency activities under Article 13 of the Paris Agreement. CCD has authority or mandate to coordinate transparency activities under Article 13. Lack of awareness and coordination with relevant authorities at MAFF and with provincial level authorities responsible for monitoring agriculture and land-use sector activities. Activities are not integrated into national planning or budgeting activities. Limited financial resources to carry out transparency related activities.

67. Finally, **Annex 11** provides a detailed and updated assessment—undertaken during the PPG Phase—of Cambodia's baseline capacities and barriers with respect to key elements of “ETF

readiness”. It includes topics under the following headings: institutional arrangements, data collection / measurement, analysis and reporting and verification.<sup>42</sup>

### **1.3. The GEF alternative**

#### **1.3.1. Project strategy**

68. The GEF alternative scenario is to develop and implement a capacity building program that will draw upon the CBIT fund to ensure that by 2020 Cambodia is preparing reports from the agriculture and land use sectors consistent with the requirements of the ETF, including more up-to-date inventories of emissions sources and sinks using advanced IPCC guidance and information necessary to track progress against priority actions identified in Cambodia’s NDC. This program will target capacity building activities under three components and in three key areas.

#### **1.3.2. Project objectives, outcomes and outputs**

##### **Project objective**

69. The project objective is that, by 2020, Cambodia is preparing reports to the UNFCCC under the Paris Agreement’s Enhanced Transparency Framework (ETF) with strengthened agriculture and land use components, including inventories of emission sources and sinks, and information to track progress against priority actions identified in Cambodia’s NDC for these sectors.

##### **Project description**

70. This section presents a description of project outcomes and outputs. Additional details, including indicative project activities, implementation modalities and main beneficiaries, are presented in **Annex 4**.

#### **Component 1: Institutional arrangements to coordinate preparation of ETF reports for agriculture, land-use and other relevant sectors enhanced.**

71. Component 1 will operate under the overall co-ordination of NCSD, which, as noted above, is responsible for coordination of climate change activities in Cambodia and for promoting a strong, comprehensive and effective national response to climate change. The component consists of two outcomes, the first of which (1.1) is focused on the AFOLU sector and works mainly with key agencies with direct responsibility for the sector (MAFF and MoE). The second outcome (1.2) aims to disseminate best practices to other priority sectors, with the coordinating support of NCSD.

#### **Outcome 1.1: Increasingly accurate and timely information and data are being collected by sub-national and national authorities responsible for the AFOLU sectors and are being incorporated into reporting under the ETF**

72. Under Outcome 1.1, the project will strengthen the capacities of the Ministry of Agriculture, Forestry and Fisheries (MAFF) and the Ministry of Environment (MoE) to collect accurate and timely information and data, and to deliver well-integrated and timely reporting, from the

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<sup>42</sup> The assessment presented in Annex 11 was included in the PIF’s project framework (Output 1.1.2), along with an indication that it would be prepared ‘in the PPG’. As such, the assessment was indeed conducted during the PPG and the output removed from the final project framework

agricultural and land use sectors as required—and potentially as recommended<sup>43</sup>—by the ETF reporting framework. It will achieve this outcome through the four outputs described below.

*Output 1.1.1: Coordination mechanism strengthened, integrating relevant authorities from the agriculture and land use sector into national UNFCCC reporting processes*

73. Under this output, the project will strengthen the capacity and role of the Technical Working Group on Climate Change – Agriculture, Forests and Fisheries (TWG-CCAFF), which is the primary forum for climate change-related co-ordination within the agricultural sectors. The TWG-CCAFF—with technical support provided by the project—will take the lead in coordinating and pulling together data and information related to emissions, mitigation and adaptation from the various sub-sectors for the purpose of ETF reporting. Once these individual building blocks have been put together, information, data and reporting will then flow to higher-level, inter-ministerial co-ordination processes being supported under Output 1.2.1. Thus the present output will support co-ordination and integration of AFOLU-sector inputs to overall national ETF reporting. Building capacity at the AFOLU level will help to raise the profile, pro-activeness and transparency of the of the AFOLU sectors’ contribution to climate change reporting.
74. Since ETF reporting covers several thematic areas, more than one coordinating group will need to be established / strengthened, with results flowing up to national level as indicated above. For example, GHG inventories are prepared by a National GHG Inventory Team (GHG-I team) under the overall coordination of the Climate Change Department (CCD)’s GHG Inventory and Mitigation Office. The GHG-I team consists of 16 members. Five of these members are from MAFF, representing: (1) the crop sector (GDA), (2) the livestock sector (GDAH), (3) the forestry sector (FA), (4) the fisheries sector (FiA), and (5) academia (RUA). Under this output, the contributions of these five entities to the GHG-I will be strengthened. In a similar manner, capacities to contribute to and integrate reporting on adaptation, NDC implementation and capacity building / financing will also be increased. The monitoring and reporting of climate change indicators (except GHG indicators) rests within the CCD’s Policy and Coordination Office under which an M&E team was established, with responsibility to implement the M&E framework for climate change in Cambodia. In the case of climate change mitigation and adaptation, underlying data collection and analysis processes will also be supported, under components 2 and 3 respectively.

*Output 1.1.2: National ETF monitoring and reporting roadmap for the agriculture and land-use sectors prepared and adopted*

75. A key early task of the project will be to develop a National Five-Year ETF monitoring and reporting roadmap for the agriculture and land-use sectors. The roadmap will cover all reporting areas (see **Tables 1-4** above), i.e.: (i) national inventory report, (ii) report on implementation of NDCs, (iii) report on climate change impacts and adaptation, and (iv) report on financial, technology transfer and capacity building support needed and received.<sup>44</sup> For each report, it will describe an agreed improvement plan (for existing reports such as the GHG-I), work plan, timetable and institutionally defined roles and responsibilities, including roles for different existing working groups<sup>45</sup> and members and overall co-ordination.
76. In addition to covering the above reports, the Roadmap will identify—and define actions to remove—barriers that are limiting the effectiveness of monitoring and reporting. Development of the Roadmap will be led by CCTWG and TWG-CCAFF and will involve a wide range of governmental and non-governmental stakeholders including MoP, UNDP, UNEP, FAO, SPCR,

<sup>43</sup> Reporting on financial, technology transfer and capacity building support needed and received is ‘recommended’, but not required, under the Paris Agreement.

<sup>44</sup> This last report is recommended rather than required under the ETF. Thus, another task of the coordinating body being established under Output 1.2.1 should be to decide on whether or not Cambodia will prepare and submit such a report.

<sup>45</sup> Existing groups include: (i) the GHG inventory and mitigation office under CCD; (ii) the policy and coordination office of CCD, especially its M&E team, and; (iii) MAFF’s Technical Working Group for Climate Change for Agriculture, Forestry and Fisheries (TWG-CCAFF).

ASPIRE, etc. The completed roadmap will be officially endorsed by both MoE/NCSD and MAFF. The Roadmap will be shared with other sectors under Output 1.2.1 and should serve as a prototype for building capacity for ETF reporting by other sectors nationally.

*Output 1.1.3: Capacity developed to clarify measurement and reporting of key NDC information (baselines, business-as-usual scenarios, targets) and support provided for ETF reporting in the agriculture and land-use sectors*

77. As noted above in Section 1.1.1, the Ad Hoc Working Group on the Paris Agreement (APA) is currently developing the “modalities, procedures and guidelines” (MPGs) of reporting under the ETF. The MPGs are expected to call for reporting of a wide range of information (see **Table 2** above for an indicative outline of reporting on NDCs). Final decisions of the APA will of course help to guide actions here and in the project as a whole.
78. **Box 1** below presents a key extract from Cambodia’s Nationally Determined Contribution (NDC), which was submitted to UNFCCC in February 2017. This represents the key quantitative contribution committed to by Cambodia in its NDC. The project will support measures aimed at improving reporting on these commitments. This may include, for example, reporting on avoided deforestation by comparing the forest cover / land use against the baseline indicated in Cambodia’s FRL. Such an estimate would rely on national forest cover data (which is currently produced with support from the FCPF) which could be combined with improved non-forest land use data, with results used to report on AFOLU-sector wide changes and corresponding emissions estimates.

**Box 1: Contributions from the LULUCF sector included in Cambodia’s NDC, February 2017**

NAME OF ACTIVITY: Increasing the forest cover to 60% of national land area by 2030, and maintaining it after 2030

DESCRIPTION: In accordance with the National Forest Programme (2010-2029), Cambodia is striving to increase and maintain the forest cover at 60% of the total land area, from an estimate of 57% in 2010. This will be achieved in particular through:

- Reclassification of forest areas to avoid deforestation:
  - Protected areas: 2.8 million hectares
  - Protected forest: 3 million hectares
  - Community forest: 2 million hectares
  - Forest concession reclassified to protected and production forest: 0.3 million hectares
  - Production forest: 2.5 million hectares
- Implementation of the FLEGT programme in Cambodia
  - The objective is to improve forest governance and promote international trade in verified legal timber.

79. While progress in delivering on the above will almost certainly be an important element in NDC reporting<sup>46</sup>, broader aspects of NDC implementation will also need to be reported on. These include<sup>47</sup>:
- Mitigation policies and measures, actions and plans (C.6)
  - Summary and projections of greenhouse gas emissions and removals (C.7, C.8)
  - Improvement plan (C.13)
80. Capacities will be built for using available activity data to establish more robust baseline scenarios and benchmarking processes to facilitate tracking of progress in achieving NDC targets for the agriculture and land-use sectors and, eventually, improved capacity for periodically changing ambition levels associated with activity targets.

<sup>46</sup> See above, Table 2, items C.4 and C.5.

<sup>47</sup> References are to items shown in Table 2.

81. Finally, it should be noted that NDC reporting may be expected to overlap with key elements of national inventories, on which NDC reports will in part depend. Thus, this output will link closely with work being done under Component 2 (see below).

*Output 1.1.4: Cambodia's engagement strengthened in the agriculture and land-use sectors with international transparency-related processes under the UNFCCC*

82. Under the Paris Agreement, UNFCCC transparency-related processes and reporting are being brought together under the ETF. At the same time, the importance of the AFOLU sectors to developing country mitigation and adaptation strategies has been made evident through the submission and subsequent analysis of NDCs. It follows, therefore, that transparency of AFOLU-sector adaptation and mitigation information, data, actions and reporting will be a crucial element of a successful ETF.
83. Given the fact that all countries will be subject to similar reporting requirements, and also given the similar challenges many countries are facing in terms of data and information management, there are substantial advantages and economies of scale to be gained through engaging countries in global and regional learning and lesson sharing processes. It also makes sense here to focus international technical exchanges and engagement, where possible, at sectoral and even sub-sectoral-levels.
84. This output will help to ensure Cambodia's full engagement and participation in various lesson-learning and knowledge exchange efforts. This will be an important aspect of the project's learning and knowledge management strategy. Learning will take place in both directions, as Cambodian practitioners share their experiences and lessons learned in addressing ETF AFOLU-sector reporting challenges, particularly with pilot countries under the CBIT-AFOLU global project, while also learning from the experience of these countries. The specific nature of these lesson sharing activities will be defined on an ongoing basis in consultation with the CBIT-AFOLU global team. It is expected that practitioners from MOE, NCSD, MAFF—including each relevant sub-sector—and MOWRAM (for water sector adaptation) will be the main beneficiaries of support under this output.

**Outcome 1.2: Best practices on ETF reporting processes, information gathering, system infrastructure, methodologies in the agriculture and land-use sectors disseminated to relevant priority sectors (e.g. energy, industry/trade, transportation).**

85. Unlike CBIT national projects underway in a number of countries, the present project focuses on the AFOLU sector rather than on the full range of economic sectors, including energy, industry/trade and transportation. This approach focuses capacity-building support on what, for Cambodia, may be considered a 'leading' sector in terms of both mitigation and adaptation. A similar logic has led to the development of CBIT-AFOLU projects in Mongolia, Papua New Guinea and, under GEF-7, possible additional countries.
86. While the present project thus focuses mainly on the AFOLU sector, under Outcome 1.2, the project will focus on broader, national-level co-ordination mechanisms and on seeking to transfer lessons from the AFOLU sector to the other sectors noted above. Responsibility for this overall level of co-ordination rests with the NCSD, which will be taking the lead under this outcome. Support for NCSD efforts to achieve national-level integration and inter-sectoral transfer of knowledge will take place through the three outputs described below.

*Output 1.2.1: Multi-sectoral coordination mechanism strengthened, integrating relevant authorities, data and information systems into national UNFCCC reporting processes*

87. Whereas the co-ordination mechanism described under Output 1.1.1 above will focus on integrating AFOLU sub-sectors into a coherent presentation of that sector, Output 1.2.1 is designed to replicate that approach through enhanced national-level co-ordination of all of the sectors, i.e. AFOLU, energy, industry/trade and transportation. This body is expected to have

primary responsibility for overall reporting under the ETF.<sup>48</sup> Co-ordination, including integration of data and information systems, will be achieved through capacity building support to the CCTWG, which operates under the NCSD. In addition, the project will ensure close coordination with an ongoing initiative implemented by UNEP DTU Partnership (UDP), “Initiative for Climate Action Transparency (ICAT)”, in which Cambodia is one of the participating countries. This initiative aims to improve transparency and strengthen capacity in the energy sector.

88. As noted above, both AFOLU-level and national-level co-ordination mechanisms will need to operate in part at the level of the individual ETF reports. For example, in the case of GHG-I reporting, the project will support formalization of the National GHG inventory team (GHG-I Team) with a ministerial declaration / decision (MoE/NCSD). Expanded team membership will be organized into four sub-working groups, namely energy, waste, IPPU, and AFOLU. AFOLU will be further divided into two sub-groups, for agriculture and land use, respectively. Within the agriculture sector, the expanded membership should also include other MAFF’s relevant departments and institutions e.g. Department of Planning and Statistics, CARDI etc. Proposed institutional arrangements are shown in **Figure 6** below. The sub-group for agriculture will work closely under the TWG-CCAFF for reporting of both mitigation and adaptation actions within the agriculture sector. For the land use sector, the monitoring and reporting will rest with the REDD+ MRV team consisting of MoE, MAFF and other institutions. The REDD+ MRV team is hosted at the GDANCP / MoE, which is responsible for producing activity data, working on GHG estimates, etc.

*Output 1.2.2: ETF lessons learned from agriculture and land-use sectors monitored, captured, up-scaled and shared to enhance wider national, regional and global reporting (e.g. via the Global Coordination Platform)*

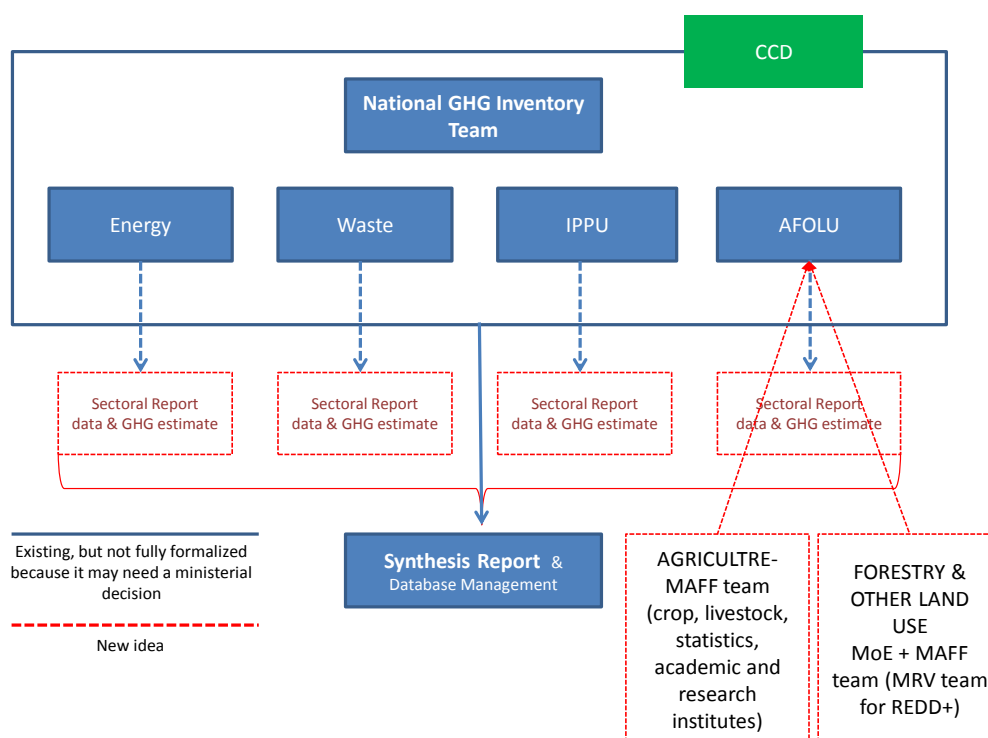
89. At national level, lessons monitored and captured from the AFOLU sector will be shared with the other institutions working together under Output 1.2.1. These will include lessons related to the development of sectoral components of AFOLU-sector contributions to ETF reports (GHG-I, NDC, adaptation, etc.), as well as lessons on the development and use of sectoral roadmaps, etc.
90. At regional level, Cambodia’s experience will be shared with other CBIT-AFOLU project and pilot countries in two-three regional workshops covering key themes of ETF reporting.
91. Globally, the value of taking an ‘AFOLU leading sector’ approach to ETF capacity building will be shared with other CBIT projects.

*Output 1.2.3: Peer exchange program on transparency activities established for relevant priority sectors*

92. Closely related to Output 1.2.2, the project will support a peer-to-peer exchange program at national, regional and global levels, covering transparency activities for relevant priority sectors.

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<sup>48</sup> This conclusion and a specific detailing of associated responsibilities, will be reconfirmed in the Ministerial Declaration...



**Figure 6: Proposed institutional arrangements for National GHG Inventory**

**Component 2: Capacity to assess and report emissions and removals from the agriculture and land-use sectors and to design and monitor related emission reduction activities**

93. This component will target barriers to reporting of GHG emissions and removals from the agriculture and land-use sectors, including emission reduction activities. This will include introducing more advanced measurement, monitoring and reporting systems for priority NDC emission reduction actions in these sectors. Activities under this component will be implemented by MoE and MAFF and will draw upon and coordinate with baseline projects and initiatives, particularly the extension network developed through the IFAD-funded ASPIRE programme, to enhance the collection and reporting of relevant activity data for priority NDC mitigation actions.

**Outcome 2.1: Reporting on inventories of emissions sources and sinks and mitigation activities from agriculture and land-use sectors strengthened**

*Output 2.1.1: Regular and systematic documentation and archiving process established to ensure accuracy and sustainability of the inventory, including quality assurance and quality control, in the agriculture and land-use sectors*

94. Under this output, regular, reliable and systematic archiving processes will be established for data on emissions sources and sinks within the agricultural and land use sectors. Archiving processes will include quality assurance and control for data and information produced and reported for sector-specific inventories of GHG source and sinks. This will include activity data being developed under Output 2.1.3. These processes will also underpin more effective measurement, monitoring and reporting of mitigation activities in the agriculture and land-use sectors.

*Output 2.1.2: GHG information management system (MIS) and infrastructure for agriculture and land-use sectors upgraded (interface w/ 3.1.3).*

95. This output will consist of a dedicated information management system (MIS) for agriculture and land-use activities, which will consolidate data and information drawn from relevant agencies and



projects in the agriculture and land-use sectors. GEF funding will also support a simple, user-friendly management information system (MIS) for agriculture and land-use activities by setting up a system to store and manage: (i) existing and projected GHG emissions data and information, (ii) source data and information from relevant agencies and projects in the AFOLU sectors and (iii) metadata. These investments will be supplemented with training and capacity building activities for system administrators and agency focal points to enable staff to adhere to reporting protocols and data standards.

96. A key early step in the process will be to review data needed for ETF reporting requirements, and compare these with existing data and databases, e.g. CamInfo, commune database and MAFF statistical sets as well as the environmental information management system covering the three Rio Conventions (under development) with support of GEF-funded project “Generating Accessing and Using Information and Knowledge Related to the three Rio Conventions”. This review will include an assessment of the accuracy and consistency of data from these sources and will consider the possibility of streamlining new indicators and variables needed for ETF reporting into these databases. Based on this review, a robust operational plan will be developed for additional data collection, analysis and review. Importantly, data sharing protocols and agreements will also be set up.
97. Systems will be designed to interface with and—where possible—enhance, existing systems for field monitoring and data collection used by provincial MAFF extension agents and extension services provided through the ASPIRE programme. Systems and protocols will also be established to better monitor contributions from donors and other sources to support implementation of NDC mitigation contributions in the agriculture and land-use sectors. Capacity building activities will focus on establishing processes to ensure the reliability and sustainability of the GHG inventory, including quality assurance and quality control, in the agriculture and land-use sectors.

*Output 2.1.3: Capacity and system hardware developed for relevant institutions at different levels to adopt and mainstream latest tools and methodologies to: (i) develop country-specific emissions factors, (ii) improve activity data, and (iii) better quantify the impact of mitigation policy measures in the agriculture and land-use sectors (inter-face w/ 3.1.4).*

98. Through investment in human resources and measurement technology at local universities and research institutions, the project will increase capacity to adopt improved GHG inventory standards in the agriculture and land-use sectors and enable enhanced field-level GHG monitoring systems. Targeted investments in remote sensing and field data collection systems and applications will be applied to expand geographical coverage.
99. The project will also provide training and support for national institutions to develop context-specific emissions factors for key sector activities. Priority will be given to the rice and livestock sub-sectors, which are the key GHG emission sources within agriculture sector, accounting for 68% and 16% of the total GHG emission in agriculture, respectively.<sup>49</sup> The sector also holds large mitigation potential. In terms of GHG estimate, the eventual aim is to move from reporting inventories where emissions and removals have been using the IPCC Revised 1996 Guidelines for the AFOLU sector to the latest IPCC Guidelines.<sup>50</sup> To this end, extension agents will be provided with training and hardware where required to generate data from the field using fit-for-purpose measurement and monitoring equipment and systems that will interface with MIS nodes (see Output 2.1.2) at sub-national and national levels. Activities will be coordinated with, and build on, efforts to prepare Cambodia’s first BUR and Third National Communication under the Cambodia component of the Umbrella Programme for Biennial Update Report to the UNFCCC.
100. The project also seeks to provide training and support to improve activity data, specifically the development of geo-spatial data regarding agricultural land use while examining potential links to

<sup>49</sup> Cambodia’s Second National Communication.

<sup>50</sup> This includes revision currently underway and due for completion in 2019.

existing national forest cover and land use data. The project envisions using the application of the System for earth observations, data access, processing & analysis for land monitoring (SEPAL). SEPAL allows users to access powerful cloud-computing resources for advanced analyses, and without heavy investment in information technology infrastructure; as well as Collect Earth from the Open Foris suite to facilitate the accuracy assessment of land use data produced. With respect to activity data, the project will support sub-national level survey in order to assess the accuracy and analyze the uncertainty of data contained in commune databases, CAMInfo and MAFF statistical reporting. The assessment will focus primarily on the key relevant data for potential uses as activity data for GHG calculation. Nationwide activity data will be generated through intercensal agriculture surveys, particularly from the “Production Methods and Environmental Module” to be supported by AGRISurvey.

101. The project will also build capacity to clarify reporting against mitigation targets through improved baselines and BAU projections covering projections for agricultural output. This work will directly benefit from the MRV systems being developed and trialed for the REDD+ National Programme in Cambodia, including the potential to adapt and utilize existing data management platforms, tools and methodologies for GHG estimates and measurements. These systems will then be applied to key activities in the agriculture and land-use sectors relevant to existing or potential future NDC priority mitigation actions, including reducing emissions from rice production, livestock, fertilizer application, biomass burning, etc.

*Output 2.1.4: National/sectoral reports prepared and submitted on inventory of emissions sources and sinks and emissions reduction activities from agriculture and land-use sectors consistent with latest UNFCCC guidance*

102. The final output under this Outcome will be agriculture and land-use sector contributions to total national emissions and removals to be reported on national communications and biennial update reports consistent with latest UNFCCC guidance, as well as contributions from the AFOLU sector to Cambodia’s updated NDC. The approach here will involve building the capacity of national teams that will be responsible for the relevant reports, including: (i) the GHG-I team’s sub-group for agriculture, (ii) MAFF’s TWG-CCAFF, and (iii) the MRV team for REDD+.

### **Component 3: Capacity to monitor and report adaptation activities in agriculture and land-use sectors strengthened**

103. Under this component, basic frameworks and infrastructure will be established for enhanced monitoring and reporting under the ETF of adaptation activities in agriculture and land-use sectors. Activities under this component will be linked to the extension network developed through the ASPIRE programme and will be designed to interface with ongoing M&E activities being implemented by the Mainstreaming Climate Resilience into Development Planning programme, the Cambodia Climate Change Alliance (CCCA) programme, activities on the National Adaptation Plan (NAP) under the USAID-GIZ Climate Finance Readiness programme, and work on climate risk and resilience, and in particular the development of indicators of effectiveness of adaptation, under the Strategic Program for Climate Resilience (SPCR)..

#### **Outcome 3.1: Monitoring and reporting of NDC priority adaptation actions in the agriculture and land-use sectors strengthened**

104. Activities under Outcome 3.1 will be designed to address barriers to adaptation monitoring and reporting of priority NDC adaptation actions in the agriculture and land-use sectors.

*Output 3.1.1: Assessment of relevant good practice methodologies and frameworks for monitoring and reporting NDC priority adaptation actions in the agriculture and land-use sectors*

105. Climate-change adaptation is less amenable to standardized approaches that are often available for climate-change mitigation (e.g., technologies, reporting frameworks, global and regional default emissions factors, etc.). Adaptation in large part requires country-specific initiatives and measurement frameworks. Although standardized international M&E tools are available for project-based adaptation interventions, they are in most cases designed to facilitate aggregation of generalized outcomes across an international portfolio rather than to track progress on specific national goals or to inform specific decisions at national and sub-national levels. Nevertheless, a number of documents may be useful in helping to guide countries in addressing the challenges of establishing nationally tailored M&R frameworks for CCA. **Annex 11** presents several resources that are expected to inform the delivery of Component 3.

106. Under this output, existing methodologies and frameworks for monitoring and reporting on adaptation, including priority actions identified in Cambodia's NDC, will be reviewed and their applicability to the Cambodian context assessed. These will include methodologies developed by FAO. This work will build on earlier work to establish an M&E framework for adaptation.

*Output 3.1.2: National/sectoral appropriate indicators and monitoring and reporting framework developed for NDC priority adaptation actions in the agriculture and land-use sectors*

107. Based on a review of NDC priorities and relevant planning documents, sector-specific indicators, methodologies, frameworks and interventions will be identified. These activities will build on relevant sector-specific experiences from the Mainstreaming Climate Resilience into Development Planning programme and will draw on relevant FAO guidance materials related to adaptation indicators (see **Annex 11**). Results will be designed to interface with national reporting systems for the NAP being developed under the USAID-GIZ Climate Finance Readiness programme and systems already in place for monitoring relevant adaptation projects under the Cambodia Climate Change Alliance (CCCA) programme and the Strategic Program for Climate Resilience (SPCR). In particular, efforts will be focused on the potential to aggregate reporting on field-level adaptation activities into broader outcome level indicator reporting necessary for NAP monitoring and reporting processes.

*Output 3.1.3: Adaptation information management system (MIS) and system infrastructure for agriculture and land-use sectors upgraded (interface w/ 2.1.2)*

108. In tandem with activities under component 2 to establish MIS for GHG inventories from the agriculture and land-use sectors and for enhanced monitoring and reporting on mitigation activities, complimentary systems will be developed and utilized to store and manage data and information on ongoing and planned adaptation initiatives, including those highlighted under the NDC. As with Output 2.1.3, these systems will be designed to interface with and—where possible—enhance existing systems for field monitoring and data collection by provincial MAFF extension agents and extension services provided through the ASPIRE programme. Systems and protocols will also be established to better monitor contributions from donors and other sources to support implementation of NDC adaptation contributions in the agriculture and land-use sectors (see reporting under **Table 4** above). Capacity building activities will include assessment of good practices and methodologies for monitoring NDC priority adaptation actions; training on adaptation monitoring and reporting at different administrative levels and aggregating indicators to develop reporting for national level NDC achievements with respect to adaptation.

*Output 3.1.4: Capacity and system infrastructure developed supporting relevant institutions at different levels to adopt and mainstream monitoring and reporting processes for NDC priority adaptation actions in the agriculture and land-use sectors (interface w/ 2.1.3)*

109. Parallel investments in data collection hardware will be made to enhance the monitoring capacity of national and local authorities at the field level. In addition, training and capacity building activities will be provided for system administrators and agency focal points to enable staff to adhere to reporting protocols and data standards

*Output 3.1.5: National reports prepared and submitted on priority adaptation activities in the agriculture and land-use sectors consistent with latest UNFCCC guidance.*

110. The final output under this Outcome will be agriculture and land-use sector contributions to national communications consistent with latest UNFCCC guidance on reporting adaptation contributions. The approach here will involve building the capacity of national teams that will be responsible for relevant reports under the ETF, including the Policy and Coordination Office of CCD and MAFF's TWG-CCAFF. In addition, the project will support the mainstreaming of reporting of adaptation actions into annual reporting by MAFF and MoE.
111. In addition to support provided under previous outputs, the project will help to build capacity to clarify reporting against adaptation targets through improved baselines and BAU projections covering projections for agricultural output.

### 1.3.3. Project assumptions

112. The achievement of the proposed project outcomes and outputs are dependent on the following assumptions (see also **Annex 1**, Results Framework):

Outcome / Output	Assumption
Output 1.1.1: Coordination mechanism strengthened, integrating relevant authorities from the agriculture and land use sector into national UNFCCC reporting processes	Strengthened coordination contributes to improved reporting
Output 1.1.2: National ETF monitoring and reporting roadmap for the agriculture and land-use sectors prepared and adopted	Ongoing commitment and financing to implement approved plan
Output 1.1.3: Capacity developed to clarify measurement and reporting of key NDC information (baselines, business-as-usual scenarios, targets) and support provided for ETF reporting in the agriculture and land-use sectors	Capacities are maintained and attrition is kept to a minimum
Output 1.1.4: Cambodia's engagement strengthened in the agriculture and land-use sectors with international transparency-related processes under the UNFCCC	MAFF is able to influence the NDC development process
Outcome 1.2: Best practices on ETF reporting processes, information gathering, system infrastructure, methodologies in the agriculture and land-use sectors disseminated to relevant priority sectors (e.g. energy, industry/trade, transportation).	Lessons taken up by other sectors will drive improvement in reporting by those sectors
Output 1.2.1: Multi-sectoral coordination mechanism strengthened, integrating relevant authorities, data and information systems into national UNFCCC reporting processes	Strengthened coordination contributes to improved reporting
Output 1.2.2: ETF lessons learned from agriculture and land-use sectors monitored, captured, up-scaled and shared to enhance wider national, regional and global reporting (e.g. via the Global Coordination Platform)	Cambodia's AFOLU-sector lessons prove valuable to other sectors
Output 1.2.3: Peer exchange program on transparency activities established for relevant priority sectors	Impacts of attrition (a.k.a. staff change) are kept to a minimum
Outcome 2.1: Reporting on inventories of emissions sources and sinks and mitigation activities from agriculture and land-use sectors strengthened	Enhanced reporting drives further effort towards strengthening and achieving mitigation ambition levels
Output 2.1.1: Regular and systematic documentation and archiving process established to ensure accuracy and sustainability of the inventory, including quality assurance and quality control, in the agriculture and land-use sectors	Enhanced QA and QC feeds into subsequent data gathering and reporting

Outcome / Output	Assumption
Output 2.1.2: GHG information management system (MIS) and infrastructure for agriculture and land-use sectors upgraded (interface w/ 3.1.3).	Data and information will be effectively integrated into reporting
Output 2.1.3: Capacity and system hardware developed for relevant institutions at different levels to adopt and mainstream latest tools and methodologies to: (i) develop country-specific emissions factors, (ii) improve activity data, and (iii) better quantify the impact of mitigation policy measures in the agriculture and land-use sectors (inter-face w/ 3.1.4).	Lessons from rice production emission factors can be adapted and subsequently transferred to other sectors
Output 2.1.4: National/sectoral reports prepared and submitted on inventory of emissions sources and sinks and emissions reduction activities from agriculture and land-use sectors consistent with latest UNFCCC guidance	Enhanced reporting on mitigation drives further effort towards strengthening and achieving mitigation ambition levels
Outcome 3.1: Monitoring and reporting of NDC priority adaptation actions in the agriculture and land-use sectors strengthened	Enhanced reporting on mitigation drives further effort towards strengthening and achieving mitigation ambition levels
Output 3.1.1: Assessment of relevant good practice methodologies and frameworks for monitoring and reporting NDC priority adaptation actions in the agriculture and land-use sectors	Selected methodologies are appropriate and lead to cost-efficient and sustainable improvements in practices
Output 3.1.2: National/sectoral appropriate indicators and monitoring and reporting framework developed for NDC priority adaptation actions in the agriculture and land-use sectors	Reporting provide a firm analytical basis for iterative adaptation planning and action
Output 3.1.3: Adaptation information management system (MIS) and system infrastructure for agriculture and land-use sectors upgraded (interface w/ 2.1.2)	Quality of data and information produced by existing data collection systems is sufficiently accurate and inter-comparable to be of value to the process
Output 3.1.4: Capacity and system infrastructure developed supporting relevant institutions at different levels to adopt and mainstream monitoring and reporting processes for NDC priority adaptation actions in the agriculture and land-use sectors (interface w/ 2.1.3)	Indicators and data collection requirements specified
Output 3.1.5: National reports prepared and submitted on priority adaptation activities in the agriculture and land-use sectors consistent with latest UNFCCC guidance.	Enhanced reporting on mitigation drives further effort towards strengthening and achieving mitigation ambition levels

## 1.4. Stakeholder engagement

### 1.4.1. Stakeholder identification

113. The project will be implemented in close cooperation with relevant stakeholders at the national, provincial and district levels. Key entities are described in **Table 9 below**.
114. In addition, specialized national and provincial agencies will be engaged to enhance data and information collection and coordination with the two ministries, MoE and MAFF and other relevant sectors as prioritized in the Cambodia's NDC.
115. Civil Society Organizations (CSOs) and research institutions have been and will continue to be engaged in the design and implementation of the project, including the baseline assessment and

stocktaking of the existing activities and systems. The institutional and coordination structure will consider including dissemination strategies for effective data management and reporting processes.

**Table 9: CBIT Project stakeholders and roles**

Agency	Role or mandate	Involvement in CBIT Project
Ministry of Environment (MoE)	<ul style="list-style-type: none"> <li>• GEF Operational Focal Point for Cambodia</li> <li>• Governing environmental protection, biodiversity conservation, rational and sustainable use of natural resources.</li> </ul>	<ul style="list-style-type: none"> <li>• Lead Executing Partner of the proposed Project.</li> <li>• Provide oversight, coordinate project planning and implementation.</li> <li>• Monitor the annual Project Implementation Reviews (PIR) and review missions and final evaluations of the Project.</li> </ul>
Ministry of Agriculture, Forestry and Fisheries (MAFF)	<ul style="list-style-type: none"> <li>• Governing activities of agriculture, forestry and the fishery sectors in the country which includes reporting on key NDC information in agriculture, forestry and other land-use (AFOLU) sectors.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide oversight, coordinate project planning and implementation.</li> <li>• Monitor the annual Project Implementation Reviews (PIR) and review missions and final evaluations of the Project.</li> </ul>
National Council for Sustainable Development (NCSD)	<ul style="list-style-type: none"> <li>• Inter-ministerial mechanism to prepare, coordinate, and monitor implementation of policies, strategies, plans and programs related to climate change.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide oversight, coordinate project planning and implementation.</li> <li>• Monitor the annual Project Implementation Reviews (PIR) and review missions and final evaluations of the Project.</li> </ul>
Climate Change Technical Working Group (CCTWG), NCSD	<ul style="list-style-type: none"> <li>• Providing coordination roles and technical supports to the NCSD to address climate change related issues, reviews and provides recommendations on any national reports including reports to be submitted to UNFCCC.</li> </ul>	<ul style="list-style-type: none"> <li>• Policy guidance, review and endorsement.</li> <li>• Co-lead with TWG-CCAFF for the Roadmap development</li> </ul>
Technical Working Group for Climate Change for Agriculture, Forestry and Fisheries (TWG-CCAFF), MAFF	<ul style="list-style-type: none"> <li>• Primary forum for climate change-related co-ordination within the agricultural sectors</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitate project activities by providing direct technical inputs</li> <li>• Facilitate in good coordination within the agriculture sector especially the TWG for AW and Forestry Reform.</li> <li>• Coordinate and pull together data and information related to emissions, mitigation and adaptation from the various sub-sectors for the purpose of ETF reporting</li> <li>• Co-lead with CCTWG for the Roadmap development</li> </ul>
General Department of Administration for Nature Conservation and Protection (GDANCP), MoE	<ul style="list-style-type: none"> <li>• Managing and facilitating biodiversity protection and conservation, and rational and sustainable use of natural resources within national protected areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide day-to-day guidance to the PMT and will ensure the timely delivery of inputs and dissemination and products</li> <li>• Participate in the meetings of the PSC and other relevant coordination mechanisms and will collaborate with the PMT in preparation of the annual work plan and budget (AWP/B), PPR and inputs for the PIR.</li> <li>• Engage on technical issues related forestry and REDD+ and within REDD+ task forces</li> <li>• Provide support for capacity building activities; particularly sharing experiences with REDD+, forest reference levels and MRV</li> </ul>

Agency	Role or mandate	Involvement in CBIT Project
Department of Climate Change, NCSD	<ul style="list-style-type: none"> <li>Coordinating the development and management of GHGs inventories, climate change related national reports, and monitoring Government's commitments under UNFCCC.</li> </ul>	<ul style="list-style-type: none"> <li>Lead agency for all coordination and decision-making on ETF issues</li> <li>Ensure inter-ministerial coordination within the Project as well as with other relevant TWGs.</li> <li>Overall lead in the implementation of Component 1 and integrating CBIT project learning into ETF activities of other relevant sectors</li> </ul>
General Directorate of Agriculture (GDA), MAFF	<ul style="list-style-type: none"> <li>Supporting the implementation and coordination of capacity development within the sector, and ensure that information and data from the agriculture and land-use sectors is collected and integrated</li> </ul>	<ul style="list-style-type: none"> <li>Engage and coordinate with agriculture stakeholders at national and provincial levels; and providing, data, information and technical advice with respect to the agriculture and land-use sectors.</li> <li>Will provide support to better coordinate extension support activities under the ASPIRE Programme</li> </ul>
Forestry Administration (FA), MAFF	<ul style="list-style-type: none"> <li>Development, technical support and regulation of forestry related activities with their mandates</li> </ul>	<ul style="list-style-type: none"> <li>Engage on technical issues related forestry and REDD+ and within REDD+ task forces</li> <li>Provide support for capacity building activities; particularly sharing experiences with REDD+, forest reference levels and MRV</li> </ul>
Department of Planning and Statistics (DPS), MAFF	<ul style="list-style-type: none"> <li>Coordinating, gathering data and reports from MAFF's technical departments/administrations as well as from sub-national offices, and managing the agricultural statistics within MAFF</li> </ul>	<ul style="list-style-type: none"> <li>Engage and coordinate with agriculture sub-sectors at national and provincial levels; and providing, data, information.</li> </ul>
National Institute of Statistics (NIS), Ministry of Planning,	<ul style="list-style-type: none"> <li>National official statistical institution, with mandate of compiling and consolidating statistics provided by decentralized offices and also collecting primary data through household establishment surveys and population, agriculture and economic censuses.</li> </ul>	<ul style="list-style-type: none"> <li>Facilitate data sharing</li> <li>Ensure close coordination between CBIT and AGRISurvey project.</li> </ul>
Ministry of Water Resources and Meteorology (MOWRAM)	<ul style="list-style-type: none"> <li>Addressing scientific and political issues related to water resources both domestic and international.</li> <li>Housing the Department of Meteorology, which manages the country's meteorological stations along with other related issues</li> </ul>	<ul style="list-style-type: none"> <li>Lead agency for engaging on technical issues related to water sector adaptation measures identified in the NDC</li> </ul>
Ministry of Women's Affairs (MOWA)	<ul style="list-style-type: none"> <li>Encouraging public institutions, civil society and the private sector to integrate gender equality into their policies and programs,</li> <li>Coordinating and facilitating for gender mainstreaming across government</li> </ul>	<ul style="list-style-type: none"> <li>Provide advice regarding integration of CBIT activities with MOWA's National Neary Rattanak Strategy of Ministry of Women's Affairs and the Gender Mainstreaming Policy and Strategy in the Agriculture Sector 2016-2020</li> </ul>
Cambodia Climate Change Alliance Programme Team	<ul style="list-style-type: none"> <li>Coordinating with a range of stakeholders engaged in climate change activities in Cambodia</li> </ul>	<ul style="list-style-type: none"> <li>Support for coordination activities being led by CCD and supplementary guidance on M&amp;E processes supported by the CCCA Programme and relevant for enhanced, economy-wide reporting</li> </ul>
Provincial departments of the Ministries of	<ul style="list-style-type: none"> <li>Implementation of national law, policy and actions at provincial level in terms of natural resources management and</li> </ul>	<ul style="list-style-type: none"> <li>Lead agencies for engaging with provincial level authorities to plan,</li> </ul>



Agency	Role or mandate	Involvement in CBIT Project
Environment and Agriculture, Forestry and Fisheries	protection, and agricultural development.	coordinate and implement field level monitoring and reporting activities <ul style="list-style-type: none"> <li>Responsible for coordinating and supporting capacity development, consultation and data collection at provincial levels</li> </ul>

## Stakeholder consultation

116. During the PPG phase, the following consultations were undertaken:

- Individual consultations with key government counterparts and development partners including General Secretariat for Sustainable Development (GSSD), Department of Climate Change (DCC), General Directorate of Administration for Nature Conservation and Protection (GDANCP), General Directorate of Environmental Protection and GEF focal point, Fisheries Administration (FiA), Forestry Administration (FA), Royal University of Agriculture (RUA), General Directorate of Agriculture (GDA), National Biodigester Programme (NBP), National Institute of Statistics (NIS), UNDP (Cambodia Climate Change Alliance-CCCA), Strategic Programme for Climate Resilience (SPCR), JICA, AFD, GGGI, ODC
- Joint consultations with GIZ, GERES, WCS and IRRI
- Inception and consultative workshop with 40 participants from a range of government agencies and development partners.
- Close technical discussion with IRRI specialist on GHG emission from rice
- A high level meeting with Chairman of the Technical Working Group for Climate Change for Agriculture, Forestry and Fisheries (TWG-CCAFF) and members of the TWG-CCAFF
- A validation workshop with key government agencies and development partners.
- Presentation of the project during Cambodia's NDC workshop.

117. During implementation, the project will continuously engage with the various stakeholders through consultations and the use of participatory methodologies and tools. Relevant stakeholders will participate both directly and indirectly in *inter alia*: i) the implementation of project interventions; ii) the M&E of project interventions; and iii) discussions focused on the success, improvement and sustainability of interventions.

### 1.4.2. Grievance mechanism

118. FAO facilitates the resolution of concerns of beneficiaries/stakeholders of FAO projects and programmes regarding alleged or potential violations of FAO's social and environmental commitments and safeguards. For this purpose, concerns may be communicated in accordance with the eligibility criteria, which apply to all FAO programmes and projects. Furthermore, these programmes and projects are required to publicise the mechanism for the receipt and handling of grievances at the local level.

### 1.4.3. Disclosure

119. The disclosure of relevant project information helps stakeholders to participate effectively. FAO will disclose information in a timely manner, before appraisal formally begins. The information disclosed will be accessible and culturally appropriate, placing due attention to the specific needs of community groups which may be affected by project implementation – such as literacy, gender, differences in language or accessibility of technical information or connectivity.



120. The project design was validated on 26 April 2018 in Phnom Penh, where governmental and non-governmental representatives contributed extensively to the project design. Prior to the validation workshop, an inception workshop was held in Phnom Penh on 15 December, 2018. During the interim period, the national consultants' team held multiple meetings with key stakeholders (see 1.4.2 above).

## 1.5. Alignment and strategic fit

### 1.5.1. Alignment to national policies

121. The proposed capacity building program is drawn directly from the priorities outlined in Cambodia's NDC, which is based upon existing national laws, regulations, and policies on issues related to climate change and the agriculture and land-use sectors. A number of these policies, such as the CCCSP and CPAP, are outlined in baseline section 1.2.3. The proposed CBIT project is also aligned with a number of additional policies related to sustainable development in the agriculture and land-use sectors. **Table 10** below presents key elements of the national policy framework within which the project will operate, together with a description of the manner in which the project activities and outputs will be mainstreamed therein.

**Table 10: Policy framework relevant for CBIT Cambodia**

Policy Framework	Description	Nature of project mainstreaming approach
<b>National Strategic Development Plan (2014-2018)</b>	NSDP, 2014-2018 is a Master Plan that elaborates priorities set by rectangular strategy III and follows by other key sectoral strategies and programmes to design to achieve the NSDP goals. Improved agricultural and natural resource management is one of the key priorities of NSDP.	The NSDP underpins the NDC and the present project will be relevant for monitoring the effective implementation of the NSDP as it relates to agriculture.
<b>Strategy for Agriculture and Water (SAW) (2010-2013)</b>	The SAW is a rolling, medium- to long-term program to guide the implementation of individual projects and actions aimed at improving food security and economic growth through: (i) enhancing agricultural productivity and diversification and (ii) improving water resource development and management. The CCPAP is underpinned by the SAW.	Monitoring and reporting systems developed under this CBIT project will be relevant for monitoring the effective implementation of the SAW.
<b>Agriculture Strategic Development Plan (ASDP) (2014-2018)</b>	The ASDP aims to contribute to poverty reduction, ensure enough & safe food availability for all people, through modernization of the agricultural sector based on a new approach and with changed scope and pace for accelerating agricultural economic growth, and sustainable natural resource management & conservation.	A key pillar of the ASDP is strengthening the institutional capacity and increasing efficient supporting services and human resource development, which is highly relevant to project activities.
<b>Green growth policy and national strategic action plan and the Green Growth Road Map, 2013-2030</b>	The National Strategic Plan on Green Growth (NSPGG) 2013-2030 was endorsed by the Council of Ministers in March 2013. It includes nine strategic directions, one of which is about Green Environment and Natural Resources, which further outlines eight strategies including: <ul style="list-style-type: none"> <li>- Green agriculture, food security, food safety and hygiene</li> <li>- Sustainable water resources management</li> <li>- Effective management of energy and renewable energy</li> </ul>	Monitoring and reporting systems developed under this CBIT project will be relevant for monitoring the effective implementation of the Green Growth Road Map as it relates to agriculture.

Policy Framework	Description	Nature of project mainstreaming approach
	<ul style="list-style-type: none"> <li>- Management of sustainable land use</li> <li>- Conservation and sustainable fisheries management</li> <li>- Infrastructure development and transportation</li> <li>- Green tourism development</li> <li>- Environmental quality control</li> </ul> <p>A number of actions listed in the NSPGG are relevant to adaptation and mitigation e.g. development and implementation of programs to respond to CC, sustainable land use management, implementation of REDD+, preparation of policy and legal frameworks for a system of payment for ecosystem services, conservation of natural resources etc.</p>	
<b>National Adaptation Programme of Action to Climate Change, 2006</b>	The National Adaptation Program of Action to Climate Change (NAPA) was endorsed by the Council of Ministers of the Royal Government of Cambodia on October 20, 2006. The main goal of the Cambodian NAPA is to provide a framework to guide the coordination and implementation of adaptation initiatives through a participatory approach, and to build synergies with other relevant environment and development programmes. Cambodia's NAPA presents priority projects to address the urgent and immediate needs and concerns of people at the grassroots level for adaptation to the adverse effects of CC in key sectors such as agriculture, water resources, coastal zone and human health. It encourages all concerned ministries and agencies to undertake their utmost efforts to integrate the priority projects identified in this National Programme into their respective sectoral plans. NAPA has identified 39 priority projects, 20 of which address the issues of agriculture and water resources.	The NAPA has informed priority actions identified in Cambodia's NDC. As a result, the present project will contribute to national efforts to better report progress toward NAPA priorities.
<b>National Environment Strategy and Action Plan (NESAP), 2016-2023 (final draft)</b>	The NESAP Strategic Goal is to leverage in-depth reform and modernization of the environmental and natural resources sustainability and sustained social and economic development through well-informed/planned and executed actions for improving resource use efficiency and productivity, sustainable financing mechanism, and reducing waste and pollution and improving human health and well-being.	Implementation of the CBIT project and development of enhanced monitoring and reporting of agriculture sector activities will help inform future strategies to reduce environmental impacts in the agriculture and land-use sectors.

### 1.5.2. Alignment to GEF priorities (focal areas and programmes)

122. The project follows closely the GEF Programming Directions for the Capacity-Building Initiative for Transparency (CBIT). This includes the elements identified in Table 11 below.

**Table 11: Correspondence with CBIT programming directions**

CBIT element	Project elements
Activities to strengthen national institutions for transparency-related activities in line with national priorities	<p>Component 1:</p> <p>Proposed project activities including: (i) validate the AFOLU stakeholder-coordination mapping and MRV assessment; (ii) capacitate key national AFOLU MRV focal point to facilitate greater coordination; and (iii) identify opportunities for inter-sectoral efficiencies and reduce redundancies in measurement and primary data storage.</p>
Activities to provide relevant tools, training, and assistance for meeting the provisions stipulated in Article 13	<p>Component 2:</p> <p>Proposed project activities including: (i) establish meta-data parameters; (ii) provide key stakeholders with the equipment and software necessary for decentralized data collection and storage; and (iii) conduct training of relevant stakeholders to enable measurement in line with CCMA regulations.</p>
Activities to assist with improvement of transparency over time	<p>Component 3:</p> <p>Proposed project activities including: (i) AFOLU MRV best practices shared with other sectors; (ii) conduct preliminary validations of proxy measures; and (iii) conduct adaptation-related measurements for prioritized indicators.</p>

### 1.5.3. Alignment to FAO priorities

123. The project aligns primarily with the **FAO Strategic Objective 2**, which is to increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner.

124. The project aligns with:

- a. **Organizational Outcome 2.3:** stakeholders endorse/adopt international (including regional) instruments and support related governance mechanisms for sustainable agricultural production systems;
- b. **Organizational Outcome 2.4:** stakeholders make evidence-based decisions in the planning and management of the agricultural sectors and natural resources to support the transition to sustainable agricultural sector production systems through monitoring, statistics, assessment and analysis.

125. In particular, the project will serve to deliver the following outputs:

- a. **Organizational Output 2.3.2:** capacities of institutions strengthened to implement policies and international instruments that foster sustainable production and address climate change and environmental degradation;
- b. **Organizational Output 2.4.2:** capacities of institutions are strengthened to collect, analyze and report data for decision-making on sustainable production, climate change and environmental degradation, including relevant SDGs, notably goals 2, 7, 12, 13, 14 and 15.

### 1.6. Comparative advantage

126. As the implementing entity of the proposed CBIT project, FAO will draw upon its deep technical understanding of the agriculture and land-use sectors and wide range of tools and

methods for development of emissions inventories, measuring and monitoring emissions from agriculture, land use and land-use change, agriculture and land-use MRV systems, quality assurance protocols and adaptation planning and monitoring.

127. FAO's Strategic Framework for 2010–2019 highlights the two main objectives of intensifying sustainable production to reduce hunger and poverty, as well as contribute towards the sustainable management and use of natural resources. In adopting this framework, FAO assists member countries in their pursuit of food security, sustainable rural livelihoods, equitable access to resources, and promotion of multi-disciplinary and ecosystem-based approaches to sustainable agriculture and rural development. FAO has a long history supporting member countries regarding sustainable land and water management, climate-smart agriculture and agro-biodiversity conservation. This support has been through a wide range of means including: i) complementary technologies and approaches; ii) assessments, equipment and tools; iii) geospatial and remote sensing facilities that cater for global, regional, national and local agricultural resources and monitoring systems; iv) training; v) information; vi) communications; vii) advisory services for institutional strengthening, viii) policy reforms; and ix) national programming.
128. As an intergovernmental body, FAO facilitates the promotion of sustainable traditional agricultural practices to its member constituencies, including CSOs. In addition, FAO continues to enhance awareness, knowledge and understanding of crop-associated biological diversity. FAO does this by providing ecosystem services to sustainable agricultural production through demonstrating methods for conservation, sustainable management of agro-biodiversity, and promoting the mainstreaming of biodiversity conservation into sectoral plans and policies. In this way, FAO is already playing a pivotal role in the management of natural resources through several initiatives and projects across Cambodia. The resulting experience and established network with the national partners in the country are important elements of FAO's comparative advantage to implement the proposed project.
129. FAO has considerable experience in developing and reinforcing countries' technical and institutional capacities, particularly considering institutional needs, as well as in promoting and facilitating dialogue, consultation and consensus processes with multiple stakeholders. FAO has recognized CD as a catalytic core functions to achieve its strategic results, is implementing a comprehensive corporate strategy and has developed cutting-edge normative and practical methodologies on human, institutional and systemic CD approaches to guide its member countries. Practical tools and methods include how to assess capacities, design appropriate CD interventions and track capacity results jointly with stakeholders. Moreover, a FAO track record of demonstrated expertise exists to integrate effective CD into climate change specific approaches and projects, including within Global Environmental facility (GEF).
130. FAO has specific expertise as a technical agency on the development of GHG-I tools, training materials and applications, such as:
  - OpenForis free and open-source software tools that facilitate flexible and efficient data collection, analysis and reporting;
  - OpenForis Collect Earth tool, developed initially in the context of REDD+ and refined through experience under the UN-REDD Programme, other REDD+ initiatives and adapted for application in the wider land use context;
  - The System for earth observations, data access, processing & analysis for land monitoring (SEPAL) allows users to access powerful cloud-computing resources to query, access and process satellite data quickly and efficiently for advanced analyses without heavy investment in information technology infrastructure.
  - FAO e-learning series "Building a sustainable national greenhouse gas inventory for Agriculture, Forestry and Other Land Use. A new FAO course to guide users towards estimating AFOLU emissions following 2006 IPCC Guidelines at Tier 1 Method, with

practical exercises to apply the acquired knowledge and information on the transition from revised 1996 IPCC 2000 GPG to 2006 IPCC.

- [EX-Ante Carbon balance Tool \(EX-ACT\)](#). An appraisal system that provides estimates of the impact of agriculture and forestry development projects, programmes and policies on the carbon-balance.

131. FAO's overall capacity in this area is globally recognized, for example, as a service provider through the World Bank's Forest Carbon Partnership Facility (FCPF). Technical contributions from the NFM/REDD+ team within FAO will therefore comprise an important part of the implementation approach of this project to not only maintain consistency with progress made on Forest/REDD+ MRV, but to expand this to a wider land use context.
132. The FAO representation in Cambodia is well-equipped to:
- responsibly manage (financially and administratively) the proposed project;
  - exert its role as a neutral platform and honest knowledge broker for national partners to share, discuss and evaluate viewpoints, helping to find common ground based on thematic data and findings;
  - deploy its networking capacity within FAO, the executive partners and other stakeholders nationally and locally to the benefit of the proposed project; and
  - use its unparalleled source of information and institutional memory, in particular in the areas of interest to the proposed project, including climate change, sustainable and integrated landscape approaches, climate change mitigation, biodiversity conservation and sustainable rangeland and forest management.
133. Therefore, FAO in Cambodia is able to respond to unforeseen needs of partners in order to achieve the expected proposed project results.

## **1.7. Lessons learned**

134. Various ministries, donor agencies and development partners in Cambodia have extensive experience in implementing different kinds of land management projects. Previous and ongoing initiatives have provided recommendations and lessons learned that have been incorporated into the activities and approaches of the proposed project. Furthermore, these initiatives have contributed to building capacity that can and will be applied for implementing proposed project activities.
135. Throughout the implementation period, the proposed project will benefit from regular engagement with other stakeholders and ongoing initiatives in order to coordinate activities, share information and explore further opportunities for collaboration. Examples and brief outlines of these projects and the respective lessons learned are detailed below.
136. Import progress within the AFOLU sector on Forestry has specifically been made through support of the UN-REDD national programme in Cambodia (UNJP/CMB/037/UNJ), Specific targeted support under the UN-REDD to support FREL/FRL development, and the Forest Carbon Partnership Facility project. The two main MRV related components required to prepare for REDD+ implementation have been established: a National Forest Monitoring System (NFMS) and a Forest Reference Level (FRL). A National MRV/REL Technical Team was established and appropriate national capacity build, including the production of national land use and land use change data (years 2006, 2010, 2014, 2016), infrastructure for forest data storage and sharing (webportal accessible under: <http://cambodia-nfms.org>) and the development of country specific emission factors for key forest categories.
137. Nonetheless the incremental improvement in data and capacities are necessary, for example the current land use data is insufficient to assess the full scale of forest degradation, and the full scale of agricultural land dynamics since the focus has been on forest and deforestation and agriculture

has been assessed only in broad categories. Further improvements are required to increase the capacity of agriculture decision making and reporting.

138. The project can also build on the experience of data sharing and reporting in the forest subsector. Cambodia has prepared and submitted its FRL to the UNFCCC, and technical assessment has taken place, with UNFCCC Technical assessment report published in April 2018. And under support of project TCP/CMB/3603/C1 FAO is providing support to the BUR Technical Annex (BUR-TA) preparations for REDD+ result reporting over the period 2015-2016. REDD+ is one of the actions highlighted in Cambodia's NDC.

## **2. FEASIBILITY**

### **2.1. Implementation and management arrangements**

#### **2.1.1. Operational Modalities**

139. The key institutions involved in the Project are the Ministry of Agriculture, Forestry and Fisheries (MAFF), and the Ministry of Environment (MOE), in particular the General Department of Administration for Nature Conservation and Protection (GDANCP), and General Secretariat for Sustainable Development (GSSD) of the National Council for Sustainable Development (NCSD), which hosts the Department of Climate Change (DCC). Other relevant stakeholders—such as the existing inter-ministerial-development partner groups including Climate Change Technical Working Group (CCTWG), Technical Working Group on Climate Change - Agriculture, Forestry and Fisheries (TWG-CAFF), TWG for Agriculture and Water, TWG for Forestry and TWG for Fisheries as well as the Ministry of Mines and Energy and the Ministry of Industry and Handicraft that are implicated by the Nationally Determined Contribution (NDC)—will also be part of the project implementation for coordination and scaling-up purposes.
140. As requested by the MOE, the Food and Agriculture Organization of the United Nations (FAO) will be the GEF Implementing Agency responsible for project oversight to ensure that project implementation adheres to GEF policies and criteria, and that the Project efficiently and effectively meets its objectives and achieves expected outcomes and outputs as outlined in the Project Document. FAO will report on Project progress to the GEF Secretariat and financial report will be submitted to the GEF Trustee. FAO will provide technical guidance by drawing upon its capacity at the global, regional and national levels, through the concerned units at FAO headquarters, the Regional Office in Bangkok and the FAO Representation in Cambodia and jointly supervise the Project with the national executing partners. The NFM/REDD+ team as well as MICCA team in HQ and RAP, will contribute specific technical inputs for project implementation, recognizing the specific capacity of FAO as a technical agency with a global mandate for provision of such services.
141. MOE will be the lead Executing Partner of the proposed Project, and the MAFF and NCSD will be the main Co-Executing Partners. Project Executing Partners will be responsible for ensuring coordination amongst the three project components, as well as coordination and collaboration with other partners, including relevant TWGs and participating ministries. Section 1.1.2 and **Annex 4** below provide further details regarding co-ordination and implementation responsibilities at the level of project components and, more specifically, indicative project activities.
142. DCC is responsible for formulation of draft climate change plans and policies and serves as secretariat to the Cambodian Government's focal points for United Nations Framework Convention on Climate Change (UNFCCC), the Intergovernmental Panel on Climate Change (IPCC), the Kyoto Protocol and the Clean Development Mechanism (CDM). DCC also coordinates inter-ministerial TWGs by sectors and themes (GHG inventory, mitigation,

vulnerability and adaptation, and UNFCCC implementation)<sup>51</sup>. DCC also supports the climate change activities of the NCSD and acts as the coordinating agency for UNFCCC reporting.

143. MAFF is responsible for governing activities of agriculture, forestry and the fishery sectors in the country which includes reporting on key NDC information in agriculture, forestry and other land-use (AFOLU) sectors. MAFF's relevant departments will participate in the project activities.

144. FAO, MOE and MAFF, within the project framework, will collaborate with other GEF Implementing Agencies and development partners that are implementing relevant programs and projects to enhance synergies. Collaboration will be undertaken through: (i) informal communications; and (ii) exchange of information. The project will coordinate actions with the following GEF-financed projects and other programs<sup>52</sup>:

- Strengthening the adaptive capacity and resilience of agriculture-dependent communities using micro-watershed approaches to deal with the adverse effects of climate change and extreme weather on a landscape scale (2013-2018), GEF-FAO. USD 5 million.
- Forest and Landscape Restoration (FLR) Mechanism Project (2016-2019), FAO USD 416,820.
- TCP/CMB/3602 - National Soil Information and Land Suitability Evaluation System for Cambodia, (2016-2019), FAO. USD 300,000.
- TCP/RAS/3604: Addressing the 2030 Agenda on climate change and food security through Climate-Smart Agriculture, (2017-2018), FAO, USD 496,000
- Pipeline project on Cambodia Inter-Censal Agricultural Survey (2018-2019), FAO. USD 1.7 million. (Approx.).
- Cambodia Climate Change Alliance (CCCA) (2014-2019), UNDP. USD 13.18 million.
- Forest Carbon Partnership Facility II (2017-2020), UNDP. USD 5.5 million.
- Agriculture Services Programme for Innovation, Resilience and Extension (ASPIRE) Programme (2014-2021), IFAD. USD 52.5 million.
- National Bio-digester Programme (NBP)
- Mainstreaming Climate Resilience into Development Planning (2012-2019), ADB.
- Climate Finance Readiness Programme (2015-2018), USAID and GIZ.
- Generating Accessing and Using Information and Knowledge Related to the three Rio Conventions (2015-2018), GEF-UNDP, USD 0.99 million.
- GEF-UNEP preparation of BUR and TNC.
- Initiative for Climate Action Transparency (ICAT) (2018-2019), UNEP, DTU

### 2.1.2. Institutional framework and coordination

145. A **Project Steering Committee (PSC)** will provide oversight of, and coordinate the planning of, project implementation. The PSC will comprise of MOE, MAFF, NCSD, MME, MIH, MoP and FAO. The PSC will meet twice annually to:

- Provide guidance to the Project Management Team (PMT) to ensure project implementation is in accordance with the project document;
- Review and approve any proposed revisions to the project results framework and implementation arrangements;
- Review, amend (if appropriate) and endorse all Annual Work Plans and Budgets;
- Review project progress and achievement of planned results as presented in six-monthly PPRs, PIRs and Financial Reports;
- Ensure that co-financing support will be available on time;

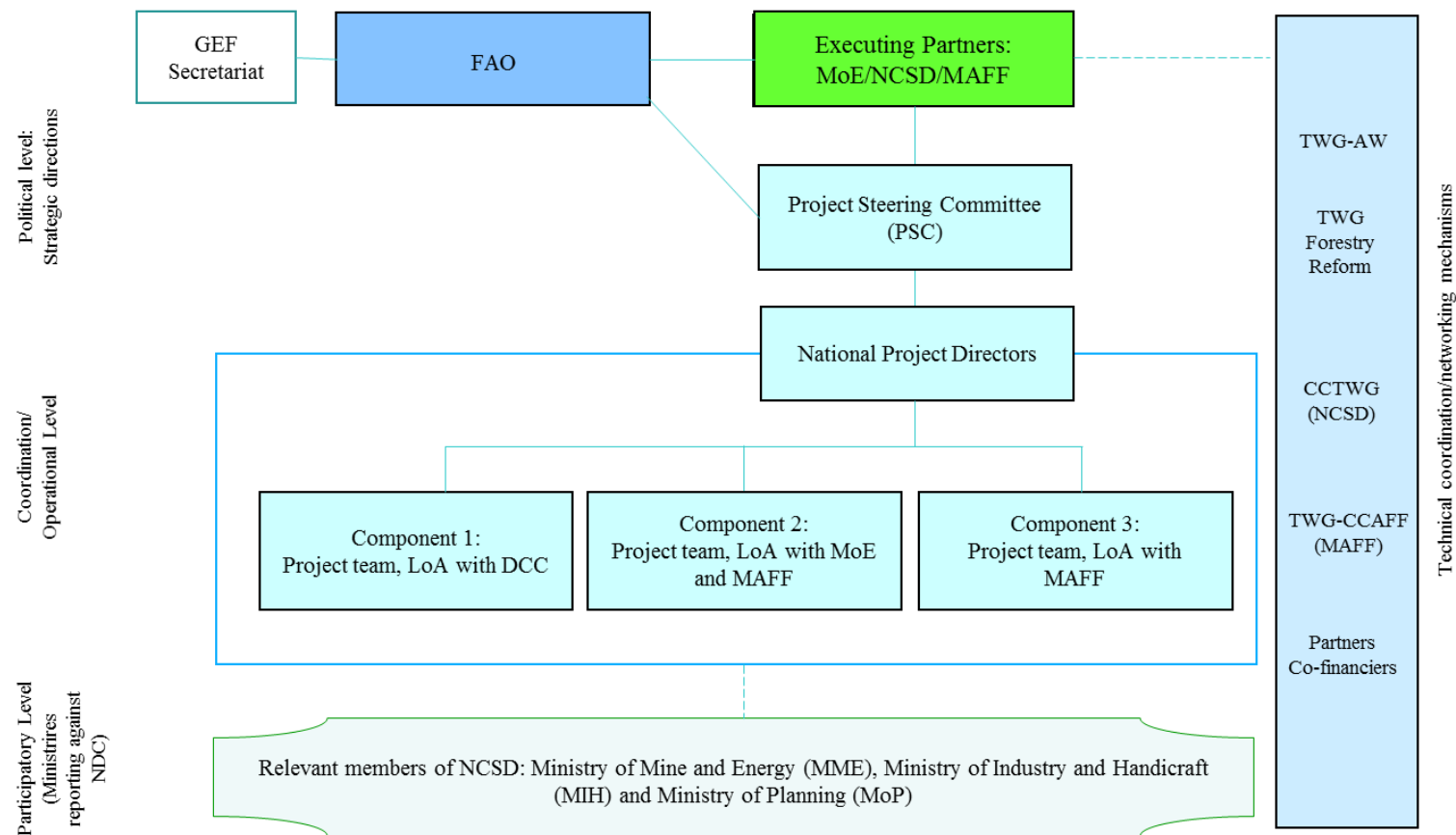
<sup>51</sup> Royal Cambodian Government, 2015, *op. cit.*

<sup>52</sup> See Section 1.2.3 for a more detailed description of projects.

- Advise on issues and problems arising during project implementation;
  - Facilitate cooperation between all project partners and facilitate collaboration between the Project and other relevant programmes, projects and initiatives in the country; and
  - Approve ToRs for final evaluations.
146. Each member of the PSC, including the executing and co-executing partners, will designate a **Focal Point** for the Project from their respective agencies. Hence, the project will have a Focal Point in each concerned institution. As Focal Points in their agency, the concerned PSC members will: (i) technically oversee activities in their sector, (ii) ensure a fluid two-way exchange of information and knowledge between their agency and the project, (iii) facilitate coordination and links between the project activities and the work plan of their agency, and (iv) facilitate the provision of co-financing to the project.
147. Day-to-day project management and coordination will be the responsibility of a **Project Management Team (PMT)** made up of short- and long-term project staff/consultants. The PMT will be headed by a **National Project Coordinator (NPC)**, who will be responsible for decision-making, providing guidance and supervising short-term consultants and execution of work taking place under **Letters of Agreement (LoAs)**. The PMT will ensure coordination and collaboration between the project and other initiatives with corresponding actions and results described in the Project Progress Reports (PPRs).
148. The MOE will designate a **National Project Director (NPD)**, who will be responsible for supervising and guiding the work of the PMT, particularly with respect to adherence with government policies and priorities. He/she will also be responsible for coordinating the activities with all relevant project stakeholders related to the different project components. He/she will be responsible for requesting FAO the timely disbursement of GEF resources that will allow the execution of project activities in accordance with the approved AWP/B for the current project year.



## Institutional Arrangements for Project Implementation



**Figure 7: Institutional Arrangements for Project Implementation**

149. **FAO** will be the GEF Agency of the Project. As such FAO will supervise and provide technical guidance for the entire project implementation phase. Administration of the GEF-financed projects will be in compliance with the rules and procedures of FAO and in accordance with the agreement between FAO and the GEF Trustee. The key responsibilities include:

- Administrate funds from the GEF in accordance with the rules and procedures of FAO;
- Oversee project implementation in accordance with the Project Document, AWP/B, agreements with co-financers and the rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned;
- Provide targeted technical advisory services as a key part of the implementation approach of the project;
- Carry out at least one supervision mission per year; and
- Report to the GEF Secretariat and Evaluation Office, through the annual PIR on project progress and provide financial reports to the GEF Trustee.

150. Based on a request from the Government, FAO will provide direct support services of the GEF resources including procurement and contracting services, fully embedded in the PMC of the project. FAO will provide six-monthly financial reports including a statement of project expenditures to the Project Steering Committee (PSC). In accordance with the present project document, progress in the financial execution of the project, and the AWP/B approved by the PSC, FAO will prepare budget revisions to maintain the budget current in the financial management system of FAO. The budget revisions will be provided to the PSC to facilitate project planning and execution. FAO will, in collaboration with MOE and the PSC, participate in the planning and execution of contracting and procurement processes.

## **Project Execution**

151. The **Ministry of Environment (MOE)**, which hosts the GEF Operational Focal Point for Cambodia, will act as the lead Executing Partner for the proposed Project. MoE has performed a similar role in other projects under multilateral environmental agreements. As a member of the PSC, MOE will be responsible for coordinating both the local and international stakeholders for implementation of the proposed project as well as all other identified aligned initiatives. MOE will ensure that proposed project activities are undertaken in alignment with national environmental law and strategies, in particular Cambodia's NDC under the Paris Agreement. The specific responsibility of the MOE in this Project will be monitoring the annual Project Implementation Reviews (PIR) and to participate in review missions and the final evaluation of the Project. The specific roles of the three executing partners may be summarized as follows:

- MoE's **General Directorate of Administration for Nature Conservation and Protection (GDANCP)** will host the NPC, coordinate relevant aspects of Component 2 and participate in the execution of components 1 and 2 through an LoA (for details, see Annex 4). GDANCP, which also hosts the REDD+ MRV team, will also play a key role in collaborating with relevant MoE offices, MAFF and other partners and will participate in meetings of the PSC and other relevant coordination mechanisms.
- **MAFF's General Directorate for Agriculture (GDA)** will coordinate Component 3 and relevant aspects of Component 2 and will participate in the execution of components 1-3 through an LoA (for details, see Annex 4). **MAFF's CC Working Group** will facilitate project activities by providing direct technical inputs to the proposed Project, through liaising with the PMT and the NPD. The Group will also facilitate in good coordination within the agriculture sector especially the TWG for AW and Forestry Reform.
- **NCSD's Department of Climate Change (DCC)** will ensure inter-ministerial coordination within the Project as well as with other relevant TWGs. DCC will be the

lead agency in the implementation of Component 1 and will participate in its execution through a LoA (see Annex 4). It will also participate in meetings of the PSC and other relevant coordination mechanisms and will collaborate with the PMT and other executing partners in preparation of the AWP/B, PPR and inputs for the PIR. DCC will also coordinate with climate-change related projects of MoE and NCSD for strengthened coordination and co-financing.

152. MOE, MAFF and NCSD have a number of programs, projects, initiatives and entities under their responsibility that align with, and will provide insight to, the Project. MAFF's leading role in data collection, analysis and reporting on the AFOLU sectors against NDC targets is particularly important here. Close coordination and collaboration amongst the key project stakeholders will be crucial for effective project implementation.
153. As noted above, Project execution will be led by a **Project Management Team (PMT)** made up of short and long-term project staff/consultants. The PMT will include two long-term and decentralized staff: (i) the National Project Coordinator (NPC), who will be stationed in MoE and, in addition to overall coordination, will be directly responsible for activities, deliverables and Letters of Agreement (LoAs) related to MoE and NCSD; (ii) an AFOLU Technical Expert (ATE), who will be stationed in MAFF and will have direct responsibility for MAFF-related activities, deliverables and LoAs.
154. Under the leadership of the NPC, the PMT will be responsible for day-to-day project execution. The main responsibility of the PMT, following the directives and decision of the PSC and under the supervision of the NPD/Budget Holder (BH), is to ensure coordination and execution of the Project through the rigorous and effective implementation of the AWP/B.
155. The **Administrative and Finance Officer** (part-time) will be responsible for the day-to-day financial management and operation of the project including raising contracts and procure necessary inputs in accordance with the AWP/B. The Officer will work in close consultation with the NPD, NPM, Budget Holder (BH), Lead Technical Officer (LTO) and executing partners, particularly with MOE, DCC, MAFF and FAO Representation in Cambodia, and will take the operational responsibility for timely delivery of required inputs to produce project outputs.
156. **Co-financed government officials** will be appointed by MAFF, MOE, NCSD and other relevant Ministries reporting against the NDC. These officials will devote part of their work time to achieve project outputs and outcomes. Other key line ministries including Ministry of Mine and Energy (MME), Ministry of Industry and Handicraft (MIH) and Ministry of Planning (MoP) will facilitate support and regular participation in the project.
157. Other key line ministries including Ministry of Mine and Energy (MME), Ministry of Industry and Handicraft (MIH) and Ministry of Planning (MoP) will facilitate support and regular participation in the project.

## **The GEF Agency**

158. The roles and responsibilities of FAO staff are regulated by the *FAO Guide to the Project Cycle, Quality for Results, 2015*, Annex 4: Roles and Responsibilities of the Project Task Force Members, and its updates.
159. The FAO Representative in Cambodia will be the **Budget Holder (BH)** and responsible within FAO for the management of the GEF resources. As a first step at the project start-up, the FAO Representation in Cambodia will establish an interdisciplinary Project Task Force (PTF) within FAO to guide the implementation of the project. In consultation with the LTO, the BH will be responsible for timely operational, administrative and financial management of the GEF project resources, including in particular: (i) contracting and procurement processes based on the request from MOE and other applicable institution and in accordance with the approved AWP/B; (ii) process the payments corresponding to delivery of goods, services and technical products based on the prior clearance of the same by MOE as applicable in each case; (iii) provide six-monthly

financial reports including a statement of project expenditures to PSC; and (iv) at least one time per year or more frequent if required, prepare budget revisions for submission to FAO-GEF Coordination Unit for approval. The FAO Representation in Cambodia will work in close consultation with MOE, MAFF, the FAO Lead Technical Unit (LTU), the LTO, and the FAO-GEF Coordination Unit for the management of GEF resources.

160. The FAO Representative will in consultation with the LTU, LTO and the FAO-GEF Coordination Unit and provide no-objection to AWP/B submitted by the PMT as well as to the PPRs which should be approved by the LTO before they are submitted to the FAO-GEF Coordination Unit for final approval and upload in the corporate system, Filed Programme Management Information System (FPMIS).
161. The **FAO Lead Technical Unit (LTU)** will be the Regional Office for Asia and the Pacific located in Bangkok, Thailand. The LTU will designate a Lead Technical Officer (LTO) for the project, with experience in sustainable forest management and integrated landscape management.
162. Under the general technical oversight of the LTU, the **Lead Technical Officer (LTO)** will provide technical guidance to the project team to ensure delivery of quality technical outputs. The LTO will coordinate the provision of appropriate technical backstopping from all the concerned FAO units represented in the Project Task Force responding to requests from the NPG and the Project Management Committee. The Project Task Force is thus composed of technical officers from the participating FAO units and of operational officers and is chaired by the BH. The LTO, supported by the LTU when needed, will be responsible for:
  - Review and provide no-objection to TORs for consultancies and contracts to be performed under the project, and to CVs and technical proposals short-listed by the PMT for key project positions, goods, minor works, and services to be financed by GEF resources;
  - Supported by the FAO Representation in Cambodia, in particular by the NPM, review and clear final technical products delivered by consultants and contract holders financed by GEF resources before the final payment can be processed;
  - Assist with review and provision of technical comments to draft technical products/reports on request from the PMT/PSC during project execution;
  - Review and approve project progress reports submitted by the PMT, in coordination with the BH;
  - Support the FAO Representative in reviewing, revising and providing no-objection to AWP/B submitted by the PMT for approval by the PSC;
  - Prepare the annual PIR report, supported by the PMT with inputs from the PSC and other partners, which will be presented to the BH and the FAO-GEF Coordination Unit for approval, finalization and submission to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The LTO must ensure that the relevant partners have submitted information on co-financing provided during the course of the year for inclusion in the PIR;
  - Undertake a supervision mission at least once a year, and;
  - Review the TORs for the final evaluation; participate in the mission including the final workshop with all key project stakeholders, development and follow-up to recommendations on how to ensure sustainability of project outputs and results after the end of the project.
163. The **FAO-GEF Coordination Unit** will act as **Funding Liaison Officer (FLO)** which will review and approve PPRs, project reviews, financial reports, and budget revisions based on the AWP/B. The Unit will also review and clear the annual PIR and undertake supervision missions if considered necessary. The PIRs will be included in the FAO-GEF Annual Monitoring Review submitted to the GEF by the Unit. The Unit will also participate in final evaluations and the development of corrective actions in the project implementation strategy in the case needed to mitigate eventual risks affecting the timely and effective implementation of the project. The Unit will in collaboration with the FAO Finance Division request transfer of project funds from the GEF Trustee based on six-monthly projections of funds needed.

164. The **FAO Finance Division** will provide annual Financial Reports to the GEF Trustee and, in collaboration with the FAO-GEF Coordination Unit, request project funds on a six-monthly basis to the GEF Trustee.

## 2.2. Planning and financial management

165. The total cost of the project is USD 2,994,573, of which USD 863,242 will be financed with a grant from the GEF.

### 2.2.1. Financial plan (by components, outcome and co-financiers)

166. Error! Reference source not found. presents the cost per component, outcomes and source of funding based on the confirmed co-financing. All co-financing letters are found in **Annex 9**.  
FAO, as a GEF agency, will be responsible only for the execution of GEF resources and FAO co-financing.

**Table 12: Financial plan by components, outcome and co-financier**

Institution	MoE	MAFF	ICAT	FAO	Total Co-financing	GEF	Total Project financing
<b>Component 1:</b>							
<b>Outcome 1.1</b>	11,787	15,493	24,639	368,184	420,103	170,152	590,255
<b>Outcome 1.2</b>	11,399	14,983	23,828	356,067	406,276	164,551	570,828
<b>Component 2:</b>	15,589	20,490	32,585	486,936	555,600	225,032	780,631
<b>Component 3:</b>	15,589	20,489	32,585	486,931	555,594	225,030	780,624
<b>PMC</b>	5,436	7,145	11,363	169,813	193,758	78,477	272,235
<b>Total Project</b>	<b>59,800</b>	<b>78,600</b>	<b>125,000</b>	<b>1,867,931</b>	<b>2,131,331</b>	<b>863,242</b>	<b>2,994,573</b>

### 2.2.2. GEF Contribution

167. The GEF contribution will support the following: i) hiring full time and part-time consultants that will form part of the PMT; ii) transfers of resources that will be made through Letters of Agreements (LoAs) and/or service contracting; iii) procurements, iv) communications; v) training; vi) travel and vii) activities related to project monitoring and evaluation.

### 2.2.3. Government Contribution

168. The Government's financial contribution will be in kind and will consist of the following: i) government officials' time assigned to the CBIT project; ii) office space, meeting services and supplies; and iii) vehicle and general office expenses.

### 2.2.4. FAO Contribution

169. FAO will provide cash contributions amounting to USD 1,867,931, which will consist of the following 6 projects:

- i. Technical Cooperation Programme TCP/CMB/3602 *National Soil Information and Land Suitability Evaluation System for Cambodia*, USD 128,901
- ii. FAO-UNFA/CMB/041/UND *Establishment of a National Forest Monitoring System for Reducing Emissions from Deforestation and Degradation-plus (REDD+) readiness in Cambodia*, USD 350,031
- iii. Technical Cooperation Programme (TCP) on *Support to the Cambodia Intra-Censal Agricultural Survey (CIAS) 2018*, USD 300,000
- iv. TCP/CMB/3603 *Strengthening Cambodian Land Use and Land Use Change and Forestry (LULUCF) and REDD+ reporting capacity*, USD 40,999

- v. TCP/RAS/3604 *Addressing the 2030 Agenda on climate change and food security through Climate-Smart Agriculture*, USD 48,000
  - vi. GLO/677/USA *Implementation of Agricultural Integrated Surveys (AGRIS)* which initiated the project formulation in April 2018, USD 1,000,000.
170. In addition, the Initiative for Climate Change Action Transparency which aims to implement activities in 20 countries including Cambodia, will provide cash contribution amounting to USD 125,000 from the project budget allocated for Cambodia.

#### **2.2.5. Financial management of and reporting on GEF resources**

171. All financial management and reporting in relation to the GEF resources will be carried out in accordance with FAO's rules and procedures for the implementation of projects under FAO's direct execution.
172. **Financial Records**: FAO shall maintain a separate account in USD for the Project's GEF resources showing all income and expenditures. Expenditures incurred in a currency other than US\$ shall be converted into US\$ at the United Nations operational rate of exchange on the date of the transaction. FAO shall administer the Project in accordance with its regulations, rules, and directives.
173. **Financial Reports**: The BH shall prepare six-monthly project expenditure accounts and final accounts for the Project, showing amount budgeted for the year, amount expended since the beginning of the year, and separately, the un-liquidated obligations as follows:
- *Annually*: Details of project expenditures on a component-by-component and output-by-output basis, reported in line with project budget codes as set out in the Project document, as at 30 June and 31 December each year.
  - *Final report*: Final accounts on completion of the Project on a component-by-component and output-by-output basis, reported in line with project budget codes as set out in the Project document.
  - *A final statement of account* in line with FAO Oracle Project budget codes, reflecting actual final expenditures under the Project, when all obligations have been liquidated.
174. Financial reports for submission to the donor (GEF) will be prepared in accordance with the provisions in the GEF Financial Procedures Agreement and submitted by the FAO Finance Division
175. **Budget Revisions**: Budget revisions will be prepared by the BH in accordance with FAO standard guidelines and procedures as needed. The budget revision will take into consideration the status of the implementation of the Project activities towards achieving specific outputs and outcomes. The budget revision will be submitted by BH through FPMIS. The budget revision should be prepared based on field needs and the agreed AWP. The National Project Manager (NPM) normally prepares the draft budget revision in consultation with the National Project Director and LTO for their reviews and submits to BH, and then BH will submit the budget revision to FAO/GEF Coordination Unit for approval. Budgets are the costed equivalent of the work plan in that they foresee the transformation of inputs into activities and activities into outputs. Budget management, monitoring, and revision are the responsibility of the BH and constitute a substantive, integral, and essential component of project management. The BH is required to carry out at least two budget revisions per year in full consultation with the FAO Project Technical Task Force: (i) in March following the corporate equalization process (explained in the following paragraph), and (ii) in September/October to support work-planning for the following year, to ensure that expenditures that have occurred in the year are adequately covered by the corresponding budget.
176. **Responsibility for Cost Overruns**: The BH is authorized to enter into commitments or incur expenditures up to a maximum of 20 percent over and above the annual amount foreseen in the project budget under any budget sub-line provided the total cost of the annual budget is not exceeded.

177. Any cost overrun (expenditure in excess of the budgeted amount) on a specific budget sub-line over and above the 20 percent flexibility should be discussed with the FAO/GEF Coordination Unit with a view to ascertaining whether it will involve a major change in project scope or design. If it is deemed a minor change, the BH shall prepare a budget revision in accordance with FAO standard procedures. If it involves a major change in the project's objectives or scope, a budget revision and justification should be prepared by the BH for discussion with the GEF Secretariat.
178. Savings in one budget sub-line may not be applied to overruns of more than 20 percent in other sub-lines even if the total cost remains unchanged, unless this is specifically authorized by the GEF Coordination Unit upon presentation of the request. In such a case, a revision to the Project document amending the budget will be prepared by the BH. Under no circumstances can expenditures exceed the approved total Project's budget or be approved beyond the NTE date of the project. Any over-expenditure is the responsibility of the BH.
179. **Audit:** The Project shall be subject to the internal and external auditing procedures provided for in FAO financial regulations, rules, and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO. The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the Governing Bodies of the Organization and reporting directly to them, and an internal audit function headed by the FAO Inspector-General who reports directly to the Director-General. This function operates as an integral part of the Organization under policies established by senior management, and furthermore has a reporting line to the governing bodies. Both functions are required under the Basic Texts of FAO, which establish a framework for the terms of reference of each. Internal audits of accounts, records, bank reconciliation, and asset verification take place at FAO field and liaison offices on a cyclical basis.

### 2.3. Procurement

180. Careful procurement planning is necessary for securing goods, services and works in a timely manner, on a "Best Value for Money" basis. It requires analysis of needs and constraints, including forecast of the reasonable timeframe required to execute the procurement process. Procurement and delivery of inputs in technical cooperation projects will follow FAO's rules and regulations for the procurement of supplies, equipment, and services (i.e. Manual Sections 502 and 507). Manual Section 502: "Procurement of Goods, Works and Services" establishes the principles and procedures that apply to procurement of all goods, works and services on behalf of the Organization, in all offices and in all locations, with the exception of the procurement actions described in Procurement Not Governed by Manual Section 502. Manual Section 507 establishes the principles and rules that govern the use of Letters of Agreement by FAO for the timely acquisition of services from eligible entities in a transparent and impartial manner, taking into consideration economy and efficiency to achieve an optimum combination of expected whole life costs and benefits.
181. As per the guidance in FAO's Project Cycle Guide, the BH will draw up an annual procurement plan for major items, in collaboration with PMT, which will be the basis of requests for procurement actions during implementation. The first procurement plan will be prepared at the time of project start-up, if not sooner, in close consultation with the National Operations Officers, Administration and Finance Officer (AFO), the NPC and the LTO. The plan will include a description of the goods, works, or services to be procured, estimated budget and source of funding, schedule of procurement activities and proposed method of procurement. In situations where exact information is not yet available, the procurement plan should at least contain reasonable projections that will be corrected as information becomes available.
182. The procurement plan shall be updated in consultation with the National Project Director every 12 months and submitted to BH and LTO for clearance, together with the AWP/B and annual financial statement of expenditures report for the next instalment of funds.

183. The BH, in close collaboration with the National Operations Officers, the NPC, and the LTO will procure the equipment and services provided for in the detailed budget in Annex, in line with the AWP/Bs and in accordance with FAO's rules and regulations.
184. The BH for extra budgetary funds is responsible for development and submission of a Procurement Plan for use of the extra budgetary funds based on reasonable estimates of annual requirements or as soon as possible after identifying new requirements (which may be at the time of finalization of the project documents).
185. **Letters of Agreement** (LoAs) will be signed between FAO and several executing partners /service providers for the implementation of proposed project activities. The Terms of References of services to be delivered by executing partners /service providers for LOAs will be prepared by the project staff in consultation with NPD. The FAO BH, together with the FAO Lead Technical Officer (LTO) in the FAO Regional Office for Asia-Pacific (RAP), will be responsible for setting up all necessary LoAs to be defined at the inception phase of project implementation. The LoAs will be administratively managed by the BH. The funds received by the executing partners / service providers, as part of the LoA, will be used to carry out proposed project activities ensuring alignment and conforming to the rules and procedures of FAO.

## 2.4. Risk management

### 2.4.1. Significant risks

186. No significant risks have been identified for the proposed project.

### 2.4.2. Environmental and social risks

187. As per the FAO Project Environmental and Social Screening<sup>53</sup>, the proposed project falls into the *Low* Category of FAO's Environmental and Social Risk Classification system. Therefore, for those environmental and social safeguards for which potential risks may arise, a mitigation plan including detailed descriptions of mitigation measures has been developed. A summary of these mitigation measures is included in **Table 13**<sup>54</sup>.

**Table 13: Risks to CBIT project implementation and measures to address them**

No.	Description of risks	Types of risks	Probability and Impact (Scale 1-5)	Measures to address the risks
1	Lack of political will to support the project activities due to change government	Political	P=2 I=5	Cambodia has now ratified the Paris Agreement and submitted its first NDC. This implies that the government at all levels and across all sectors is full committed to implementation of the Paris Agreement and associated ETF requirements. To safeguard against changes in momentum associated with changes in key government posts risk management measures will include awareness raising among key decision makers combined with a strong stakeholder involvement plan.
2	Lack of coordination among concerned ministries and local government authorities	Organizational	P=3 I=4	To address risks associated with coordination the project will work through existing coordination mechanisms such as the CCCSP and the CCCA. Clear project institutional arrangements that specify roles and responsibilities of those concerned will be

<sup>53</sup> The Project Environmental and Social and Risk Management Plan has been included in Annex.

<sup>54</sup> See the Project Risk Certification in **Annex 7**.



No.	Description of risks	Types of risks	Probability and Impact (Scale 1-5)	Measures to address the risks
				reinforced by working through these existing mechanisms.
3	Limited cooperation on data and information sharing among stakeholders	Organizational	P=3 I=5	To address risks associated with data management, consultation and data system assessments will be crucial elements of activities under Outputs 2.1.2 and 3.1.3. The project will also build on existing systems where possible developed for REDD+ with respect to mitigation and for NAP and ADB with respect to adaptation. Clear agreement of the stakeholders to collect and hand over required data and information.
4	Inability for the government to fund the ETF related activities beyond the project cycle	Financial	P=4 I=4	The proposed CBIT project will include measures to mainstream ETF activities into government budgetary and extra-budgetary processes. It will be proposed that ETF reporting be incorporated into current and future CPAP processes.
5	Gender mainstreaming hindered by resistance from local and national stakeholders	Cultural	P=3 I=3	Clear initial communication on gender equality as one of the key monitoring element for tracking progress of the project – particularly with respect to adaptation monitoring and reporting and co-benefits.
6	Transparency related work loses momentum as the Paris Agreement is not adopted	Political	P=1 I=4	See risk 1 above. To address this issue CBIT project activities will focus on the potential positive externalities associated with improved data collection, monitoring and reporting of agriculture and land-use sector mitigation and adaptation activities. These could include more effective targeting of initiatives to improve farm and land-use efficiency and strengthen rural resilience. This ‘no-regrets’ approach will aim to highlight the need for and benefits of this transparency work that will go beyond the lifetime of the Paris Agreement.

## 2.5. Monitoring, reporting and evaluation

188. Oversight of the proposed project will be carried out by the Project Steering Committee (PSC), the PMT, the FAO GEF Coordination Unit, the FAO Office of Evaluation (OED) and relevant FAO Technical Units. Oversight will ensure that: i) proposed project outputs are produced in accordance with the finalised and approved project results framework, leading to achievement of project outcomes; ii) outcomes of the proposed project are in line and leading towards the achievement of the project objective; iii) identified, as well as unidentified, risks are continuously monitored and appropriate mitigation strategies are applied; and iv) the agreed global environmental and adaptation benefits of the proposed project are being delivered under its implementation.

189. The FAO GEF Unit and FAO Technical Units will provide oversight of GEF-financed activities, outputs and outcomes, largely through the annual Project Implementation Reports (PIRs), periodic backstopping and supervision missions.

190. The BH, in consultation with the national M&E expert, FAO Project Task Force (PTF) and FAO Office of Evaluation (OED), and with concurrence of the Project Steering Committee, will field an independent Terminal Evaluation (TE) of the Project.

### **2.5.1. Monitoring and reporting**

191. Project monitoring will be carried out by the PMT and the FAO Budget Holder, with support from the PTF members. Monitoring of the FAO GEF Portfolio will be ensured by the GEF Funding Liaison Unit.
192. Project performance will be assessed based on delivery of project outputs and achievement of project outcomes and the project objective defined in the results matrix. The Inception Report, the subsequent six-monthly Project Progress Reports (PPRs), the annual Project Implementation Reviews (PIRs) and the project Terminal Report will be the main reports used by the PTF to monitor project progress and evaluate results.
193. The inception phase of the project (i.e. the first six months after the project has become operationally active) will focus on:
- Recruitment of the PMT;
  - Setting up the PSC;
  - Review of the project logical framework and results matrix to take into account any changes that have taken place from project approval to start of project implementation. In particular, indicators (and related baseline and targets) will be finalised;
  - Develop an annual work plan and budget to be reviewed and approved by the PSC;
  - Develop a detailed M&E plan, which builds on the project logical framework, results matrix and annual work plan and budget, defining specific requirements for each indicator (data collection methods, frequency, responsibilities for data collection and analysis and budget);
  - Prepare and submit a Project Inception Report.
194. Performance of the proposed project will be monitored using the project results framework, including indicators (baseline and targets) and AWP/Bs. At the inception phase of project implementation, the results framework will be reviewed to finalize identification of: i) outputs ii) indicators; and iii) any missing baseline information and targets. A detailed M&E plan, which builds on the results framework and defines specific requirements for each indicator (i.e. data collection methods, frequency, responsibilities for data collection and analysis) will also be developed during the inception phase of the proposed project by the NPC.
195. The specific project-level reports to be prepared for the Project are:
- i) Project Inception Report;
  - ii) Annual Work Plan and Budget (AWP/B);
  - iii) Project Progress Reports (PPRs) for FAO;
  - iv) Annual Project Implementation Reviews (PIRs) for the GEF;
  - v) Technical reports;
  - vi) Co-financing reports; and
  - vii) Terminal Report.
196. **Project Inception Report:** After FAO approval of the Project and signature of the execution agreement, an inception workshop will be held. The PMT will prepare a Project Inception Report in consultation with the Project Task Force (PTF) and other project partners prior to a Project Inception Workshop. Key information from this report should be discussed during the Project Inception Workshop and the report subsequently finalized. The report will include a narrative on the institutional roles and responsibilities and coordinating action of Project partners, progress to date on project establishment and start-up activities, and an update of any changed external

conditions that may affect project implementation. It will also include a detailed first year AWP/B and a detailed project monitoring plan. The draft inception report will be circulated to the Project Steering Committee for review and comments before its finalization, no later than one month after project start-up. The report should be cleared by the BH and LTO and the FAO-GEF Coordination Unit and will be uploaded in the FPMIS.

197. **Annual Work Plans and Budgets (AWPs/Bs):** The executing partners/agencies will submit AWP/Bs to the BH that are divided into monthly timeframes detailing the activities and progress indicators that would guide implementation during the year of the Project. Each AWP/B will be drafted by the NPC in consultation with the NPD, FAO PTF, PMT, technical working group members, and other relevant stakeholders. After drafting of each AWP/B, it will be submitted for approval and review by the PSC. Necessary changes to the AWP/B - as recommended by the PSC - will be made by the NPC prior to implementation of the AWP/B. As noted earlier, the first AWP/B will be drafted during the project's Inception Phase presented at the project Inception Workshop. As part of the AWP/B, a detailed Project budget for the activities to be implemented during the year should be included together with all monitoring and supervision activities required during the year. The inputs of the Inception Workshop will be incorporated and the NPC will submit a final draft AWP/B within two weeks of the workshop to the BH. For subsequent AWP/B, the NPC will organize a PPR and plan PSC meetings for its review. Once comments have been incorporated, the BH will circulate the AWP/B to the LTO and the FAO-GEF Coordination Unit for comments/clearance prior to uploading in FPMIS by the BH. The AWP/B must be linked to the Project's Results Framework indicators so that the Project's work is contributing to the achievement of the indicators. The AWP/B should include detailed activities to be implemented to achieve the project outputs and output targets and divided into monthly timeframes and targets and milestone dates for output indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. Once the PSC has approved the AWP/B and also cleared by the LTO and FAO-GEF Coordination Unit, the document is uploaded in the FPMIS by the BH.
198. **Project Progress Reports (PPRs):** PPRs will be prepared by the NPC based on the systematic monitoring of output and outcome indicators identified in the Project's Results Framework. The purpose of the PPR is to identify constraints, problems, or bottlenecks that impede timely implementation and to take appropriate remedial action in a timely manner. They will also report on projects risks and implementation of the risk mitigation plan. The PPR will be submitted to the BH and LTO for comments and clearance. The FAO-GEF Coordination Unit will review and upload the PPR in the FPMIS.
199. **Annual Project Implementation Reviews (PIRs):** The NPC will prepare annual PIRs covering the period July (the previous year) through June (current year) to be submitted to the LTO for finalization, which will be shared with the BH and the Funding Liaison Officer (FLO) for review and approval by Mid-July of the current year (FAO-GEF Coordination Unit will share a PIR template each year). The FAO-GEF Coordination Unit will submit the PIR to the GEF Secretariat and GEF Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. PIRs will be uploaded in the FPMIS by the FAO-GEF Coordination Unit.
200. Key milestones for the PIR process **include:**
  - **30 June:** the LTOs submit the draft PIRs (after consultations with BH, project team) to the FAO GEF Coordination Unit (copying respective GEF FLO) for initial review;
  - **Mid July:** GEF FLO review main elements of PIR and discuss with LTO as required;
  - **Early August:** FAO-GEF Coordination Unit prepares and finalizes the FAO Summary Tables and submits to the GEF Secretariat by the date communicated each year by the GEF Secretariat;
  - **September/October:** PIRs are finalized. PIRs are carefully and thoroughly reviewed by the FAO-GEF Coordination Unit and discussed with the LTOs for final review and clearance;

- **Mid November:** the FAO-GEF Coordination Unit submits the final PIR reports – cleared by the LTU and approved by the FAO-GEF Coordination Unit – to the GEF Secretariat and the GEF Independent Evaluation Office.

201. **Technical Reports:** Technical reports will be prepared by national and international consultants as part of project outputs and to document and share project outcomes and lessons learned along with the prerequisite items that are indicated in the project Results Matrix and GEF Tracking Tools. The drafts of any technical reports must be submitted by the NPC to the BH who will share them with the LTO. The PSC may also be involved in peer review of relevant technical reports. The LTO will be responsible for ensuring appropriate technical review and clearance of said report. The BH will upload the final cleared reports onto the FPMIS. Copies of the technical reports will be distributed to FAO PTF, project partners and the PSC as appropriate.
202. **Co-Financing Reports:** The BH, with support from the NPC and PMT staff, will be responsible for collecting the required information and reporting on co-financing as indicated in the Project Document and CEO Endorsement Request. The NPC will compile the information received from the executing partners/agencies and transmit it in a timely manner to the LTO and BH. The report, which covers the period from 1 July to 30 June, is to be submitted on or before 31 July and will be incorporated into the annual PIR. The format and tables to report on co-financing are included in the PIR.
203. **GEF Tracking Tools:** The NPC will update the Tracking Tools in close work with the PMT and other partners as a part of monitoring and reporting procedure. Following GEF policies and procedures, the relevant GEF Tracking Tools submitted with the Project Document, at CEO Endorsement Request, will be updated at the project's mid-term cycle, and with the project's terminal evaluation or final completion report. The tools will be uploaded in FPMIS by the FAO-GEF Coordination Unit which will also facilitate the filling of the tools, with inputs from relevant stakeholders. The LTO will ensure the technical accuracy of the tools.
204. **Terminal Report:** The NPC will prepare the Terminal Report. **Three months before** the actual end date of the project (NTE) – and prior to the completion of the Terminal Evaluation (TE) exercise – the PMT will submit to the BH and LTO a draft Terminal Report. The main purpose of the Terminal Report is to reflect the findings of the Terminal Evaluation, give guidance on the policy decisions required for the follow-up of the project, and to provide the donor with information on how the funds were utilized. The report is accordingly a concise account of the main products, results, conclusions, and recommendations of the project, without unnecessary background, narrative, or technical details. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for insuring sustainability of project results. After review, and in alignment with the findings of the Terminal Evaluation, the PMT will revise the Terminal Report and re-submit it to the BH and LTO for final approval.

## **2.5.2. Evaluation**

205. Although no independent Mid-Term Review (MTR) will be undertaken at the project mid-term (i.e. at the end of the second year of the proposed project implementation) to review progress and effectiveness of implementation in terms of achieving the project objectives, outcomes and outputs, a similar exercise should be conducted during the annual supervision mission. Findings and recommendations of this review will be instrumental in bringing improvement into the overall project design and execution strategy for the remaining period of the project's term. In general, the MTR evaluation will, *inter alia*:
  - review the effectiveness, efficiency and timeliness of project implementation;
  - analyse the effectiveness of partnership arrangements;
  - identify issues requiring decisions and remedial actions;
  - propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and

- highlight technical achievements and lessons learned derived from project design, implementation and management.

206. A Final Evaluation will be initiated **six months prior** to the actual completion date (NTE) of the project. The BH, in consultation with the PMT the FAO Project Technical Task Force and FAO Office of Evaluation (OED), and with concurrence of the Project Steering Committee, will launch an independent evaluation of the Project. The evaluation process includes the initial consultations with stakeholders, preparation of ToRs, recruitment of evaluator/s, conduct of mission/s, preparation of report/s, briefing/debriefing with stakeholders, up to the submission and acceptance of the report, and the preparation of a management response by the end-users. FAO Office of Evaluation, in consultation with project stakeholders, will be responsible for organizing and backstopping the Final Evaluation, including: finalizing the ToR, selecting and backstopping the team and Quality Assurance of the final report.

207. The final evaluation will focus on the achievement of outcomes and the sustainability of these outcomes and the component outputs, as well as the potential impacts of the intervention, in line with GEF Guidelines and FAO/UNEG Evaluation Standards and Policy. The process will also lead towards the identification of good practices that can be scaled-up or replicated in future similar interventions, together with the lessons learned. The Project's effects on gender equality and women's empowerment, human rights, capacity development, and environmental sustainability will also be explored. The evaluation will be conducted as a cluster evaluation including interventions in Cambodia and similar interventions in Mongolia and Papua New Guinea that are scheduled to complete the project activities around the same period. Separate analysis, reporting ratings and co-funding tables will be produced for each project.

208. Findings and recommendations of this evaluation will be instrumental for bringing improvement in the overall project design and execution strategy for similar future interventions. FAO will arrange for the evaluation in consultation with the project partners. The evaluation will, *inter alia*:

- review the relevance, effectiveness, efficiency and sustainability of project results; and
- highlight results and lessons learned derived from project design, implementation, and management.

### 2.5.3. Summary of M&E arrangement

**Table 14: Summary of M&E arrangement**

Type of M&E activity	Responsible party(ies)	Time frame	Budget
Project Inception Workshop	PMT in consultation with the LTO, BH and PSC	Within one month following project start-up	USD 4,000
Results-based Annual Work Plan and Budget (AWP/B)	PMT in consultation with the FAO team	Three weeks following project start-up and on an annual basis thereafter within the July to June reporting period	USD 2,500
Project Inception Report	PMT in consultation with the LTO and BH; report to be cleared by BH, LTO and FAO-GEF Coordination Unit, and uploaded to FPMIS by BH	Immediately after the workshop	USD 5,000
Project M&E function in PMT	Project consultants	One month following project start-up	USD 2,500
Finalisation of baseline information and	Project consultants	Each project year	USD 7,500

Type of M&E activity	Responsible party(ies)	Time frame	Budget
reassessment at mid-term and project closure			
Supervision visits	FAO PTF	Annual	FAO visits will be borne by GEF agency fees Project Coordination visits shall be borne by the project's travel budget
Project Progress Reports (PPRs)	PMT with inputs from NPD, PSC and other partners	No later than one month after each six-monthly reporting period (end June and December)	USD 15,000
Project Implementation Review (PIR) Report	PMT under supervision of the LTO and cleared and submitted by the GEF Coordination Unit to the GEF Secretariat	1 August of each reporting year	USD 15,000
Co-financing Reports	PMT, NPD, co-financiers	Annual together with PIR	USD 7,500
GEF Tracking Tools	NPC; FAO-GEF Coordination Unit, reviewed by the LTO	Mid-point and end-of-project	USD 2,500
Technical Reports	Project consultants; peer-reviewed by LTO/TWGs	As appropriate	Project staff time and consultant costs
Final workshop	PMT, partners and FAO	At the end of the project	USD 4,000
Independent Terminal Evaluation (TE)	BH, PMT, LTO, OED, GEF Coordination Unit, PTF, Evaluation mission, and other partners	Six months prior to the actual project completion date	USD 20,000
Processing of Terminal Report at FAO headquarters	PMT, BH, LTO and GEF Coordination Unit, TCS Report Group	At the end of project implementation	USD 6,600
<b>Total budget for M&amp;E</b>			<b>USD 92,100</b>

#### 2.5.4. Communication

209. A communication and knowledge sharing plan will be developed early in the project. A work plan will be built to share the results of the project and the lessons learned over the three years of project implementation, which will be documented and disseminated to national stakeholders, other countries implementing CBIT projects and to a wider audience.
210. As a general objective, the plan, in line with the Global CBIT project's communication and knowledge sharing framework, aims to disseminate and sensitize the results and achievements of the project to publicize its successful experiences and lessons learned.
211. This communication plan will be developed jointly with the key stakeholders. The wide range of communication and visibility tools and approaches will be employed throughout the project implementation period to raise awareness of the project's key messages, achievements and support scaling-up of the results, such as: leaflets, press releases, and postings on existing websites.
212. During the final workshop, consolidated information will be disseminated including the project results, key lessons learnt and best practices captured through the project.

### **3. INNOVATIVENESS, POTENTIAL FOR SCALING UP AND SUSTAINABILITY**

#### **3.1. Innovativeness**

213. The project will facilitate scientific innovation through investment in infrastructure and systems to update and modernize the measurement and monitoring capacities of the Royal Cambodian Government and local technical and research institutions. The project will facilitate investment and technology transfer for new and updated equipment at local universities and labs to measure and monitor emissions from a wide range of agriculture and land-use activities. The project will also facilitate investment in dedicated knowledge management information systems and IT hardware for the more effective management and reporting of data and information related to transparency of both mitigation and adaptation actions. Field monitoring systems will be overhauled through the upgrading of data collection processes with the wider application of mobile telecommunications, pilot use / testing of app-based data collection platforms and cloud-based data storage and transfer services, where appropriate. Systems upgraded through the project in the Ministry of Environment and Ministry of Agriculture, Fisheries and Forestry will be able to replicate in other national Ministries, and at reduced effort and cost.
214. These systems will be designed to benefit from recent advances and tools for estimating GHG emissions from the crops, livestock and forestry sectors. FAO, with partners, has developed or is currently developing a suite of tools for standardizing emissions monitoring and reporting at Tier 2 levels. For example, the Global Livestock Environment Assessment Model (GLEAM) establishes baselines and assesses the impacts of different mitigation and adaptation scenarios at local and national scale. Based on IPCC Tier 2 methodology and GIS based modeling of livestock distribution, GLEAM allows the assessments of all major GHG emissions from livestock and the impacts of all actions to reduce emissions from the sector. Similar tools are under development for field crops based on projects including a global program on Mitigating Agricultural Greenhouse Gases (MAGHG) and support for countries in Southeast Asia to prepare Nationally Appropriate Mitigation Actions for different field crops.
215. With the application of GHG estimation tools such as GLEAM and those developed under MAGHG, Cambodian national institutions will have enhanced capacity to measure progress toward NDC priorities in agriculture and land-use sectors. At global level, evidence tested and compiled in Cambodia will facilitate the improvement of scientific knowledge of GHG emissions reduction potential from AFOLU sectors, consequently improving our knowledge to estimate global environmental benefits. These systems once implemented and operational will support the potential for improved understanding of mitigation and adaptation potentials and the possibility for increased levels of ambition and quantification of support required in future iterations of Cambodia's NDC in the lead up to and during the commitment period of the Paris Agreement.
216. In addition, the project adopts an innovative approach that integrates extensive stakeholder consultations and assessments of capacity needs and baseline activities for monitoring the progress. The project interventions have been formulated by taking into account the need to enhance national capacity in monitoring mitigation and adaptation actions for AFOLU and relevant sectors as a whole emerging from the representatives of line ministries in Cambodia at the regional transparency workshop organized in Bangkok, Thailand in June 2016.

#### **3.2. Potential for scaling up**

217. The project specifically embeds opportunities to scale-out and scale-up the measures implemented. As highlighted, the relative importance of the agriculture and land-use sectors to the Cambodian economy and the significant technical challenges and capacity gaps for enhanced transparency in these sectors in the Cambodian context necessitate a focused, sector-specific approach. However, the information management systems and infrastructure for monitoring and reporting mitigation and adaptation actions in the agriculture and land-use sectors established under the project will be designed to allow for easy adaptation and adoption by other sectors.

218. Hardware, capacity building and training provided to national and local-level stakeholders will be developed as modules that can be adapted to improve data collection methods and analysis across all sectors. By working through and strengthening the institutional mechanisms in place for transparency of climate change actions, the project will be able to better facilitate this process of scaling out project-developed systems and processes. The enhanced capacity provided by the project will enable regular national reporting of actions to address climate change drivers and impacts as envisioned under Paris Agreement, Article 13.
219. Outcome 1 of the project will also facilitate Cambodia's engagement in international transparency-related processes under the UNFCCC. With the enhanced institutional capacity and engagement with international processes, the government of Cambodia will be capacitated to identify potential partners to develop scaling-up actions and investment opportunities for further improving transparency over time, as well as to benefit other countries in the region to develop more transparent, accurate, complete, consistent and comparable monitoring and reporting systems.
220. The government will use a combination of national budget, and planned international support for fulfilling its reporting requirements to the Convention and ensure continued application and sustainability of the transparency systems and infrastructure for the other sectors.

### **3.3. Sustainability**

221. With the project's support, Cambodia will be able to articulate a clear plan of action with regards to national reporting of its NDC, utilizing the monitoring and reporting roadmap, coordination mechanisms, and technical guidelines prepared by the project. All stakeholders will be empowered to access, archive, analyze, and monitor the necessary information and activities with regards to agriculture and land-use sectors, as well as to inform processes by lessons learned in other sectors.
222. Through the capacity building activities, the capacities of technical and policy focal points from the two participating ministries as well as the capacities of relevant national institutions will be improved. The soft skills and knowledge acquired will be retained through the systematic support put in place through the establishment of climate change transparency database, Management Information System (MIS).
223. The core outcome of the project is to establish an enabling institutional coordination mechanism to ensure greater collaboration among line ministries, in particular, Ministry of Environment and Ministry of Agriculture, Forestry and Fisheries and the National Council for Sustainable Development (NCSD). During the project life cycle, at least one Agriculture and LULUCF (IPCC 1996 Revised) or AFOLU (IPCC 2006) chapter within country NDC reporting will be facilitated and improved by the government with technical supervision of FAO. This experience and institutional memory will better prepare the government of Cambodia to fully take-over the reporting processes in the next reporting cycle from 2020 onwards. Furthermore, the transfer of GHG measurement and estimation technologies supported through improved national capacity in the agriculture and land use sectors has the potential to help Cambodia raise its ambitions by including reductions in GHG emissions from these sectors into its NDC emissions reductions targets.

#### **3.3.1. Capacity development**

224. In line with FAO-GEF Project Formulating Guidelines, effective, robust and system-wide capacity development (CD) approaches<sup>55</sup> are essential to enhance the impact, sustainability and scale of GEF project results through deepening country ownership, commitment and leadership of

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<sup>55</sup> See FAO Corporate Strategy <http://www.fao.org/capacity-development/en/>



the development process. Effective CD enhances needs-based project interventions through addressing all three CD dimensions interdependently and systematically. This includes strengthening *individual capacities* (e.g. knowledge, skills and competencies), *organizational capacities* (e.g. performance of organizations, cross-sectoral, multi-stakeholder coordination / collaboration mechanisms) as well the *enabling environment* (e.g. sound regulatory and policy frameworks, institutional linkages and enhanced political commitment and will). Methodologically, capacities across the three CD dimensions are jointly assessed with country stakeholders. On the basis of the assessment, appropriate CD interventions are designed, results identified and tracked jointly. Ultimately, integration of more effective, robust and system-wide CD aims to enhance the quality and sustainability of the project proposal through enabling and empowering country-stakeholders. The development of capacities (of all stakeholders, public and private) in this project is therefore an integral and crucial part of the project activities and essential to achieve the desired outcomes and ensure their sustainability. At the end of the project, country actors will have reinforced substantially their capacities across people, institutions and the enabling policy environment.

225. FAO has considerable experience in developing and reinforcing countries' technical and institutional capacities, particularly considering institutional needs, as well as in promoting and facilitating dialogue, consultation and consensus processes with multiple stakeholders. FAO has recognized CD as a catalytic core functions to achieve its strategic results, is implementing a comprehensive corporate strategy and has developed cutting-edge normative and practical methodologies on human, institutional and systemic CD approaches to guide its member countries. Practical tools and methods include how to assess capacities, design appropriate CD interventions and track capacity results jointly with stakeholders. Moreover, a FAO track record of demonstrated expertise exists to integrate effective CD into climate change specific approaches and projects, including within Global Environmental facility (GEF). In the context of this project, FAO's internal technical expertise, particularly through the NFM/REDD+ team and MICCA team in HQ and in RAP, will be utilized directly to provide CD services as indicated in the work plan in Annex 2. This is the most cost-effective use of the expertise available through FAO as the implementing agency for the project

226. The project will ensure incorporation of CD through ensuring that:

- project design team has a dedicated national expert with specific CD tasks in the TORs (see sample) that include facilitating participatory capacity assessments
- project applies the CD principles of joint stakeholder assessment, design, identification and tracking of CD to deepen country-ownership namely:
  - i. joint-assessment: project preparation phase capacity assessment (i.e. participatory, inclusive, self-assessment, multi-stakeholder workshops starting with strengths and what is functioning well) addressing the three CD dimensions across national, state, district, and landscape (where appropriate) complementing technical baseline assessments to generate a CD baseline
  - ii. joint-design: the envisioned CD intervention modalities include a mix of most contextualized CD intervention modalities across the three CE dimensions with clearly defined budgets
  - iii. joint tracking: identifying the baseline within stakeholder capacity assessments, defining envisioned and dedicated results within the project results framework
- project implementation team is envisioned to include a dedicated CD expert

### **3.3.2. Decent rural employment**

227. The project is not expected to directly affect people's livelihood and employment status. Indirectly, the project is expected to benefit Cambodian society and economy with overall socio-economic benefits, by supporting the Cambodian Government in advancing its NDC implementation and therefore contributing to the sustainability of current occupations, monitoring progress of national mitigation and adaptation priority activities in the NDC.

### **3.3.3. Environmental sustainability**

228. The causal chain between the project and environmental sustainability outcomes is short and direct. The project, like CBIT as a whole, aims to build capacities for transparent reporting of actions and support under the Paris Agreement, particularly with respect to NDCs. Transparency, in turn, may hold the key to the eventual success or failure of efforts to limit global temperature rises as it can greatly contribute to a progressive ratcheting up of ambitions through follow on NDCs. Finally, it goes without saying that limiting temperature rises will determine a vast range of environmental sustainability outcomes in decades to come.

### **3.3.4. Gender equality**

229. The project will ensure the preparation of the necessary documentation and publications in which principle of gender sensitive and specific data and information are included. Gender concepts, gender equity and issues in agriculture and climate change will be mainstreamed during the implementation, making sure a better participation of women in the project activities. Through cooperation with the government partners, the project intervention will be in line with the GEF Gender Equality Action Plan and the existing policy and strategy in the country specifically including the National Neary Rattanak Strategy of Ministry of Women's Affairs and the Gender Mainstreaming Policy and Strategy in the Agriculture Sector 2016-2020 of MAFF. The project will ensure that women's specific needs are met, that women enjoy equal access to project activities and that women benefit equitably from the project's activities.
230. In terms of overall socio-economic benefits, the project will benefit Cambodian society and economy by supporting the Cambodian Government in advancing its NDC implementation, monitoring progress of national mitigation and adaptation priority activities in the NDC. An appropriate transparency framework can generate multiple social, economic and environmental co-benefits such as human capacity, local and national institutions, cost-effective national budgeting and planning, reduced vulnerability of its food systems, and the national resources and ecosystems that the food systems depend upon. Through improved and more transparent data, the project also supports improved and better targeted local, regional and national investment and decision making.

### **3.3.5. Indigenous peoples**

231. The project sites do not hold any population of indigenous people as these are commonly defined.
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## **5. ANNEXES**

- Annex 1: Results Matrix
- Annex 2: Workplan
- Annex 3: Budget
- Annex 4: Indicative project activities
- Annex 5: FAO and Government Obligations
- Annex 6: Terms of Reference of Key Project Personnel (Draft)
- Annex 7: Terms of Reference of Project Bodies (Draft)
- Annex 8: ETF Readiness Assessment for Cambodia's AFOLU Sector
- Annex 9: Co-Financing Letters
- Annex 10: Data on AFOLU Sector Emissions
- Annex 11: References to Inform the Design of Measurement Frameworks for Climate-change Adaptation

## Annex 1: Results Matrix

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions
The <b>project objective</b> is that, by 2020, Cambodia is preparing reports to the UNFCCC under the Paris Agreement's Enhanced Transparency Framework (ETF) with strengthened agriculture and land use components, including inventories of emission sources and sinks, and information to track progress against priority actions identified in Cambodia's NDC for these sectors.						
<b>Component 1: Institutional arrangements to coordinate preparation of ETF reports for agriculture, land-use and other relevant sectors enhanced.</b>						
Outcome 1.1: Increasingly accurate and timely information and data are being collected by sub-national and national authorities responsible for the agricultural and land use sectors and are being incorporated into reporting under the ETF	Sharing of data, information and analysis across AFOLU sub-sectors	Data, information and analysis from the majority of agricultural and land use sub-sectors are not being produced and shared in a timely and coordinated manner; no agreed protocols for such data sharing	Data, information and analysis from the majority of agricultural and land use sub-sectors are being produced and shared within TWG-CCAFF in a timely and coordinated manner and according to agreed protocols and ETF requirements	Data, information and analysis from all agricultural and land use sub-sectors are being produced and shared within TWG-CCAFF and with national GHG-I team in a timely and coordinated manner and according to agreed protocols and ETF requirements	ETF reporting	
Output 1.1.1: Coordination mechanism strengthened, integrating relevant authorities from the agriculture and land use sector into national	Degree of harmonized participation of agricultural sub-sectors within ETF-AFOLU data and information collection and reporting processes	No regular, consistent or coordinated participation of agricultural and land use sub-sectors	Participatory / coordination structures are defined and coordination processes are initiated / tested	Coordination processes are made official and are functioning	Co-ordination meeting reports	Strengthened coordination contributes to improved reporting

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions
UNFCCC reporting processes	Gender equity will be a specific agenda item that will be considered in the coordination process to ensure the active engagement of women.					
Output 1.1.2: National ETF monitoring and reporting roadmap for the agriculture and land-use sectors prepared and adopted	Agreed ETF AFOLU monitoring and reporting plan	No plan	Draft plan	Final plan	Draft and final adopted plans	Ongoing commitment and financing to implement approved plan
Output 1.1.3: Capacity developed to clarify measurement and reporting of key NDC information (baselines, business-as-usual scenarios, targets) and support provided for ETF reporting in the agriculture and land-use sectors	ETF readiness in terms of institutional and human capacities	Low level of readiness as per section A of AFOLU readiness assessment and expected ETF requirements	Updated AFOLU readiness assessment and finalized ETF requirements	Measurable increases in readiness level (Note: Quantitative targets to be defined based on updated AFOLU readiness assessment and finalized ETF requirements)	AFOLU readiness assessment (final report)	Capacities are maintained and attrition is kept to a minimum
Output 1.1.4: Cambodia's engagement strengthened in the agriculture and land-use sectors with international	Agriculture sector stakeholders in Cambodia are influencing the future iterations of Cambodia's NDC and the global	Cambodia's NDC includes broad priorities for the agriculture and land-use sector sectors without specific targets or quantified needs for investment	Specific targets for adaptation and possibly mitigation in the agriculture and land-use sectors are identified and	Cambodia's NDC includes specific targets for adaptation and possibly mitigation in the agriculture and land-use	Project reporting	MAFF is able to influence the NDC development process

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions
transparency-related processes under the UNFCCC	climate change agenda NDC		investment needs quantified and shared at UNFCCC events, including those relevant to the Koronivia work programme on agriculture	sectors without and quantified needs for investment		
Outcome 1.2: Best practices on ETF reporting processes, information gathering, system infrastructure, methodologies in the agriculture and land-use sectors disseminated to relevant priority sectors (e.g. energy, industry/trade, transportation).	Uptake of improved AFOLU sector reporting practices by other priority sectors within and outside of Cambodia	Cambodia is sharing only minor lessons, if any, related to specific agricultural and land use sub-sector issues	Priority areas are identified for sharing with other sectors through international fora	At least 2 examples of uptake of lessons generated by Cambodia's AFOLU-ETF experience by other sectors in Cambodia and internationally	Project reporting	Lessons taken up by other sectors will drive improvement in reporting by those sectors
Output 1.2.1: Multi-sectoral coordination mechanism strengthened, integrating relevant authorities, data and information systems into national UNFCCC reporting processes	Level of co-ordination amongst key economic sectors in preparation of ETF reports. Gender equity will be a specific agenda item that will be considered in the coordination process	No regular, consistent or coordinated participation by economic sectors	Participatory / coordination structures are defined and coordination processes are initiated / tested	Coordination processes are made official and are functioning	Co-ordination meeting reports	Strengthened coordination contributes to improved reporting

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions
	to ensure the active engagement of women.					
Output 1.2.2: ETF lessons learned from agriculture and land-use sectors monitored, captured, up-scaled and shared to enhance wider national, regional and global reporting (e.g. via the Global Coordination Platform)	Extent of AFOLU sector lesson sharing by Cambodia at regional and global levels	Cambodia is making only minor contributions, if any, related to specific agricultural and land use sub-sector issues	Potential case studies are identified for sharing internationally	At least 2-3 case studies of AFOLU-ETF reporting have been developed and shared in international fora	Case study reports and other knowledge products	Cambodia's AFOLU-sector lessons prove valuable to other sectors
Output 1.2.3: Peer exchange program on transparency activities established for relevant priority sectors	Number of peer exchanges at national, regional and global levels	Peer exchanges are ad hoc, e.g. through irregular contacts and networking	Processes established for peer exchange in identified 'expertise areas', i.e. specialty areas within overall ETF	Cambodian practitioners are actively participating in at least 1-2 global / regional specialized CBIT-AFOLU peer exchange networks	Project reporting	Impacts of attrition (a.k.a. staff change) are kept to a minimum
<b>Component 2: Capacity to assess and report emissions and removals from the agriculture and land-use sectors and to design and monitor related emission reduction activities</b>						
Outcome 2.1: Reporting on inventories of emissions sources and sinks and mitigation activities from	Quality and timeliness of Cambodia's reporting to UNFCCC under ETF on inventories of emissions sources	Last report submitted was Second National Communication	Agreed improvement plan for mitigation reporting	Implementation of improvement plan underway; measurable improvement in quality of reporting as compared with	Quality control and verification reports	Enhanced reporting drives further effort towards strengthening and achieving



Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions
agriculture and land-use sectors strengthened	and sinks from AFOLU sector			Second National Communication, including enhanced use of emissions factors and activity data		mitigation ambition levels
Output 2.1.1: Regular and systematic documentation and archiving process established to ensure accuracy and sustainability of the inventory, including quality assurance and quality control, in the agriculture and land-use sectors	Documentation and archiving process for agricultural and land use portions of the inventory	No systematic process in place for systematic documentation and archiving	Process proposed for regular and systematic documentation and archiving process in agriculture and land-use sectors developed	Process for regular and systematic documentation and archiving process in agriculture and land-use sectors agreed	Inventory report	Enhanced QA and QC feeds into subsequent data gathering and reporting
Output 2.1.2: GHG information management system (MIS) and infrastructure for agriculture and land-use sectors upgraded (interface w/ 3.1.3).	Data sharing protocols and agreements	GHG emissions data and information from relevant agencies and projects in the agriculture and land-use sectors are scattered; basic but critical IT hardware and system infrastructure are missing	GHG emissions data and information from relevant agencies and projects in the agriculture and land-use sectors have been identified and consolidation initiated; basic but critical IT hardware and system	GHG emissions data and information from relevant agencies and projects in the agriculture and land-use sectors have been consolidated, stored and are available	Project reporting	Data and information will be effectively integrated into reporting

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions
			infrastructure in place			
Output 2.1.3: Capacity and system hardware developed for relevant institutions at different levels to adopt and mainstream latest tools and methodologies to: (i) develop country-specific emissions factors, (ii) improve activity data, and (iii) better quantify the impact of mitigation policy measures in the agriculture and land-use sectors (inter-face w/ 3.1.4).	IPCC guidelines used for reporting of inventories, emissions and removals by the AFOLU sector and activity data collection for key high emission activity/ies	IPCC Revised 1996 Guidelines (Agriculture and Land Use, Land-use Change and Forestry) are used by all sub-sectors and activity data is collected via traditional national agriculture statistics system	System in place to improve activity data collection for key high emission activity/ies based on geospatial data collection systems i.e. Collect Earth)	IPCC 2006 Guidelines (Agriculture, Forestry and Other Land Use) in use for calculating GHG emissions and removals in the agriculture and land use sectors, and country-specific emission factors and activity data improved (e.g. via development of emission factors and activity data for rice and livestock)	Project reporting	Lessons from rice production emission factors can be adapted and subsequently transferred to other sectors
Output 2.1.4: National/sectoral reports prepared and submitted on inventory of emissions sources and sinks and emissions reduction activities from agriculture and land-use sectors consistent with latest UNFCCC guidance	Tracking / reporting on implementation of AFOLU-sector mitigation commitments under NDC	No system in place for AFOLU-sector NDC tracking / reporting	AFOLU-sector tracking / reporting system defined; responsible parties are aware and associated capacity building initiated	AFOLU-sector reporting on NDC implementation is delivered in line with ETF requirements	Official national reports including NDC, NC, BUR and related reports to UNFCCC	Enhanced reporting on mitigation drives further effort towards strengthening and achieving mitigation ambition levels

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions
<b><u>Component 3: Capacity to monitor and report adaptation activities in agriculture and land-use sectors strengthened</u></b>						
Outcome 3.1: Monitoring and reporting of NDC priority adaptation actions in the agriculture and land-use sectors strengthened	Quality and timeliness of Cambodia's reporting to UNFCCC under ETF on adaptation within the AFOLU sector	Approved national M&E framework for climate change adaptation actions	Agreed improvement plan for adaptation reporting	Implementation of adaptation reporting improvement plan underway and 50% completed	Quality control and verification reports	Enhanced reporting on mitigation drives further effort towards strengthening and achieving mitigation ambition levels
Output 3.1.1: Assessment of relevant good practice methodologies and frameworks for monitoring and reporting NDC priority adaptation actions in the agriculture and land-use sectors	Good practice methodologies and frameworks for adaptation monitoring and reporting	No detailed comparison made to date between current practices and good practice methodologies	Good practice methodologies assessed vs. Cambodian practices; priority improvements identified for implementation by project and beyond	Priority improvements implemented in line with good practice methodologies	Project reporting	Selected methodologies are appropriate and lead to cost-efficient and sustainable improvements in practices
Output 3.1.2: National/sectoral appropriate indicators and monitoring and reporting framework developed for NDC priority adaptation actions in the	Tracking / reporting on implementation of AFOLU-sector adaptation actions under NDC	No system in place for AFOLU-sector NDC tracking / reporting	AFOLU-sector indicators and adaptation tracking / reporting system defined; responsible parties are aware and associated	AFOLU-sector reporting on NDC implementation is delivered in line with ETF requirements	NDC report to UNFCCC	Reporting provide a firm analytical basis for iterative adaptation planning and action

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions
agriculture and land-use sectors			capacity building initiated			
Output 3.1.3: Adaptation information management system (MIS) and system infrastructure for agriculture and land-use sectors upgraded (interface w/ 2.1.2)	Systems to store and manage data and information on ongoing and planned adaptation initiatives, including those highlighted under the NDC	Existing systems for field monitoring and data collection by provincial MAFF extension agents and extension services provided through the ASPIRE programme	Improvement / interface strategy developed	Systems in use that interface with and—where possible—enhance existing systems	Project reporting	Quality of data and information produced by existing data collection systems is sufficiently accurate and inter-comparable to be of value to the process
Output 3.1.4: Capacity and system infrastructure developed supporting relevant institutions at different levels to adopt and mainstream monitoring and reporting processes for NDC priority adaptation actions in the agriculture and land-use sectors (interface w/ 2.1.3)	Field-level data collection hardware and systems for monitoring AFOLU-sector adaptation actions defined in NDC	Information collected relevant to adaptation activities is collected via traditional national agriculture statistics system, is costly and not used in a systematic way to inform preparation of UNFCCC reporting processes	Agreed improvement plan for collection of activity data for 5 selected indicators relevant for NDC adaptation priorities (includes improved aggregation of M&E for government programmes at local level and geospatial data collection systems i.e. collect earth)	System for improved collection of activity data for 5 selected indicators relevant for NDC adaptation priorities in place	Project reporting	Indicators and data collection requirements specified

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions
Output 3.1.5: National reports prepared and submitted on priority adaptation activities in the agriculture and land-use sectors consistent with latest UNFCCC guidance.	<p>Tracking / reporting on implementation of AFOLU-sector adaptation commitments under NDC</p> <p>Gender equity will be a specific agenda item that will be considered in the coordination process to ensure the active engagement of women.</p>	Adaptation indicators in place but no system in place for AFOLU-sector NDC tracking / reporting	AFOLU-sector adaptation tracking / reporting system defined; responsible parties are aware and associated capacity building initiated	AFOLU-sector reporting on NDC implementation of adaptation is delivered in line with ETF requirements	NDC report to UNFCCC	Enhanced reporting on mitigation drives further effort towards strengthening and achieving mitigation ambition levels

## Annex 2: Workplan, by activity and quarter

### Component 1 - Institutional arrangements to coordinate preparation of ETF reports for agriculture, land-use and other relevant sectors enhanced

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1.1.1: Coordination mechanism strengthened, <b>integrating relevant authorities from the agriculture and land use sector</b> into national UNFCCC reporting processes	Support to strengthen coordination and capacities of Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries and Ministry of Planning for data gathering and sharing												
	Development and updating of detailed AFOLU-sector ETF reporting timetable and associated workplan and responsibilities, covering all AFOLU contributions to ETF reporting and associated monitoring												
	Capacity building to AFOLU group members to increase understanding / awareness of ETF requirements and their role in process (based on their sub-sectors, etc.)												
	Awareness raising among AFOLU sub-group members re. importance of the roadmap process (see Output 1.1.2 below)												
Output 1.1.2: National <b>ETF monitoring and reporting roadmap for the AFOLU sectors</b> prepared and adopted	Prepare (and update as needed) comprehensive assessment of ETF requirements												
	Review existing and relevant AFOLU-sector indicators, e.g. indicators in the National M&E framework for climate change action, indicators submitted by line ministries to the Ministry of Planning for monitoring and reporting of the National Strategic Development Plan, localized indicators for SDGs, SFDRR, and other indicators in sectoral ministries' reports												
	Prepare and gain endorsement of National ETF monitoring and reporting roadmap for the AFOLU sector, including a 5-year improvement plan for GHG Inventory and monitoring and reporting of adaptation actions in the AFOLU sector												
Output 1.1.3: Capacity developed to clarify <b>measurement and reporting of key NDC</b>	Build capacity to clarify reporting against mitigation and adaptation targets through improved baselines and BAU projections of agricultural output												
	Build capacity to understand AFOLU-sector emission scenarios												
	Build capacity to develop and adjust NDC ambition levels												

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>information</b> (baselines, business-as-usual scenarios, targets) and support provided for ETF reporting in the <b>AFOLU sectors</b>	Review and strengthen existing system to track progress in implementing of AFOLU-sector NDC actions (e.g. indicators)												
	Build capacity to monitor, report on and encourage donor contributions to AFOLU-sector actions to tackle climate change drivers and impacts												
Output 1.1.4: Cambodia's <b>engagement strengthened in the AFOLU sectors with international transparency-related processes under the UNFCCC</b>	Provide knowledge and resources to better inform Cambodian Government involvement in UNFCCC processes regarding transparency and sector-based target setting exercises												
	Specific targets for adaptation and possibly mitigation in the agriculture and land-use sectors are identified and investment needs quantified and shared at UNFCCC events, including those relevant to the Koronivia work programme on agriculture												
Output 1.2.1: <b>Multi-sectoral coordination mechanism strengthened</b> , integrating relevant authorities, data and information systems into national UNFCCC reporting	Formalize the National GHG inventory team (GHG-I Team) with a ministerial declaration/decision (MoE/ NCSD). Expanded team membership would consist of four sub-working groups, namely energy, waste, IPPU, and AFOLU												
	Present and advocate to policy makers/ decision makers within MoE, MAFF and other relevant ministries, regarding the importance of ETF and advocate for national budgetary allocations for monitoring and reporting on NDC progress												
	Support process of finalizing updated NDC for 2020 submission to UNFCCC												
Output 1.2.2: <b>ETF-related lessons learned from AFOLU sectors</b> monitored, captured, up-scaled and shared to enhance wider national, regional and global reporting	Development of sector specific GHG inventory and mitigation knowledge management systems for the AFOLU sectors												
	Document lessons learned from the AFOLU sector and share with relevant stakeholders to enhance wider national, regional and global reporting												

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
(e.g. via the Global Coordination Platform)													
Output 1.2.3: <b>Peer exchange program</b> on transparency activities established for relevant priority sectors	Support to participation in peer exchange program on transparency activities for relevant priority sectors												
	Support to participation in sub-national, national, regional and global peer-to-peer exchange on ETF reporting requirements												



**Component 2: Capacity to assess and report emissions and removals from the agriculture and land-use sectors and to design and monitor related emission reduction activities**

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 2.1.1: Regular and systematic <b>documentation and archiving process</b> established to ensure accuracy and sustainability of the GHG inventory, including quality assurance and quality control, in the AFOLU sectors	1. Ensure the establishment and operation of standard protocols for timely sharing of information necessary for compiling GHG inventories in the AFOLU sector												
	2. Prepare QA/QC mechanisms / procedures to ensure quality of data and reporting by responsible national and sub-national government departments (see also #6 below)												
	3. Provide training and capacity building for system administrators and agency focal points to enable staff to adhere to reporting protocols and data standards												
	4. Support use of various tools, including tools developed by FAO, for data collection, quality control and reporting, e.g. FAOSTAT QA/QC tool, SEPAL, geospatial tools (to visualize, download and query emissions from burning of biomass) and Open Foris / Collect Earth (for land representation)												
Output 2.1.2: <b>GHG information management system (MIS) and infrastructure</b> for AFOLU sectors upgraded (interface w/ 3.1.3).	5. Develop simple, user-friendly management information system (MIS) for agriculture and land-use activities by setting up a system to store and manage: (i) existing and projected GHG emissions data and information, (ii) source data and information from relevant agencies and projects in the AFOLU sectors and (iii) metadata.												
	6. Review the possibility of obtaining and incorporating relevant data from existing databases, e.g. CamInfo, commune database and MAFF's statistics												
Output 2.1.3: <b>Capacity and system hardware developed</b> for relevant institutions at different levels to adopt and	7. Develop geo-spatial data regarding agricultural land use to improve activity data on land use, while examining potential links to existing national forest cover data and data developed under FCPF												
	8. Research and develop activity data and emission factors for key emission sources in agriculture, e.g. rice												

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
mainstream latest tools and methodologies to: (i) develop country-specific emissions factors, (ii) improve activity data, and (iii) better quantify the impact of mitigation policy measures in the agriculture and land-use sectors (inter-face w/ 3.1.4).	9. Assess existing databases and ongoing initiatives, including CamInfo, commune database, MAFF's statistics [and Agris survey], for potential use as activity data												
	10. Sub-national-level survey to assess the accuracy and analyse uncertainty of specific data from commune databases, CamInfo and MAFF's statistics												
	11. Add data generated by above work to MIS developed under activity #5 above												
	12. Capacity building of GHG-I Team for AFOLU on interpolation / extrapolation techniques for use in, e.g. scenario building												
	13. Translate key portions of methodology and guidelines into Khmer language												
	14. Training and application of latest IPCC software												
	15. Contribute improved emission estimates for use in GHG Inventory and national reporting, e.g. BUR, updated NDC and National Communications												

### Component 3: Capacity to monitor and report adaptation activities in agriculture and land-use sectors strengthened

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 3.1.1: <b>Assessment of relevant good practice methodologies and frameworks</b> for monitoring and reporting NDC priority adaptation actions in the AFOLU sectors	1. Conduct an assessment of relevant good practice methodologies and existing frameworks and initiatives for monitoring and reporting NDC priority adaptation actions in the AFOLU sectors												
	2. Conduct a workshop to discuss assessment and agree on an action plan for monitoring, sharing data and reporting NDC priority adaptation actions in the AFOLU sectors												
Output 3.1.2: National sectoral appropriate <b>indicators and monitoring and reporting framework</b> developed for NDC priority adaptation actions in the AFOLU sectors	3. Preparation of national sector specific adaptation indicators in addition to the existing indicators for measuring progress against NDC adaptation priorities												
	4. Preparation of national appropriate monitoring and reporting framework as an update to the existing framework for measuring progress against NDC adaptation priorities												
Output 3.1.3: Adaptation <b>information management system (MIS) and system infrastructure</b> for AFOLU sectors upgraded (interface w/ 2.1.2)	5. Develop simple, user-friendly management information system (MIS) for agriculture and land-use activities by setting up a system to store and manage: (i) existing data and information on adaptation initiatives; (ii) projected data and information on priority adaptation actions in the agriculture and land-use sector, and; (iii) metadata												
	6. Develop a data management system to aggregate adaptation monitoring data and reporting to capture progress toward NDC adaptation priorities												
Output 3.1.4: <b>Capacity and system infrastructure</b>	7. Provide training and capacity building activities for system administrators and agency focal points to enable staff to adhere to reporting protocols and data standards												

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
developed supporting relevant institutions at different levels to adopt and mainstream monitoring and reporting processes for NDC priority adaptation actions in the agriculture and land-use sectors (interface w/ 2.1.3)	8. Extend capacity building and technical support to AFOLU sector actors for adaptation actions (e.g. M&E team for adaptation actions as well as MAFF's team) during initial period of action plan to test and populate MIS, while supporting further resource mobilization												
Output 3.1.5: <b>National sectoral reports</b> prepared and submitted on priority adaptation activities in the AFOLU sector consistent with latest UNFCCC guidance.	9. Build capacity to understand and incorporate national climate-risk scenarios into national adaptation reporting processes												
	10. Contribute to improved national reporting on priority adaptation activities in the AFOLU sector, e.g. in BUR, and National Communications and, in particular, an updated NDC to support national decision-making process and contribute to enhancing baseline ambitions over time												

### Annex 3: Budget

Oracle code and description	BUDGET (USD)									EXPENDITURES BY YEAR (USD)		
	Unit	Qty	Unit cost	Comp 1 (1.1)	Comp 1 (1.2)	Comp 2	Comp 3	PMC	Total GEF	Year 1	Year 2	Year 3
<b>5300 Salaries</b>												
Administration and Finance Officer/ Associate	mo	36	1,090	-	-	-	-	39,239	39,239	13,100	13,100	13,039
Procurement Officer/ Associate	mo	36	1,090	-	-	-	-	39,238	39,238	13,100	13,100	13,038
<b>5300 Sub-total - Salaries, Professionals</b>				-	-	-	-	<b>78,477</b>	<b>78,477</b>	<b>26,200</b>	<b>26,200</b>	<b>26,077</b>
<b>5570 Consultants</b>												
<b>National Consultants</b>												
1 National Project Coordinator	mo	33	2,500	20,625	20,625	20,625	20,625	-	82,500	27,500	27,500	27,500
1 Technical Specialist	mo	33	2,500	20,625	20,625	20,625	20,625	-	82,500	27,500	27,500	27,500
1 Data-sharing/ Decision-support Specialist	mo	33	1,250	10,313	10,313	10,313	10,311	-	41,250	13,750	13,750	13,750
<i>Sub-total - National Consultants</i>				51,563	51,563	51,563	51,561	-	206,250	68,750	68,750	68,750
<b>5570 Sub-total - Consultants</b>				<b>51,563</b>	<b>51,563</b>	<b>51,563</b>	<b>51,561</b>	<b>-</b>	<b>206,250</b>	<b>68,750</b>	<b>68,750</b>	<b>68,750</b>
<b>5650 Contracts</b>												
<i>LOAs with Executing Partners and Service Providers</i>	sum	1	300,000	75,000	75,000	75,000	75,000	-	300,000	120,000	120,000	60,000
Final/ Terminal evaluation	sum	1	20,000	5,000	5,000	5,000	5,000	-	20,000	-	-	20,000
Final reporting	sum	1	6,600	1,100	1,100	2,200	2,200	-	6,600	-	-	6,600
<b>5650 Sub-total - Contracts</b>				<b>81,100</b>	<b>81,100</b>	<b>82,200</b>	<b>82,200</b>	<b>-</b>	<b>326,600</b>	<b>120,000</b>	<b>120,000</b>	<b>86,600</b>
<b>5900 Travel</b>												
International travel	sum	1	50,000	12,500	12,500	12,500	12,500	-	50,000	16,700	16,700	16,600
Domestic travel	sum	1	30,000	7,500	7,500	7,500	7,500	-	30,000	10,000	10,000	10,000
<b>5900 Sub-total - Travel</b>				<b>20,000</b>	<b>20,000</b>	<b>20,000</b>	<b>20,000</b>	<b>-</b>	<b>80,000</b>	<b>26,700</b>	<b>26,700</b>	<b>26,600</b>

<b>5020 Training and Workshops</b>												
Technical capacity assessment and development for experts of Executing Partners, focal points	sum	1	44,000	-	-	22,000	22,000	-	44,000	35,000	9,000	-
Training of trainers for AFOLU sectors data collection, reporting and verification	sum	1	8,000	-	-	4,000	4,000	-	8,000	-	8,000	-
Coordination meetings/ workshops (e.g., TWGs)	sum	1	6,000	3,000	3,000	-	-	-	6,000	2,000	2,000	2,000
Inception workshop	sum	1	4,000	1,000	1,000	1,000	1,000	-	4,000	4,000	-	-
Final workshop	sum	1	4,000	1,000	1,000	1,000	1,000	-	4,000	-	-	4,000
<b>5020 Sub-total - Training</b>				<b>5,000</b>	<b>5,000</b>	<b>28,000</b>	<b>28,000</b>	<b>-</b>	<b>66,000</b>	<b>41,000</b>	<b>19,000</b>	<b>6,000</b>
<b>6100 Non-expendable Procurement</b>												
Equipment and software for data-collection and -management for CCM and CCA	sum	1	50,000	-	-	25,000	25,000	-	50,000	20,000	30,000	-
PMT computer equipment, electronics	sum	1	5,000	1,250	1,250	1,250	1,250	-	5,000	1,700	3,300	-
Communication and KM products (video clip, banner, brochure, web article etc.) of project activities and results	sum	1	8,000	2,000	2,000	2,000	2,000	-	8,000	6,400	800	800
<b>6100 Sub-total - Non-expendable Procurement</b>				<b>3,250</b>	<b>3,250</b>	<b>28,250</b>	<b>28,250</b>	<b>-</b>	<b>63,000</b>	<b>28,100</b>	<b>34,100</b>	<b>800</b>
<b>6300 General Operating Expenses (GOE; ≤ 5%)</b>												
Vehicle rental (incl. cars, boats, drivers, fuel, related operating costs, etc.)	day	60	100	2,000	-	2,000	2,000	-	6,000	2,000	2,000	2,000
Communication	mo	36	150	1,800	-	1,800	1,800	-	5,400	1,800	1,800	1,800
Utilities	mo	36	150	1,800	-	1,800	1,800	-	5,400	1,800	1,800	1,800
Stationery and Consumables	sum	3	1,000	750	750	750	750	-	3,000	1,000	1,000	1,000
Miscellaneous including contingencies	sum	1	23,115	2,889	2,888	8,669	8,669	-	23,115	6,000	10,000	7,115
<b>6300 Sub-total - GOE</b>				<b>9,239</b>	<b>3,638</b>	<b>15,019</b>	<b>15,019</b>	<b>-</b>	<b>42,915</b>	<b>12,600</b>	<b>16,600</b>	<b>13,715</b>
<b>TOTAL</b>				<b>170,152</b>	<b>164,551</b>	<b>225,032</b>	<b>225,030</b>	<b>78,477</b>	<b>863,242</b>	<b>323,350</b>	<b>311,350</b>	<b>228,542</b>



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#### Annex 4: Indicative project activities and associated implementation modalities

##### **Component 1 - Institutional arrangements to coordinate preparation of ETF reports for agriculture, land-use and other relevant sectors enhanced**

*Overall co-ordination: NCSD*

*Implementation by: MAFF, MoE, NCSD*

Outputs	Indicative activities	Implementation modality <sup>56</sup>	Main beneficiaries	Other key stakeholders
Output 1.1.1: Coordination mechanism strengthened, <b>integrating relevant authorities from the agriculture and land use sector</b> into national UNFCCC reporting processes	1. Support to strengthen coordination and capacities of Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries and Ministry of Planning for data gathering and sharing	Project team	MoE, MAFF, MoP, NCSD	
	2. Development and updating of detailed AFOLU-sector ETF reporting timetable and associated workplan and responsibilities, covering all AFOLU contributions to ETF reporting and associated monitoring	Project team	MoE, MAFF, MoP, NCSD	
	3. Capacity building to AFOLU group members to increase understanding / awareness of ETF requirements and their role in process (based on their sub-sectors, etc.)	Project team	MoE, MAFF, MoP, NCSD	
	4. Awareness raising among AFOLU sub-group members re. importance of the roadmap process (see Output 1.1.2 below)	Project team	MoE, MAFF, MoP, NCSD	
Output 1.1.2: National <b>ETF monitoring and reporting roadmap for the AFOLU sectors</b> prepared and adopted	5. Prepare, and update as needed, comprehensive assessment of ETF requirements	Project team	MAFF / MoE / NCSD	
	6. Review existing and relevant AFOLU-sector indicators, e.g. indicators in the National M&E framework for climate change action, indicators submitted by line ministries to the Ministry of Planning for monitoring and reporting of the National Strategic Development Plan, localized indicators for SDGs, SFDRR, and other indicators in sectoral ministries' reports	Project team	MAFF / MoE / NCSD	

<sup>56</sup> Acronyms and abbreviations: (1) Letters of agreement (LoAs) - #1: GDANCP; #2: GDA, #3: NCSD; #4: Academic and research institute(s). (2) Project team: (a) Two full-time national consultants - National Project Co-ordinator (NPC) and AFOLU technical expert (ATE), to be based in MoE and MAFF, respectively, and (b) Short-term national consultants (NC) and International consultants (IC). (3) Technical support and backstopping – FAO Regional Office for Asia and Pacific (RAP) and FAO HQ (HQ).



Outputs	Indicative activities	Implementation modality <sup>56</sup>	Main beneficiaries	Other key stakeholders
	7. Prepare and gain endorsement of National ETF monitoring and reporting roadmap for the AFOLU sector, including a 5-year improvement plan for GHG Inventory and monitoring and reporting of adaptation actions in the AFOLU sector	Project team; (LOA#3)	MAFF / MoE / NCSD	
Output 1.1.3: Capacity developed to clarify <b>measurement and reporting of key NDC information</b> (baselines, business-as-usual scenarios, targets) and support provided for ETF reporting <b>in the AFOLU sectors</b>	8. Build capacity to clarify reporting against mitigation and adaptation targets through improved baselines and BAU projections of agricultural output	Project team, LOA#1 & 2	MAFF / MoE	
	9. Build capacity to understand AFOLU-sector emission scenarios	Project team, LOA#1 & 2	MAFF / MoE	
	10. Build capacity to develop and adjust NDC ambition levels	Project team, LOA#1 & 2	MAFF / MoE	
	11. Review and strengthen existing system to track progress in implementing of AFOLU-sector NDC actions (e.g. indicators)	Project team, LOA#1 & 2	MAFF / MoE	
	12. Build capacity to monitor, report on and encourage donor contributions to AFOLU-sector actions to tackle climate change drivers and impacts	Project team, LOA#1 & 2	MAFF / MoE	
Output 1.1.4: Cambodia's <b>engagement strengthened in the AFOLU sectors with international transparency-related processes under the UNFCCC</b>	13. Provide knowledge and resources to better inform Cambodian Government involvement in UNFCCC processes regarding transparency and sector-based target setting exercises	Project team	MAFF / MoE / NCSD	
	14. Specific targets for adaptation and possibly mitigation in the agriculture and land-use sectors are identified and investment needs quantified and shared at UNFCCC events, including those relevant to the Koronivia work programme on agriculture	Project team	MAFF / MoE / NCSD	
Output 1.2.1: <b>Multi-sectoral coordination mechanism strengthened</b> , integrating relevant authorities, data and information systems into national UNFCCC reporting	15. Formalize the National GHG inventory team (GHG-I Team) with a ministerial declaration/decision (MoE/ NCSD). Expanded team membership would consist of four sub-working groups, namely energy, waste, IPPU, and AFOLU	LOA#3	MAFF / MoE / NCSD	Other sectors
	16. Present and advocate to policy makers/ decision makers within MoE, MAFF and other relevant ministries, regarding the importance of ETF and advocate for national budgetary allocations for monitoring and reporting on NDC progress	LOA #3	NCSD	MAFF / MoE

Outputs	Indicative activities	Implementation modality <sup>56</sup>	Main beneficiaries	Other key stakeholders
	17. Support process of finalizing updated NDC for 2020 submission to UNFCCC	LOA #3, Project team	MAFF / MoE / NCSD	Other sectors
Output 1.2.2: <b>ETF-related lessons learned from AFOLU sectors</b> monitored, captured, up-scaled and shared to enhance wider national, regional and global reporting (e.g. via the Global Coordination Platform)	18. Development of sector specific GHG inventory and mitigation knowledge management systems for the AFOLU sectors	Project team	MAF / MoE	
	19. Document lessons learned from the AFOLU sector and share with relevant stakeholders to enhance wider national, regional and global reporting	Project team, LOA #3	MAF / MoE / NCSD	Other national sectors
Output 1.2.3: <b>Peer exchange program</b> on transparency activities established for relevant priority sectors	20. Support to participation in peer exchange program on transparency activities for relevant priority sectors	Project team	MAF / MoE / NCSD /	
	21. Support to participation in sub-national, national, regional and global peer-to-peer exchange on ETF reporting requirements	Project team	MAF / MoE / NCSD	

**Component 2: Capacity to assess and report emissions and removals from the agriculture and land-use sectors and to design and monitor related emission reduction activities**

*Coordination & implementation by: MAFF, MoE*

Outputs	Indicative activities	Implementation modality <sup>57</sup>	Main beneficiaries	Other key stakeholders
Output 2.1.1: Regular and systematic <b>documentation and archiving process</b> established to ensure accuracy and sustainability of the GHG inventory, including quality assurance and quality control, in the AFOLU sectors	1. Ensure the establishment and operation of standard protocols for timely sharing of information necessary for compiling GHG inventories in the AFOLU sector	LOA #1, 2	MAFF / MoE	
	2. Prepare QA/QC mechanisms / procedures to ensure quality of data and reporting by responsible national and sub-national government departments (see also #6 below)	LOA #1, 2; Project team	MAFF / MoE	
	3. Provide training and capacity building for system administrators and agency focal points to enable staff to adhere to reporting protocols and data standards	LOA 1&2, Project team	MAFF / MoE	
	4. Support use of various tools, including tools developed by FAO, for data collection, quality control and reporting, e.g. FAOSTAT QA/QC tool, SEPAL, geospatial tools (to visualize, download and query emissions from burning of biomass) and Open Foris / Collect Earth (for land representation)	LOAs 1 & 2, Project team	MAFF / MoE	
Output 2.1.2: <b>GHG information management system (MIS) and infrastructure</b> for AFOLU sectors upgraded (interface w/ 3.1.3).	5. Develop simple, user-friendly management information system (MIS) for agriculture and land-use activities by setting up a system to store and manage: (i) existing and projected GHG emissions data and information, (ii) source data and information from relevant agencies and projects in the AFOLU sectors and (iii) metadata.	Project team	MAFF / MoE	
	6. Review the possibility of obtaining and incorporating relevant data from existing databases, e.g. CamInfo, commune database and MAFF's statistics	LOAs 1 & 2, Project team	MAFF / MoE	

<sup>57</sup> Acronyms and abbreviations: (1) Letters of agreement (LoAs) - #1: GDANCP; #2: GDA, #3: NCSD; #4: Academic and research institute(s). (2) Project team: (a) Two full-time national consultants - National Project Co-ordinator (NPC) and AFOLU technical expert (ATE), to be based in MoE and MAFF, respectively, and (b) Short-term national consultants (NC) and International consultants (IC). (3) Technical support and backstopping – FAO Regional Office for Asia and Pacific (RAP) and FAO HQ (HQ).

Outputs	Indicative activities	Implementation modality <sup>57</sup>	Main beneficiaries	Other key stakeholders
Output 2.1.3: <b>Capacity and system hardware developed</b> for relevant institutions at different levels to adopt and mainstream latest tools and methodologies to: (i) develop country-specific emissions factors, (ii) improve activity data, and (iii) better quantify the impact of mitigation policy measures in the agriculture and land-use sectors (inter-face w/ 3.1.4).	7. Develop geo-spatial data regarding agricultural land use to improve activity data on land use, while examining potential links to existing national forest cover data and data developed under FCPF	LOAs #1, 2; project team	MAFF / MoE	
	8. Research and develop activity data and emission factors for key emission sources in agriculture, e.g. rice	LOAs with academic and research institute(s)	MAFF / MoE	
	9. Assess existing databases and ongoing initiatives, including CamInfo, commune database, MAFF's statistics [and Agris survey], for potential use as activity data	Project team	MAFF / MoE	
	10. Sub-national-level survey to assess the accuracy and analyse uncertainty of specific data from commune databases, CamInfo and MAFF's statistics	Project team, LOA #2	MAFF / MoE	
	11. Add data generated by above work to MIS developed under activity #5 above	To be confirmed	MAFF / MoE	
	12. Capacity building of GHG-I Team for AFOLU on interpolation / extrapolation techniques for use in, e.g. scenario building	Project team, LOA #1	MAFF / MoE	
	13. Translate key portions of methodology and guidelines into Khmer language	TBD	MAFF / MoE	
Output 2.1.4: <b>National sectoral reports</b> prepared and submitted on inventory of emissions sources and sinks and emissions reduction activities from AFOLU sectors consistent with latest UNFCCC guidance	14. Training and application of latest IPCC software	LOA #2, project team	MAFF / MoE / NCSD	
	15. Contribute improved emission estimates for use in GHG Inventory and national reporting, e.g. BUR, updated NDC and National Communications	Project team	MAFF / MoE / NCSD	

### **Component 3: Capacity to monitor and report adaptation activities in agriculture and land-use sectors strengthened**

Coordination and implementation by: MAFF

<b>Outputs</b>	<b>Indicative activities</b>	<b>Proposed implementation modality<sup>58</sup></b>	<b>Main beneficiary</b>	<b>Other key stakeholders</b>
Output 3.1.1: <b>Assessment of relevant good practice methodologies and frameworks</b> for monitoring and reporting NDC priority adaptation actions in the AFOLU sectors	1. Conduct an assessment of relevant good practice methodologies and existing frameworks and initiatives for monitoring and reporting NDC priority adaptation actions in the AFOLU sectors	Project team	MAFF	
	2. Conduct a workshop to discuss assessment and agree on an action plan for monitoring, sharing data and reporting NDC priority adaptation actions in the AFOLU sectors	LOA #2	MAFF / MoE / NCSD	
Output 3.1.2: National sectoral appropriate <b>indicators and monitoring and reporting framework</b> developed for NDC priority adaptation actions in the AFOLU sectors	3. Preparation of national sector specific adaptation indicators in addition to the existing indicators for measuring progress against NDC adaptation priorities	Project team, LOA #2	MAFF	
	4. Preparation of national appropriate monitoring and reporting framework as an update to the existing framework for measuring progress against NDC adaptation priorities	LOA, #2, Project team	MAFF	
Output 3.1.3: Adaptation <b>information management system (MIS) and system infrastructure</b> for AFOLU sectors upgraded (interface w/ 2.1.2)	5. Develop simple, user-friendly management information system (MIS) for agriculture and land-use activities by setting up a system to store and manage: (i) existing data and information on adaptation initiatives; (ii) projected data and information on priority adaptation actions in the agriculture and land-use sector, and; (iii) metadata	Project team	MAFF	
	6. Develop a data management system to aggregate adaptation monitoring data and reporting to capture progress toward NDC adaptation priorities	Project team	MAFF	

<sup>58</sup> Acronyms and abbreviations: (1) Letters of agreement (LoAs) - #1: GDANCP; #2: GDA, #3: NCSD; #4: Academic and research institute(s). (2) Project team: (a) Two full-time national consultants - National Project Co-ordinator (NPC) and AFOLU technical expert (ATE), to be based in MoE and MAFF, respectively, and (b) Short-term national consultants (NC) and International consultants (IC). (3) Technical support and backstopping – FAO Regional Office for Asia and Pacific (RAP) and FAO HQ (HQ)..

Outputs	Indicative activities	Proposed implementation modality <sup>58</sup>	Main beneficiary	Other key stakeholders
Output 3.1.4: <b>Capacity and system infrastructure</b> developed supporting relevant institutions at different levels to adopt and mainstream monitoring and reporting processes for NDC priority adaptation actions in the agriculture and land-use sectors (interface w/ 2.1.3)	7. Provide training and capacity building activities for system administrators and agency focal points to enable staff to adhere to reporting protocols and data standards	Project team, LOA #2	MAFF	
	8. Extend capacity building and technical support to AFOLU sector actors for adaptation actions (e.g. M&E team for adaptation actions as well as MAFF's team) during initial period of action plan to test and populate MIS, while supporting further resource mobilization	Project team, LOA #2	MAFF / NCSD	
Output 3.1.5: <b>National sectoral reports</b> prepared and submitted on priority adaptation activities in the AFOLU sector consistent with latest UNFCCC guidance.	9. Build capacity to understand and incorporate national climate-risk scenarios into national adaptation reporting processes	Project team, LOA #2	MAFF / MoE / NCSD	
	10. Contribute to improved national reporting on priority adaptation activities in the AFOLU sector, e.g. in BUR, and National Communications and, in particular, an updated NDC to support national decision-making process and contribute to enhancing baseline ambitions over time	LOA # 2 Project team	MAFF / MoE / NCSD	

## **Annex 5: FAO and Government Obligations**

(a) This Annex sets out the basic conditions under which FAO will assist the Government in the implementation of the Project.

(b) The achievement of the objectives set by the Project shall be the joint responsibility of the Government and FAO.

### **FAO OBLIGATIONS**

1. FAO will be responsible for the provision, with due diligence and efficiency, of assistance as provided in the Project Document. FAO and the Government will consult closely with respect to all aspects of the Project.
2. Assistance under the Project will be made available to the Government, or to such entity as provided in the Project, and will be furnished and received (i) in accordance with relevant decisions of the Governing Bodies of FAO, and with its constitutional and budgetary provisions, and (ii) subject to the receipt by FAO of the necessary contribution from the Donor. FAO will disburse the funds received from the Donor in accordance with its regulations, rules and policies. All financial accounts and statements will be expressed in United States Dollars and will be subject exclusively to the internal and external auditing procedures laid down in the financial regulations, rules and directives of FAO.
3. FAO's responsibilities regarding financial management and execution of the Project will be as stipulated in the Project Document. FAO may, in consultation with the Government, implement Project components through partners identified in accordance with FAO procedures. Such partners will have primary responsibility for delivering specific project outputs and activities to the Project in accordance with the partner's rules and regulations, and subject to monitoring and oversight, including audit, by FAO.
4. Assistance under the Project provided directly by FAO, including technical assistance services and/or oversight and monitoring services, will be carried out in accordance with FAO regulations, rules and policies, including on recruitment, travel, salaries, and emoluments of national and international personnel recruited by FAO, procurement of services, supplies and equipment, and subcontracting. The candidacies of senior international technical staff for recruitment by FAO will be submitted to the Government for clearance following FAO procedures.
5. Equipment procured by FAO will remain the property of FAO for the duration of the Project. The Government will provide safe custody of such equipment, which is entrusted to it prior to the end of the Project. The ultimate destination of equipment procured under this Project will be decided by FAO in consultation with the Government and the Resource Partner.

### **GOVERNMENT OBLIGATIONS**

6. With a view to the rapid and efficient execution of the Project, the Government shall grant to FAO, its staff, and all other persons performing services on behalf of FAO, the necessary facilities including:
  - the prompt issuance, free of charge, of any visas or permits required;
  - any permits necessary for the importation and, where appropriate, the subsequent exportation, of equipment, materials and supplies required for use in connection with the Project and exemption from the payment of all customs duties or other levies or charges relating to such importation or exportation;
  - exemption from the payment of any sales or other tax on local purchases of equipment, materials and supplies for use in connection with the project;
  - any permits necessary for the importation of property belonging to and intended for the personal use of FAO staff or of other persons performing services on behalf of FAO, and for the subsequent exportation of such property;
  - prompt customs clearance of the equipment, materials, supplies and property referred to in subparagraphs (ii) and (iv) above.
7. The Government will apply to FAO, its property, funds and assets, its officials and all the persons performing services on its behalf in connection with the Project: (i) the provisions of the Convention on Privileges and Immunities of the Specialized Agencies; and (ii) the United Nations currency exchange rate. The persons performing services on behalf of FAO will include any organization, firm or other entity, which FAO may designate to take part in the execution of the Project.
8. The Government will be responsible for dealing with any claims which may be brought by third parties against FAO, its personnel or other persons performing services on its behalf, in connection with the Project,

and will hold them harmless in respect to any claim or liability arising in connection with the Project, except when it is agreed by FAO and the Government that such claims arise from gross negligence or willful misconduct of such persons.

9. The Government will be responsible for the recruitment, salaries, emoluments and social security measures of its own national staff assigned to the project. The Government will also provide, as and when required for the Project, the facilities and supplies indicated in the Project Document. The Government will grant FAO staff, the Donor and persons acting on their behalf, access to the Project offices and sites and to any material or documentation relating to the Project, and will provide any relevant information to such staff or persons.

## **REPORTING AND EVALUATION**

10. FAO will report to the Government (and to the Donor) as scheduled in the Project Document.
11. The Government will agree to the dissemination by FAO of information such as Project descriptions and objectives and results, for the purpose of informing or educating the public. Patent rights, copyright, and any other intellectual property rights over any material or discoveries resulting from FAO assistance under this Project will belong to FAO. FAO hereby grants to the Government a non-exclusive royalty-free license to use, publish, translate and distribute, privately or publicly, any such material or discoveries within the country for non-commercial purposes. In accordance with requirements of some donors, FAO reserves the right to place information and reports in the public domain.
12. The Project will be subject to independent evaluation according to the arrangements agreed between the Government, the Donor and FAO. The evaluation report will be publicly accessible, in accordance with the applicable policies, along with the Management Response. FAO is authorized to prepare a brief summary of the report for the purpose of broad dissemination of its main findings, issues, lessons and recommendations as well as to make judicious use of the report as an input to evaluation synthesis studies.

## **FINAL PROVISIONS**

13. Any dispute or controversy arising out of or in connection with the Project or this Agreement will be amicably settled through consultations, or through such other means as agreed between the Government and FAO.
14. Nothing in or related to any provision in this Agreement or document or activity of the Project shall be deemed (i) a waiver of the privileges and immunities of FAO; (ii) the acceptance by FAO of the applicability of the laws of any country to FAO; and (iii) the acceptance by FAO of the jurisdiction of the courts of any country over disputes arising from assistance activities under the Project.
15. This Agreement may be amended or terminated by mutual written consent. Termination will take effect sixty days after receipt by either party of written notice from the other party. In the event of termination, the obligations assumed by the parties under this Agreement will survive its termination to the extent necessary to permit the orderly conclusion of activities, and the withdrawal of personnel, funds and property of FAO.
16. This Agreement will enter into force upon signature by the duly authorized representatives of both parties.



## **Annex 6: Short terms of Reference of Key Project Personnel (Draft)**

### **National Project Director (NPD)**

Duration: 3 years

#### *Roles and responsibilities*

- Designated by MoE as national leader for the Project;
- Act as the responsible focal point at the political and policy level with other Government agencies, FAO and outside implementing agencies;
- Ensure effective communication between partners and monitoring of project progress towards expected results;
- Ensure all necessary support from Government personnel is provided to enable the Project to implement proposed activities;
- Ensure that appropriate and adequate office space and utilities are provided to the Project offices, including one project-funded staff at MoE and one project-funded staff at MAFF;
- Work collaboratively with the FAO Representation and the National Project Manager to ensure effective management of the Project and supervision of the Project team;
- Facilitate signature of Letters of Agreement between FAO and Government partners, and the clearance of financial reports and other reports and correspondence in line with the Project document;
- Ensure regular communication between the Project Steering Committee (PSC) and all Project partners to facilitate decision-making processes;
- Review annual work plans and budgets prepared by the PMT and provide any additional constructive inputs before submission to FAO and the PSC for approval;
- Provide general guidance and support in the implementation of Project activities and monitoring of Project progress;
- Assist in the selection of recruitment of Project personnel whenever required;
- Mobilise and report on co-financing from the Government.

#### *Background/qualifications*

- Appropriate tertiary qualification
- Senior staff member in MoE
- At least 5 years' experience in planning and managing development initiatives in Cambodia
- Demonstrated planning and organizational skills with attention to detail
- Demonstrated ability to coordinate engagements between governmental and non-governmental stakeholders
- Excellent communication skills
- Fluent in English language

### **National Project Coordinator (NPC)**

The National Project Coordinator (NPC) will be stationed in MoE and will be responsible for overall project coordination as well as having direct responsibility for actions, deliverables and Letters of Agreement (LoAs) related to MoE and NCSD. Working under the guidance of the NPD/BH, the NPC will be in charge of the following specific areas of management and technical supervision including:

- Coordinate and closely supervise the implementation of project activities;
- Day-to-day project management;
- Coordinate with related initiatives;
- Ensure collaboration between the participating institutions and organizations;
- Implement and manage the project monitoring and evaluation (M&E) plan and its communication program; prepare the PPRs, containing information on the activities carried out and the progress in the achievement of outcomes and outputs;
- Organize annual project workshops and meetings to monitor project progress and prepare the AWP/B;
- Submit PPRs and AWP/B to PSC and FAO for approval; and
- Support the preparation of PIRs, joint supervision missions and final evaluation.

## **AFOLU Technical Expert (ATE)**

AFOLU Technical Expert (ATE) will be stationed in MAFF and will have direct responsibility for MAFF-related activities, deliverables and LoAs (see Annex 4 for a list of indicative project activities, including those directly related to MAFF).

The ATE will provide direct technical support and inputs to MAFF-related project activities.<sup>59</sup> Where necessary, short-term national and international consultants will be recruited to provide further technical support to implementation of these activities.

Additional support, including organization of meetings, etc, will take place under the planned LoA with MAFF. The ATE will provide technical support and oversight to these inputs. This may include, e.g. drafting of consultants' ToRs and meeting agendas and background notes, commenting on consultants' reports, etc,

Where activities involve other partners, including NCSD and MoE, the ATE will work closely with MAFF staff to ensure that such co-operation takes place in an efficient and effective manner.

During the project inception phase, the ATE will benefit from a specialized training, led by FAO staff, designed to help fill any technical gaps in their knowledge of ETF-related issues. Government counterparts will also participate in this training exercise, which may be undertaken at a regional level, in co-operation with other FAO-AFOLU projects

## **Decision-support Specialist**

The Decision-support Specialist will support the NPC and ATE and will provide expertise to facilitate a decision-driven approach to the project's outcomes, including mitigation-related MRV, adaptation-related M&R, and project-related M&E. The Decision-support Specialist will help to ensure that capacities and systems are developed to produce action-oriented information that efficiently enables stakeholders to achieve national and local climate-related goals, especially those of the NDC.

The Decision-support Specialist will contribute directly to:

- Drafting relevant requirements of LOAs and contracts;
- Supporting the data collection and archiving;
- Supporting the PMT in project M&E and other day-to-day project management activities;
- Drafting of technical reports;
- Engaging with stakeholders to understand and define relevant decisions and informational needs, especially related to informational constraints to taking relevant actions;
- Proposing options for analyses and data visualizations efficiently tailored to stakeholders' needs; and
- Facilitating the dissemination and broader use of the project's best practices and lessons learned.

## **Administration and Finance Officer**

### *Roles and Responsibilities*

- Support the day-to-day operation of the Project activities;
- Establish and organize project task forces and ensure timely provision of suitable inputs (personnel, training, equipment and supplies) including preparing initial and regular budget revisions and providing overall administrative and operational support to the Project;
- Liaise with donors and government authorities as required;
- Ensure timely submission of regular project progress and implementation reports including identification of project follow up requirements and project closure including reporting;
- Ensure timely and complete information data entry into the field programme management information system (FPMIS) throughout the whole project cycle;
- Monitor the Project in close collaboration with other units at headquarters and at country level;

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<sup>59</sup> See Annex 4 for a list of indicative project activities and associated institutional responsibilities.

- Monitor delivery estimates and contribute to regular reports at the request of the budget holder and NPC;
- Carry out financial management and supervision of Project budgets on behalf of the budget holder;
- Lead, in collaboration with the NPM, the preparation of the preparation of annual work plans and budget;
- Appraisal and operational clearance of Project documents, preparation of budgets and active participation in project discussions;
- Prepare detailed budgets for cash transfer requests based on the annual work plans and budgets and Project account cash balance;
- Maintain the Project's disbursement ledger and journal;
- Keep the financial records and regular review of the Project account;
- Review the receipts and financial reports submitted by service providers;
- Prepare six-monthly financial statement of expenditures and other project financial reports as required;
- Prepare relevant documents for internal and external financial audits.

#### *Background/qualifications*

- University degree in economics, finance, business administration or a related field
- A minimum of 5 years' experience working in one of the above fields
- Experience managing the administration and finances of large projects
- Excellent communication skills
- Excellent planning and organizing skills, accurate with attention to detail
- Able to work as part of a multi-national team
- Working knowledge of English and local languages
- Experience in the UN system is an asset

### **Procurement Officer**

#### *Roles and Responsibilities*

- Implementing all procurement management processes in an appropriate manner and in accordance with FAO rules, liaising with national counterparts about procurement issues and customs formalities including all procedures for importing goods into Cambodia and coordination with project partner companies involved with procurement management;
- Monitoring cash availability and alignment with purchases made under project procurement plans;
- Ensuring accurate records of all relevant data for operational and financial supervision of all project-related purchases;
- Ensuring that relevant reports relating to purchase-related expenditure, forecasts and progress regarding project plans and closure are prepared and submitted in accordance with FAO and GEF procedures and according to the given formats, submission schedules and notifying reports, as necessary;
- Implementing specific and timely actions regarding all operational requirements associated with the procurement process, including equipment, material and disbursements in the field;
- Participating in partnership meetings with project partners and the Steering Committee, as necessary;
- Undertaking oversight missions to monitor the results-based budget and resolve outstanding operational issues relating to procurement, as appropriate.

#### *Background/qualifications*

- University degree in economics, finance, business administration or a related field
- A minimum of 5 years' experience working in one of the above fields
- Experience managing the procurement of large projects
- Excellent communication skills
- Excellent planning and organising skills, accurate with attention to detail
- Able to work as part of a multi-national team
- Working knowledge of English and local languages
- Experience in the UN system is an asset

## **Annex 7: Terms of Reference of Project Bodies (Draft)**

### **Project Steering Committee (PSC):**

The PSC will be the policy setting body for the Project; as and when required, the PSC will be the ultimate decision making body with regard to policy and other issues affecting the achievement of the Project's objectives. The PSC will be responsible for providing general oversight of the execution of the Project and will ensure that all activities agreed upon under the GEF Project Document, Inception Report and review mission recommendations are adequately prepared and carried out. In particular, it will:

- Provide overall guidance to the Project Management Team (PMT) in the implementation of the Project;
- Ensure all project outputs are in accordance with the Project Document, Inception Report and review mission recommendations;
- Review, amend if appropriate, and agree with the draft Annual Work Plan and Budget of the Project for submission to FAO;
- Provide inputs to the terminal evaluation, review findings and provide comments for the management response;
- Ensure dissemination of project information and best practices;
- Act as an inter-ministerial discussion platform for the FAO-GEF portfolio and knowledge sharing

### **Meetings of the PSC**

1. The Project Steering Committee meetings will normally be held semi-annually, but the Chairperson will have the discretion to call additional meetings, if this is considered necessary. Meetings of the PSC would not necessarily require a physical meeting and could be undertaken electronically. No more than 13 months may elapse between PSC meetings.
2. Invitations to a regular PSC meeting shall be issued not less than 90 days in advance of the date fixed for the meeting. Invitations to special meetings shall be issued not less than forty days in advance of the meeting date.

### **Agenda**

1. A provisional agenda will be drawn up by the National Project Coordinator (NPC) in the PMT and sent to members and observers following the approval of the Chairperson. The provisional agenda will be sent not less than 30 days before the date of the meeting.
2. A revised agenda including comments received from members will be circulated 5 working days before the meeting date.
3. The Agenda of each regular meeting shall include:
  - a) Adoption of the agenda
  - b) A report of the NPC on Project activities during the inter-sessional period
  - c) A report and recommendations from the NPC on the proposed Annual Work Plan and the proposed budget for the ensuing period
  - d) Reports that need PSC intervention
  - e) Review operational linkages among FAO GEF projects and knowledge sharing by FAO officers such as Program Officer
  - f) Consideration of the time and place (if appropriate) of the next meeting;
  - g) Any other matters as approved by the Chairperson
4. The agenda of a special meeting shall consist only of items relating to the purpose for which the meeting was called.

### **The Secretariat**

The PMT will act as Secretariat to the PSC and be responsible for providing PSC members with all required documents in advance of PSC meetings, including the draft Annual Work plan and Budget and independent scientific reviews of significant technical proposals or analyses. PMT will prepare written report of all PSC meetings and be responsible for logistical arrangements relative to the holding of such meetings. PMT will circulate the draft PSC meeting minutes for clearance by PSC members.

### **Functions of the Chairperson**

1. The Chairperson shall exercise the functions conferred on him elsewhere in these Rules, and in particular shall:

- a) Declare the opening and closing of each PSC meeting;
- b) Direct the discussions at such meetings and ensure observance of these Rules, accord the right to speak, put questions and announce decisions;
- c) Rule on points of order;
- d) Subject to these Rules, have complete control over the proceedings of meetings;
- e) Appoint such ad hoc committees of the meeting as the PSC may direct;
- f) Ensure circulation by the Secretariat to PSC members of all relevant documents;
- g) Agree with Annual Work Plans and Budgets and any subsequent proposed amendments submitted to FAO;
- h) May request Technical Working Group (TWG) Chairperson to present the PSC meeting for any required technical agreement in consultation with PMT, whenever needed;
- k) In liaison with the PSC Secretariat, the Chairperson shall be responsible for determining the date, site (if appropriate) and agenda of the PSC meeting(s) during his/her period of tenure, the chairing of such meetings as well as nomination of Chairperson and members for PSC and TWG.

### **Participation**

The PSC Chairperson and members will be listed in Annex of the final PSC Terms of Reference. PMT will also be represented on the PSC, in ex-officio capacity. The NPC will be the Secretary to the PSC. Other active institutions and person from the Project stakeholder may be invited and/or requested to participate in the meeting as observer by the Chairperson.

### **Decision-making**

All decisions of the PSC shall be taken by consensus.

### **Reports and recommendations**

1. At each meeting, the PSC shall agree with the report text that embodies its views, recommendations, and decisions, including, when requested, a statement of minority views.
2. A draft PSC Meeting Report shall be circulated to the Members as soon as possible after the meeting for comments. Comments shall be accepted over a period of 7 days. Following its agreement by the Chairperson, the Final Report will be distributed and posted on the Workspace as soon as possible after this.

### **Official language**

The official language of the PSC shall be English.

### **Quorum of the meeting**

50% of the membership considered as the quorum to conduct the PSC meetings. If any member/s unable to attend should be represented by a nominee or inform the absence prior to the PSC meeting shall be considered as excused and shall count in to quorum.

### **List of Annexes**

- Name and title of Chairperson (To be confirmed during the project inception phase)
- List of PSC Members (To be confirmed during the project inception phase)

## Annex 8: ETF Readiness Assessment for Cambodia's AFOLU-Sector

Assessment question	Detailed description, including barriers/ constraints	Corresponding project output(s)
Section A: Institutional arrangements and capacity		
A. 1. What is the current institutional arrangement for Monitoring and Reporting of Climate Change Actions and GHG in Cambodia and how robust is the MRV and M&E system in terms of inventory planning, preparation and management?	<p><u>Overall institutional arrangements:</u></p> <p>The National Council for Sustainable Development (NCSD) is responsible for the coordination of climate change activities in Cambodia and to promote a stronger, comprehensive and effective national response to climate change. A General Secretariat was established to support the operations of the NCSD and for coordinating the development of policies, strategic plans, action plans and legal instruments concerning sustainable development, including the green economy, climate change, biodiversity conservation and biosafety, and science and technology. A Climate Change Department (CCD), under NCSD's General Secretariat, is responsible for formulation of draft climate change plans and policies and serves as secretariat to the Cambodian Government's focal points for UNFCCC, the Intergovernmental Panel on Climate Change (IPCC), the Kyoto Protocol and the Clean Development Mechanism (CDM). CCD coordinates inter-ministerial technical working groups by sectors and themes (GHG inventory, mitigation, vulnerability and adaptation, and UNFCCC implementation), supports the climate change activities of the NCSD and acts as the coordinating agency for UNFCCC reporting. Recently the NCSD has established a Climate Change Technical Working Group (CCTWG) to provide advisory and technical support to NCSD to address climate change related issues in Cambodia. CCD serves as secretariat of the CCTWG. Responsibilities of the CCTWG include: (i) collaborate and share data/information for the preparation of the national GHG report, and other reports required by UNFCCC and for the information regarding climate change responses; (ii) review and provide recommendations on any national reports, including reports to be submitted to UNFCCC. Members of CCTWG represent different sectors. (See ToR of CCTWG and membership in list of annexes).</p> <p>Within MAFF, there is also a Working Group of Climate Change for Agriculture, Forestry and Fisheries, with 16 members representing all key technical departments, directorates and research and academic institutions, ranging from deputy director of department to policy makers within the ministry. The overall responsibilities of the working group are to coordinate and lead policy formulation in climate change, monitoring and reporting of climate change actions in agriculture. (See detailed ToR in the list of annexes).</p> <p><u>Mitigation:</u> CCD is responsible for coordinating and managing GHG inventory and reporting (energy, agriculture, LULUCF, waste sector and industrial sector) at the national level. Under the CCD, there is a GHG Inventory and Mitigation Office responsible for preparing the national GHG inventory. The GHG Inventory and Mitigation Office has a few staffers dedicated for this inventory work. Analysis of GHG inventories and mitigation is prepared using generic emissions factors.</p> <p>Overall, the national GHG inventory system is not robust. It is not systematic, in the sense that there are no systems or systematic processes through which actors involved in mitigation activities can register or report their activities to CCD. Mitigation is reported on a project/activity basis (see list of mitigation projects) and not in a coordinated manner. The GHG inventory exercise relies mainly on external assistance both in terms of funding and expertise. There is no database management system in place and no clear improvement plan,</p>	<p>1.1.1</p> <p>1.1.3</p> <p>1.1.4</p> <p>1.1.5</p> <p>1.2.1</p> <p>1.2.2</p> <p>1.2.3</p>

Assessment question	Detailed description, including barriers/ constraints	Corresponding project output(s)
	<p>e.g. no capacity development plan or follow-up action plan for the GHG inventory. A national GHG inventory team has been established, although not through a formal ministerial declaration. However, there is no activity/action or budget plan for the inventory team, and the team is activated only when needed, e.g., for the preparation of the national communication, rather than having regular meetings. Due to a lack of technical capacity, team members' involvement in the inventory is limited to participation in meetings, consultations and endorsement.</p> <p>On the other hand, the REDD+ sector is more advanced and has a good MRV system in place. An MRV team has been established within GDANCP, and is well equipped with tools and capacity to perform their tasks.</p> <p><u>Adaptation:</u> Within the CCD, there is a Policy and Coordination Office, under which an M&amp;E team has been established, with responsibility to implement the M&amp;E framework and prepare annual reporting of the core sets of indicators (except GHG indicators) as outlined in the established M&amp;E framework for climate change in Cambodia. This framework includes a core set of eight indicators, to which additional (2-3) key sector specific indicators will be added as work on the sectoral CC M&amp;E frameworks progresses. There are two groups of indicators: 1. Institutional readiness indicators, measuring how well the national institutions are managing climate risks (5 indicators) and 2. Impact indicators, measuring how successful climate interventions are reducing vulnerability and lowering GHG emissions (3 indicators), (see detailed indicators in separate sheet). The roles of the Policy and Coordination Office include: (i) collecting data against the core indicators, and (ii) conducting in-depth studies in some cases and coordinating M&amp;E reporting with line ministries. But this system is not yet fully operationalised. With the support of IIED, CCD's M&amp;E officials have increased capacities to establish baselines for the first term (2014), but in the long run the CCD officials will be fully responsible for this task, and for facilitating sectoral line ministry staff to report against core sectoral indicators. In 2017, with support from CCCA, the CCTWG has updated the institutional readiness indicators, but not the impact indicators (see detailed indicators in list of annexes).</p> <p><u>NDC:</u> this relies on the MRV and M&amp;E systems of the above mitigation and adaptation.</p>	
A.2. Are there official agreements in place for data sharing and coordination, or is data sharing mainly one on an ad-hoc basis?	<p>Data sharing is a very challenging issue in Cambodia, especially regarding access to raw data/databases. In general, there are no data sharing agreements. When data are needed, team members, together with consultants, are assigned the task of collecting data on an ad hoc basis from relevant institutions. However, MoE prepares a supporting letter requesting collaboration from relevant institutions in sharing needed data, which can help to facilitate team members and consultants in accessing data.</p> <p>CCCA is working to establish a data-sharing agreement between NCSD and MoP that would allow NCSD continuous access to a commune database. This agreement is expected to be signed soon, as has already been agreed at a senior level of MoP. It is worth noting that the impact indicators of climate change actions set out in the national M&amp;E framework rely on raw data from this database for calculation.</p> <p>Overall, there is a lack of coordination amongst relevant Ministries in the gathering of data and information needed to report climate change mitigation and adaptation actions vis-a-vis a progress against NDC actions in the agriculture and land-use sectors.</p>	1.1.1

Assessment question	Detailed description, including barriers/ constraints	Corresponding project output(s)
	<p>There are two existing databases at the Ministry of Planning (MoP). The two databases can provide a lot of useful raw data in the AFOLU sector, which can serve for purpose of calculation, analysis and reporting:</p> <p>1). <u>CamInfo</u> : CamInfo is developed from DevInfo (DevInfo a powerful database system for monitoring human development), and is publically available online (<a href="http://caminfo.nis.gov.kh/CAMINFO/libraries.aspx/dataview.aspx">http://caminfo.nis.gov.kh/CAMINFO/libraries.aspx/dataview.aspx</a>). CamInfo cover 655 indicators including agriculture, demography, economy, education, environment, governance, health and nutrition, infrastructure, social and tourism. SPCR Package C is working with the MoP to build a national system for M&amp;E of CC adaptation in which climate change indicators will be mainstreamed into the CamInfo. Some sectoral ministries have already submitted key indicators to MoP (see SPCR package C and climate change related indicators submitted by key sector ministries to the MoP in the list of annexes).</p> <p>2). <u>Commune Database</u>: this database contains data down to the village and commune and district levels. The database contains about 1100 data variables. The baseline indicators for national M&amp;E framework for climate change were calculated using the data from this commune database. However, the databases are not publically available (the last update, which is available online was in 2010 (<a href="http://db.ncdd.gov.kh/cdbonline/home/index.castle">http://db.ncdd.gov.kh/cdbonline/home/index.castle</a>). Through network, we can access to the raw databases.</p> <p>MAFF has agricultural statistics disaggregated down to the provincial level, and these data are reported annually in the MAFF annual reports, but they are not stored in the database. CamInfo uses data from MAFF.</p> <p>The draft Environmental Code includes an article stipulating that all government entities shall submit any data required for climate change reporting to NCSD.</p>	
A.3. Are inventory compilers hired as permanent staff or under consultancy?	<p>As detailed in question 1, CCD's GHG Inventory and Mitigation Office employs few permanent staff dedicated for the GHG inventory works. They are assisted by GHG inventory team whose members are from different government institutions. Data collection, calculation, analysis and reporting has relied heavily on national and international consultants hired on ad hoc basis for the GHG inventory works.</p> <p>As for the M&amp;E of adaptation actions, an M&amp;E team was established within the CCD's Policy and Coordination Office. The establishment of the first baseline indicators (2014) was supported by IIED, and in the long run, the team will need capacity building for this and for facilitating sectoral line ministry staff to report against core sectoral indicators.</p>	1.1.4 2.1.3 3.1.4
A.4. Is an annual budget available (international funding aside) to ensure functioning of a national system able to ensure the quality of the annual	<p>There is a very limited government budget to support the functioning of the system. For instance, lack of financial resources was indicated in the SNC as a major constraint to the preparation of national communications on a continuous basis. In line with national development priorities, government funding is likely to continue focusing on adaptation to climate change and poverty reduction, and other measures with immediate social impacts. Therefore, external funding will remain necessary in the short term to assist Cambodia in fulfilling its reporting obligations.</p>	1.1.5



Assessment question	Detailed description, including barriers/ constraints	Corresponding project output(s)
national inventory through planning, preparation and management of inventory activities?		
<p>A.5. Does the country have adequate human capacity to support the following:</p> <ul style="list-style-type: none"> <li>- MRV system and archiving of GHG emissions from AFOLU sector?</li> <li>-M&amp;E of adaptation measures?</li> <li>- Meet ETF reporting requirements?</li> </ul>	<p>Insufficient technical and human resources have been among the critical constraints for the preparation of national communications on a continuous basis. This is clearly spelled out in the SNC. The SNC also states that while the NCSD and the CCD are permanent institutions, their mandates extend beyond national communications, and include the facilitation, coordination and implementation of mitigation and adaptation measures. In addition, development and implementation of effective climate change strategies is constrained in a variety of ways in Cambodia. These include: (i) limited human capacity; (ii) a lack of reliable and comprehensive data sets and research in preparing GHG inventory, mitigation analysis and vulnerability assessments; (iii) a lack of technology and awareness; (iv) policy and institutional shortfalls; and (v) significant financial constraints. In addition, there is a lack of awareness regarding the Paris Agreement, the ETF and the need for enhanced transparency in monitoring and reporting of mitigation and adaptation activities.</p> <p>There is a strong need for capacity development in the following areas:</p> <ul style="list-style-type: none"> <li>• Understanding of recent IPCC guidelines, such as the GPG and IPCC 2006 Guidelines including capacity to perform uncertainty analyses and quality assurance/quality control procedures, provision of relevant information.</li> <li>• Capacity to understand and implement the national monitoring and evaluation (M&amp;E) framework to measure the performance of its national and sectoral responses to climate change, using IIED's Tracking Adaptation and Measuring Development (TAMD) approach.</li> <li>• Capacity to conduct research, data collection, calculations, drafting, quality control, archiving, and documentation.</li> <li>• Capacity to conduct climate change impact assessments, climate change projections</li> <li>• Capacity to understand national emission scenarios/climate risks scenarios and adjust national sector-specific mitigation/adaptation planning processes accordingly</li> <li>• Capacity to clarify reporting against mitigation and adaptation targets through improved baselines and BAU projections covering projections for agricultural output</li> <li>• Capacity to assess and adjust NDC ambition levels to attract international support</li> <li>• Capacity to monitor and report donor contributions to actions to tackle climate change drivers and impacts</li> </ul>	1.1.4, 1.1.5, 1.2.3
A.6. Does the country have the necessary hardware and related systems to	<p>Overall, there is a lack of reliable and sustainable inventory systems, including national registry system for GHG mitigation and adaptation initiatives.</p> <p>As indicated in question 2, there are two existing databases at the Ministry of Planning (MoP), which can provide a lot of useful raw data</p>	2.1.2, 2.1.3, 3.1.3, 3.1.4

Assessment question	Detailed description, including barriers/ constraints	Corresponding project output(s)
support archiving, accounting and reporting to the UNFCCC?	<p>in the AFOLU sector for calculation, analysis and reporting. MoP is working to mainstream climate change indicators into the CamInfo. The indicators overlap partly with what will need to be reported under the ETF. However, there is a lack of critical IT hardware and system infrastructure in the AFOLU sector compared with what is needed in order to: (i) store and manage existing and projected GHG emissions data and information vis-a-vis the existing and projected data and information on adaptation initiatives in support of the NDC and (ii) draw together data and information from relevant agencies and projects in the agriculture and land-use sectors.</p> <p>Under the Reducing Emissions from Deforestation and Degradation (UN-REDD) Cambodia National Programme (2011-2015) and the Forest Carbon Partnership Facility (FCPF) Project (2013-ongoing), the Cambodian Government, in partnership with FAO, UNDP, UNEP and the World Bank, has been working to establish effective National Management Systems for the REDD+ Readiness process and stakeholder engagement. As part of this work, a National REDD+ Strategy (NRS) and National Forest Monitoring System (NFMS) have been developed. Under targeted support from the global UN-REDD programmes a national Forest Reference Level (FRL) has been developed and was submitted to the UNFCCC in 2016. Cambodia's FRL has undergone UNFCCC technical assessment and the technical assessment report has been published in 2018. The design and implementation of MRV systems for agriculture activities identified in Cambodia's NDC can build on the experiences accumulated by FAO and partners in developing REDD+ MRV systems including Forest Reference Emission Levels (FRL).</p>	
A.7. Are technical and financial capacity needs specified and publically expressed (reported)?	<p>Technical and financial capacity needs have been expressed in several policy documents. Comprehensive technical and financial needs were specifically addressed in the Thematic Assessment and Action Plan for the three Conventions: CBD, UNFCCC and UNCCD in 2007. Cambodia National Capacity Self-Assessment (NCSA) assessed the existing capacities and capacity needs in Cambodia and developed an Action Plan to embark on building up the needed capacities in the country in the short- (1-3 years), medium- (4-6 years), and long- (6-10 years) terms.</p> <p>These are the relevant priority actions, which can be addressed by the CBIT:</p> <ul style="list-style-type: none"> <li>-&gt; Improve and strengthen ability to: Understand in-depth the technical aspects of GHGs; Undertake GHG inventory; Do mitigation analysis and promote interagency collaboration on mitigations; Undertake vulnerability and adaptation assessments; Develop energy data (e.g., using demand analysis and forecasting); Develop and improve GHG emission factors by sector; Use projection methods of GHG emission and removal; Apply determinant factors to project crop growth and production variability.</li> <li>-&gt; Improve and strengthen their ability to adopt appropriate technologies and sustainable development programs like CDM and cogeneration.</li> <li>-&gt; Improve and strengthen their ability to advance Cambodian national interests on climate change matters in international fora and negotiations, and to represent Cambodia in regional and global networks on climate change mitigation and adaptation.</li> <li>-&gt; Elevate the level of public sector financial commitment to fulfilling the obligations to the UNFCCC through raising decision-makers'</li> </ul>	1.1.4 1.2.2 1.2.3 2.1.2 2.1.3 3.1.2 3.1.3

Assessment question	Detailed description, including barriers/ constraints	Corresponding project output(s)
	<p>awareness and understanding of national interests on biodiversity conservation.</p> <p>-&gt; Widen and intensify institutional commitments to: Attend to climate change vulnerability and adaptation issues in Cambodia; Prioritize and mainstream climate change matters and activities in national and sectoral plans and sustainable development strategies in the country; Develop and procure needed infrastructure, facilities and equipment to strengthen national capacities to respond to climate change vulnerabilities and to take measures to adapt to climate change; Harmonize and integrate national policies and international climate change agreements into national and sectoral actions on climate change; Strengthen international collaboration on climate change matters</p>	
A.8. Is there any improvement plan for the MRV system as well as to comply with the new ETF requirements?	<p>Through FCPF, there is a clear plan for strengthening the MRV system in the REDD+ sector. FCPF has a specific outcome for this "Outcome 4: Monitoring system designed for REDD+ with capacity for implementation", with three outputs: Output 4.1. Strengthening of National MRV Technical Team and national capacity; Output 4.2. Support for Nationally-derived Activity Data, Emission Factors, GHG estimates for LULUCF/AFOLU sector improved, and reporting; Output 4.3. Capacity building for monitoring impacts of REDD+ interventions. Monitoring and reporting of adaptation actions are being strengthened by CCCA and SPCR. What continues to be lacking are the improvement plan and actions for MRV system for GHG emission in the agriculture sector.</p>	1.1.3
A.9. Is the country expecting to receive external support (other than the present project) for meeting ETF? If so, for what specific purposes?	<p>Through GEF funding, DCC has received support for the preparation of first BUR and TNC. Technical assistance is provided by regional UNEP. According to the plan, the first BUR is scheduled to be completed in 2019. However, in order to take opportunity with the first call for application for result-based payments under GCF, Cambodia is exploring the possibility of completing the first BUR by the end of 2018. In this respect, UNDP through FCPF and FAO may take key roles in supporting this process. FAO will support development of technical annex.</p>	1.1.5
Section B. Data collection and measurement		
B.1. Are the data collected, validated and documented regularly and accurately?	<p><u>Mitigation</u>: there is limited experience with measuring, reporting and verification (MRV) systems for emissions in the agriculture and land use sectors. There is insufficient short-term and long-term planning information and data for all sectors to conduct mitigation analysis and projections of national emissions.</p> <p>In the REDD+ sector, important progress was made in establishing an NFMS and FRL through support from UN-REDD, FCPF, JICA and FAO Technical Cooperation Programme. A national forest definition and land use classification was established along with activity data and a National Forest Inventory (NFI) methodology was designed along with a field manual. Historical forest inventory data, though not of high accuracy, was collected and analysed to develop country-specific emission factors for some carbon pools, in preparation of the initial FRL submission. A database and monitoring platform were developed and datasets were collected and reviewed to facilitate future land use interpretation.. There is nevertheless much work remaining in order for</p>	2.1.1

Assessment question	Detailed description, including barriers/ constraints	Corresponding project output(s)
	<p>Cambodia to operationalize its national forest monitoring system, and to be in a position to revise and upgrade its FRL using more accurate data and information. A number of components of the national forest monitoring system require further development, including linkages to the broader national MRV system (i.e. non-land use sectors), further refinement of the monitoring functions of the NFMS, and the establishment of linkages between the national forest monitoring system and the SIS. Significant work has been undertaken on the development of national data. Land use and land use change assessments for the years 2006, 2010, 2014, and 2016 are complete. The land use data produced for 2006 and 2010 is, in part, based on existing data while the 2014 land use data was developed from the ground up using improved methodologies, and the 2016 map is a continuation of this methodology. Data for 2016 will provide information on land use and land use change for the Biennial Update Report (BUR) and technical annex on REDD+, to be submitted in 2018. Land use data is currently of an insufficient quality to assess forest degradation and therefore exploring options to improve the assessment of forest degradation is a priority. Land use and land cover maps will be produced under a mapping cycle of 2 to 4 years and the 2018 map as with the 2016 map will be done with FCPF funding.. A NFMS database has been developed and initial data sharing procedures between institutions established. The MRV/REL technical team members are able to perform basic GHG emissions calculations. Further capacity building will enable Cambodia to report its GHG emissions from land use, land use change and forestry (LULUCF) sector.</p> <p><u>Adaptation:</u></p> <ul style="list-style-type: none"> <li>• Limited experience with measuring, reporting and verification (MRV) systems for emissions from the agriculture and land-use sectors</li> <li>• Insufficient short-term and long-term planning information and data for all sectors to conduct mitigation analysis and projections of national emissions</li> <li>• Financial constraints for mitigation analysis and the implementation of identified options</li> <li>• Shortage of technical experts capable of conducting MRV in the agriculture and land-use sectors</li> <li>• Absence of quality assurance or control mechanisms in the preparation and reporting of emissions inventories and emissions reduction activities</li> <li>• Lack of harmonized indicator and monitoring systems for adaptation based on national priorities</li> <li>• Need capacity to implement monitor and evaluate field-level projects and activities in the agriculture and land-use sectors</li> <li>• Insufficient relevant data and information to conduct an assessment for immediate climate change adaptation action in Cambodia under the conditions of increased likelihood of floods and droughts</li> <li>• Limited research conducted for related sectoral impact to climate change</li> <li>• Shortage of capable technical experts and financial resources for adaptation activities and accompanying monitoring exercises</li> </ul>	

Assessment question	Detailed description, including barriers/ constraints	Corresponding project output(s)
B.2. Are formalised data collection activities established and reviewed periodically?	No	2.1.1
B.3. Is the country capable to deal with restricted data (no data availability)?	Yes, by using proxy data	2.1.3
B.4. Does the data collected cover all mandatory categories to be reported?	Yes, but the quality and accuracy / validity still need to be improved	2.1.1, 2.1.4
B.5. Is there a national improvement plan for collecting data?	See response to question A.8	
B.6. To what extent are other stakeholders involved in the data collection (Universities, Research centers, etc)?	The Royal University of Agriculture is taking lead in developing emission factor in the forestry sector. Also, USAID supports MoE, FA and FiA, RUA and RUPP in collaboration with Hawaii University and Kasesart University to estimate soil organic carbon stock in mangrove and flooded forests (soil carbon under mangrove completed, but under flooded forests still ongoing).	1.1.1, 1.2.1
B.7. Is data collected and available to reporting team(s) re. support received including information on government and donor contributions to strengthen UNFCCC monitoring and reporting activities	<ul style="list-style-type: none"> <li>Lack of financial management mechanisms to effectively implement the adaptation and mitigation options</li> <li>Lack of information on activities, projects and other information related to climate-friendly technology development and transfer</li> </ul>	
Section C: Analysis and reporting		

Assessment question	Detailed description, including barriers/ constraints	Corresponding project output(s)
C.1 Is there regular and comprehensive reporting of anthropogenic emissions inventories by sources and removals prepared using good practice methodologies accepted by IPCC and agreed upon by the Parties to the Paris Agreement?	Details not yet clear re. what Paris Agreement Ad hoc committee will require in terms of reporting.	
C.2. Is the methodology used for the GHG emissions /removals estimation described transparently and in sufficient detail?	Cambodia's Inventory of Greenhouse Gas for the Year 2000 was developed using the Revised 1996 IPCC Guidelines and the UNFCCC software for use in calculating and estimating emissions (Version 1.3.2, 28 January 2007). This was complemented by the IPCC Good Practice Guidance (GPG) and Uncertainty Management in National Greenhouse Gas Inventories and the IPCC Good Practice Guidance on Land-Use, Land-Use Change and Forestry (GPG LULUCF). Cambodia's inventory for 2000 adopted a Tier 1 approach. However, gaps in specific national data, necessary for the application of even Tier 1 methods, have created significant difficulties in many areas, for example, in the energy module, where disaggregated information is not available. There is currently no national methodology for GHG inventory in Cambodia. Thus, this inventory has made extensive use of IPCC default emission factors, and in some cases, default activity data. Despite these limitations, every effort was taken to make the inventory as complete and representative as possible.	
C.3. Are there QA/QC procedures in place and being performed?	Yes, the QA is done externally with UNDP assistance, and QC is done internally	2.1.1
C.4. Are consistent data reported in different climate change reports (NDC, FREL, BUR, etc)?	In general, the data in climate change reports are consistent e.g. NDC and National Communication Report. But data may not be fully consistent with FREL, as FREL provides more precise, detailed data using clear methodology, high technology and with strong accuracy analysis along with clear QA/QC procedures.	1.2.1
C.5. Does the country use or intend to use internationally available software or	For the first communication report, Cambodia used 1996 IPCC software and guidelines and for the second communication report, revised 1996 IPCC software and guidelines were used. In the future, Cambodia is planning to use the 2006 IPCC software and GLs/GPGs. ALU software is also being considered for use in AFOLU sector. A training on ALU was recently provided by Silva Carbon to relevant government	2.1.3

Assessment question	Detailed description, including barriers/ constraints	Corresponding project output(s)
tools to analyse and report data?	personnel (ministries-MAFF, MoE and DCC and universities-RUA and RUPP)	
C.6. Is there a need for further training of experts on skills for GHG estimation?	Yes, especially on 2006 IPCC software and ALU software, but we need to build a robust team, with clear and concrete action plan	2.1.3
C.7. Are mitigation and adaptation actions prioritized in NDC according to GHG Inventory AFOLU key categories?	Yes	
C.8. Is there any system in place to track progress in implementing of NDC (e.g. indicators)?	No	
Section D. Verification		
D.1. Are there QA of the methodologies and Verification of estimates being performed? Are they performed by a single entity?	<p>The QA is done externally with UNDP assistance, and QC is done internally</p> <p>For QA: An experience with SNC: The draft SNC was sent to the third person (in UNDP roster of expert). Expert(s) who conducted review of document would identify any issues related to data, information, etc., and provide question, comments, suggestion back to national coordinator for further elaboration.</p> <p>For QC: normally we have national expert(s) from relevant technical departments, representatives of ministries and universities to conduct review on consistency of data /information in the doc.</p>	
D.2. Is information reported to the UNFCCC (National reports) and to FAO (agriculture production questionnaires) consistent among the multiple reports? (NDC, FREL,	In general, the data in climate change reports are consistent e.g. NDC and National Communication Report. But data may not be fully consistent with FREL, as FREL provides more precise, detailed data using clear methodology, high technology and with strong accuracy analysis along with clear QA/QC procedures. FAOSTAT on agricultural production is consistent with MAFF's statistics.	

Assessment question	Detailed description, including barriers/ constraints	Corresponding project output(s)
BUR, NC, FRA, FAOSTAT)?		
D.3.What methodology and independent sources are used for Verification? How national reports (NC, BUR,...) have been verified or reviewed	x	



## Letters



**KINGDOM OF CAMBODIA**  
**NATION-RELIGION-KING**  


Phnom Penh, 04 May 2018

**To: Mr. Jeffrey Griffin**  
Senior Coordinator, GEF Unit  
Climate and Environment Division,  
Climate and Biodiversity Department - D664  
Viale delle Terme di Caracalla, 00153 Rome, ITALY  
Tel: +39 06 570 55680

**Subject:** In kind co-financing for project “GCP/CMB/041/CBT-Strengthening capacity in the agricultural and land use sectors for enhanced transparency in implementation and monitoring of Cambodia’s Nationally Determined Contribution (NDC)”

Dear Mr. Griffin,

With reference to the above subject for co-financing towards the project “GCP/CMB/041/CBT-Strengthening capacity in the agricultural and land use sectors for enhanced transparency in implementation and monitoring of Cambodia’s Nationally Determined Contribution (NDC)”, the General Directorate of Administration for Nature Conservation and Protection of the Ministry of Environment of the Royal Government of Cambodia would like to confirm the in-kind contributions for an estimated value of USD 59,800.00 as detailed in the Annex 1 for the implementation of the above project.

Yours Sincerely,

Yours Sincerely,



**Dr. Chea Sam Ang**  
**Director General**



**Annex 1: In-kind Contribution from GDANCP/MoE**

No	In-kind contributions	Project month	Estimated cost	Total
1	Project Coordinator/Director's salary	12	500	6,000.00
2	National Assistants (2)	18	350	12,600.00
3	Project office spaces	24	300	7,200.00
4	project office supplies and maintenance	24	200	4,800.00
5	Vehicle to support project coordinator	24	500	12,000.00
6	Electricity, internet, water, cleaning and other communication related support	36	200	7,200.00
7	Meeting services		LS	10,000.00
	<b>Grand Total</b>			<b>59,800.00</b>





**ព្រះរាជាណាចក្រកម្ពុជា**

Kingdom of Cambodia

**ជាតិ សាសនា ព្រះមហាក្សត្រ**

Nation Religion King

**ក្រសួងកសិកម្ម រុក្ខាប្រមាញ់ និងនេសាទ**

Ministry of Agriculture, Forestry and Fisheries

N° 50.81.....MAFF

Phnom Penh...25...May...201..

**Mr. Jeffrey Griffin**  
Senior Coordinator, GEF Unit  
Climate and Environment Division,  
Climate and Biodiversity Department - D664  
Viale delle Terme di Caracalla, 00153 Rome, ITALY  
Tel: +39 06 570 55680

**Subject:** In kind co-financing for project “GCP/CMB/041/CBT- Strengthening capacity in the agricultural and land use sectors for enhanced transparency in implementation and monitoring of Cambodia’s Nationally Determined Contribution (NDC)”

Dear **Mr. Jeffrey Griffin**,

With reference to FAO’s request for co-financing towards the project “**GCP/CMB/041/CBT- Strengthening capacity in the agricultural and land use sectors for enhanced transparency in implementation and monitoring of Cambodia’s Nationally Determined Contribution (NDC)**”, the Ministry of Agriculture, Forestry and Fisheries (MAFF) of the Kingdom of Cambodia would like to confirm our in-kind contributions for a total amount of **USD 78,600.00** for the implementation of the above project as shown in the Annex 1.

Yours Sincerely,   
For Minister



**Srey Vuthy**  
Secretary General

Annex 1

No	In-kind contributions	Project month	Estimated cost (USD)	Total (USD)
1	Project Coordinator/Director's salary	12	1000	12,000.00
2	National Assistants (2)	18	300	10,800.00
3	Project office spaces	36	300	10,800.00
4	Project office supplies and maintenance	36	200	7,200.00
5	vehicles to support project coordinator	36	500	18,000.00
6	Electricity, internet, water, cleaning and other communication related support	36	300	10,800.00
7	Meeting services		LS	9,000.00
				<b>78,600.00</b>



May 15, 2018



From:  
John Christensen  
UNEP DTU Partnership  
Marmorvej 51  
UN City  
2100 Copenhagen  
Denmark

Jeffrey Griffin  
Senior Coordinator, GEF Unit  
Climate and Environment Division  
Climate, Biodiversity, Land and Water Department  
Food and Agriculture Organization of the United Nations (FAO)  
Viale delle Terme di Caracalla, 00153 Rome, ITALY  
Tel: +39 06 570 55680

**Subject:** Confirmation of co-financing for the GEF-financed project "Strengthening capacity in the agriculture and land-use sectors for enhanced transparency in implementation and monitoring of Cambodia's Nationally Determined Contribution (NDC)"(GCP/CMB/041/CBT).

Dear Mr Griffin,

I have the pleasure to confirm that UNEP DTU Partnership accepts to co-finance the GEF-financed project "Strengthening capacity in the agriculture and land-use sectors for enhanced transparency in implementation and monitoring of Cambodia's Nationally Determined Contribution (NDC)" through our activities in Cambodia in 2018-2019. The co-financing will be through the following;

- ICAT Cambodia

The co-financing contribution to the national GEF funded project activities will be USD 125,000.- and the component wise split is as follows:

- Component 1: Summary of (i) key national policies and strategies reviewed and proposed for the MRV system, (ii) current status of national climate MRV and M&E activities and initiatives, (iii) summary of meetings.  
USD 20,000.-
- Component 2: Application of ICAT Pillar 1 Methodology on selected Cambodian policies.  
USD 10,000.-
- Component 3: Data and metrics of RE sector and its policies, BAU scenario(s), ex-ante estimation of selected policy GHG impact, existing barriers and gaps in current reporting mechanisms and MRV system design.  
USD 20,000.-



UNEP DTU Partnership  
Department of Management Engineering  
Technical University of Denmark – DTU  
UN City, Marmorvej 51  
DK-2100 Copenhagen Ø, Denmark

Phone: +45 4533 5250  
Email: [unep@dtu.dk](mailto:unep@dtu.dk)  
Web: [unepdtu.org](http://unepdtu.org)

- Component 4: MRV System and its Implementation Plan  
USD 55,000.-
- Component 5: Workshop  
USD 20,000.-

I hope that this is sufficient and look forward to working with you on transparency activities in Cambodia.

Yours Sincerely,



John Christensen

អង្គការស្បៀងនិងកសិកម្មនៃសហប្រជាជាតិ ប្រចាំកម្ពុជា

Food and Agriculture Organization of the United Nations in Cambodia

Ref.: GCP/CMB/041/CBT

15 May 2019

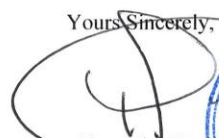
### Commitment letter


**Subject:** GCP/CMB/041/CBT “Strengthening capacity in the agricultural and land use sectors for enhanced transparency in implementation and monitoring of Cambodia’s Nationally Determined Contribution (NDC)”

I hereby confirm that the above project will complement and be cofinanced by several projects and activities implemented by the FAO Representation in Cambodia funded by the FAO Technical Cooperation Programme (TCP) and various donors through trust fund arrangements as indicated below:

- FAO TCP/CMB/3602: National Soil Information and Land Suitability Evaluation System for Cambodia (USD 128,901)
- UNFA/CMB/041/UND: Establishment of a National Forest Monitoring System for Reducing Emissions from Deforestation and Degradation-plus (REDD+) readiness in Cambodia (USD 350,031)
- FAO TCP: Support to the Cambodia Intra-Censal Agricultural Survey (CIAS) 2018 (USD 300,000)
- FAO TCP/CMB/3603: Strengthening Cambodian Land Use and Land Use Change and Forestry (LULUCF) and REDD+ reporting capacity (USD 40999).
- FAO TCP/RAS/3604: Addressing the 2030 Agenda on climate change and food security through Climate-Smart Agriculture (USD 48,000)
- Implement AGRISurvey - GCP/GLO/677/USA (USD 1 000 000)

With a total value of USD 1 867 931 these contribution will be managed as an integral part of the above project by FAO and will be assessed and recorded each year by the project team in accordance with GEF policies and procedure.

Yours Sincerely,  
  
Alexandre Huynh  
FAO Representative in Cambodia



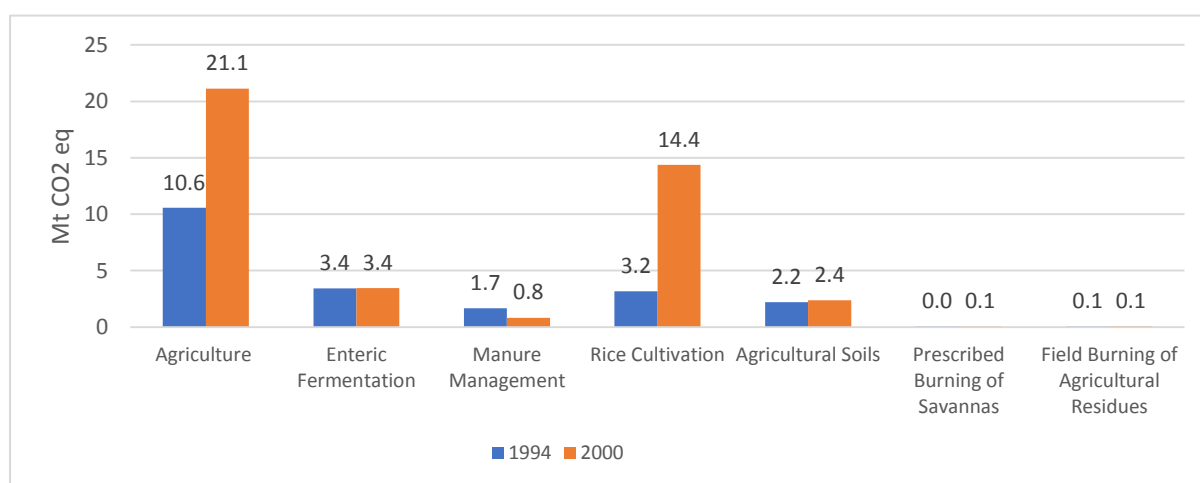


## Annex 10: Data on AFOLU-Sector Emissions

### GHG emissions from Agriculture sector (SNC) [Paragraph 21]

**Table 1: GHG agriculture emissions by gas from agriculture in year 2000 and share of emitting categories (data from 2NC)**

GHG emissions - Categories year 2000	CH <sub>4</sub> (Mt)	N <sub>2</sub> O (Mt)	CO <sub>2</sub> eq Mt	Share (%)
Enteric fermentation	0.16		3.4	16.3
Manure management	0.02	0.001	0.8	3.9
Rice cultivation	0.68		14.4	68.0
Agricultural soils		0.007	2.4	11.2
Prescribed burning of savannahs	0.002	0.00003	0.1	0.3
Field burning of agricultural residues	0.003	0.00004	0.1	0.4
<b>Total emissions form agriculture</b>	<b>875.52</b>	<b>8.8</b>	<b>21.1</b>	<b>100</b>



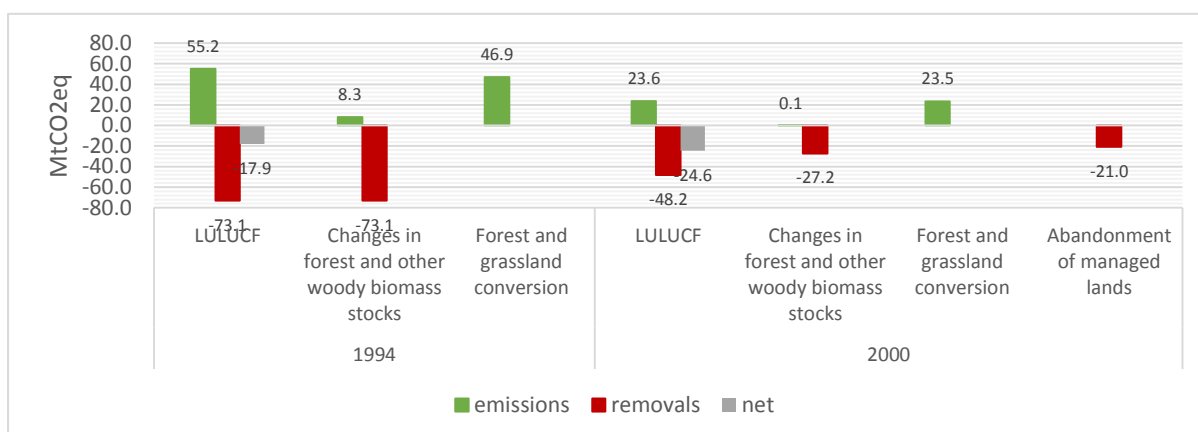
**Figure 1: Comparison of GHG agriculture emissions by emitting category of year 2000 and year 1994 (data from SNC)**

### GHG emissions and removals from Land use change and forestry (SNC) - [Paragraph 22]

**Table 2: GHG emissions and removals from land use change and forestry (data from 2NC)**

GHG emissions/removals - Categories year 2000	Emissions MtCO <sub>2</sub>	Removals MtCO <sub>2</sub>	net total CO <sub>2</sub> MtCO <sub>2</sub>
Changes in forest and other woody biomass stocks	0.1	-27.2	
Forest and grassland conversion	23.5	0.0	
Abandonment of managed lands	0.0	-21.0	
<b>Total Land use Change and forestry</b>	<b>23.6</b>	<b>-48.2</b>	<b>-24.6</b>





**Figure 2: GHG emissions and removals from the land use change and forestry sector, data from FNC (1994) and SNC (2000)**

#### FAOSTAT Emissions database – comparison with national data [Paragraph 23]

Baseline projections were developed for the agricultural sector (rice cultivation, agricultural soils and livestock) in the FNC as well as in the SNC. In the latter, according to the availability of the activity data, emissions were calculated until 2005/2007 and then projected to 2050 taking into account, when possible, the macroeconomic, policy and market conditions as well as events in other sectors (**Table 3**). These emissions were compared with the emissions of FAOSTAT Emissions database.

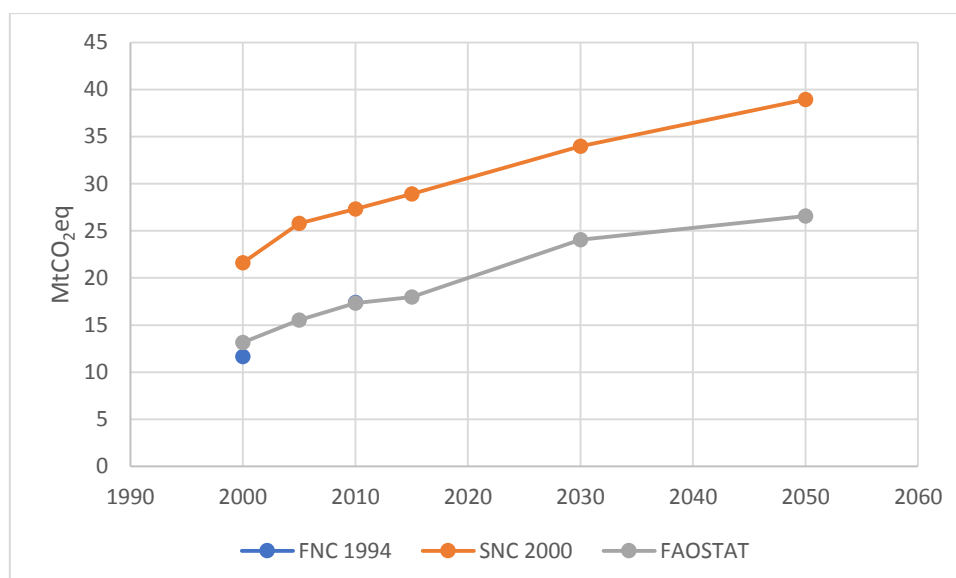
**Table 3: Comparison of GHG agriculture emissions taken from FNC, SNC and FAOSTAT**

MtCO <sub>2</sub> e q	Domestic Livestock			Rice Cultivation			Agricultural Soils		
	FNC	SNC	FAO	FNC	SNC	FAO	FNC	SNC	FAO
2000	5.34	4.87	5.13	4.16	14.37	6.24	2.17	2.36	1.78
2005	0.00	5.84	5.49	0.00	16.84	7.91	0.00	3.11	2.11
2010	8.95	5.84	5.78	5.33	17.94	9.10	3.10	3.55	2.45
2015 <sup>60</sup>	0.00	6.36	5.03	0.00	18.68	10.16	0.00	3.87	2.80
2020	15.48	0.00	n.a.	6.36	19.62	n.a.	4.96	4.21	n.a.
2030	0.00	7.93	7.13	0.00	21.18	13.48	0.00	4.89	3.45
2050	0.00	10.02	8.28	0.00	22.63	14.23	0.00	6.31	4.07

FAO has developed a global inventory on greenhouse gas emissions from the AFOLU sector under FAOSTAT database. The default Tier 1 methodology of the 2006 IPCC Guidelines is applied to derive estimates of GHG emissions associated with each activity. The dataset is based on input data from FAOSTAT and the Forest Resource Assessment (FRA) data on agriculture and land-use change activities officially reported by countries.

For the agriculture sector, estimations of the country and FAOSTAT indicate that they are generally changing and increasing (Figure 3). Data from FNC are matching pretty well with FAOSTAT estimation compared to the one submitted in the SNC. Specifically, in the SNC there is a jump of GHG emission of about 40 percent compared to FAOSTAT but with the same trend. As a result, the total emission in 2050 reported by the SNC summed up to 39 MtCO<sub>2</sub>eq compared with FAOSTAT which reports 27 MtCO<sub>2</sub>eq.

<sup>60</sup> 2014 for FAOSTAT



**Figure 3: Time series of total agricultural emissions of FAOSTAT Emissions database vs SNC and FNC data, including projections.**

Differences between the two sources of data are mostly due to differences at level of the single emitting categories. For example, emissions from rice cultivation from SNC result higher than the ones estimated in FAOSTAT as shown in **Table 4**. These difference are due to the different methodology used, however the national activity data match well with the activity data of FAOSTAT. Remarkable differences in estimated GHG agricultural emissions can also be observed for the category Prescribed burning of savannahs<sup>61</sup> while for the other categories estimations are aligned. FAOSTAT emissions from the forestry and land use sector are reported as a net source rather than a net sink that was reported in the FCN and SCN (see **Figure 4**). The FAOSTAT forest land area are official data sent by the country through the Forest Resource Assessment (FRA) every five years. The annual area data is therefore a calculated value (FAO estimate) obtained through interpolation. The FAOSTAT calculates the total emission in the forest land sector through a stock difference estimate (between areas). Since the stock difference method is used, gains from growth in managed forests are excluded. **Table 4** provides estimates on emissions from FAOSTAT and removals are not available in the database. The emissions reported in FAOSTAT are compared to the FNC and SNC as far as possible. It is clear from the estimates by category that different categories have been estimated and for each category values are considerable different because of differences in methodology. Note that the emissions due to forest and grassland conversion of the SNC and FAOSTAT are of the same order of magnitude, however estimated for different years.

<sup>61</sup> For prescribed burning of savannahs and field burning of agricultural residues, the baseline projections have not been estimated, then only year 1994 and 2000 are available. For sake of comparability, FAOSTAT values in Figure 4 have been summed up without considering these two categories.

**Table 4: Comparison of GHG forestry and land use emissions and removals taken from FNC, SNC and FAOSTAT**

MtCO <sub>2</sub> e q	Changes in forest <sup>62</sup> (emissions)			Changes in forest (removals)			Abandonment of land (removals)			Forest and grassland conversion		
	FN C	SN C	FAO	FN C	SNC	FA O	FN C	SNC	FA O	FNC <sup>63</sup>	SN C	FA O
<b>1994</b>	8.3	i.e <sup>64</sup>	2.2	73.1	n.a.	n.a.	n.a.	n.a.	n.a.	47.1	n.a.	24.2
<b>2000</b>	9.3	i.e	2.3	67.1	- 26.2	n.a.	n.a.	- 12.7	n.a.	49.2	8.5	24.1
<b>2010</b>	13.0	i.e	1.2	61.1	- 29.0	n.a.	n.a.	- 12.7	n.a.	44.4	22.9	21.5
<b>2020</b>	16.9	i.e	n.a. <sup>65</sup>	53.8	- 28.8	n.a.	n.a.	0.0	n.a.	44.4	22.9	n.a.
<b>2025</b>	n.a.	i.e	n.a.	n.a.	- 28.7	n.a.	n.a.	0.0	n.a.	n.a.	22.9	n.a.
<b>2030</b>	n.a.	i.e	n.a.	n.a.	- 30.8	n.a.	n.a.	0.0	n.a.	n.a.	22.9	n.a.
<b>2035</b>	n.a.	i.e	n.a.	n.a.	- 27.7	n.a.	n.a.	0.0	n.a.	n.a.	22.9	n.a.
<b>2040</b>	n.a.	i.e	n.a.	n.a.	- 27.8	n.a.	n.a.	0.0	n.a.	n.a.	22.9	n.a.
<b>2045</b>	n.a.	i.e	n.a.	n.a.	- 28.3	n.a.	n.a.	0.0	n.a.	n.a.	22.9	n.a.
<b>2050</b>	n.a.	i.e	n.a.	n.a.	- 27.7	n.a.	n.a.	0.0	n.a.	n.a.	22.9	n.a.

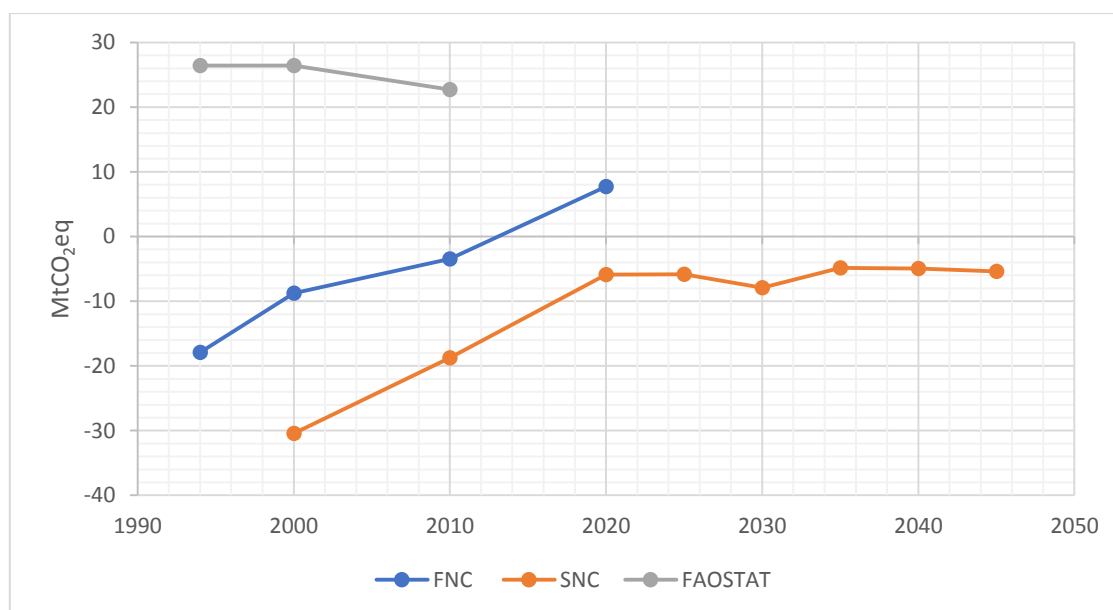
The final emissions / removals are projected for FNC and SNC visualized in Figure 4 show in general a decrease of sink capacity. Furthermore, differently from FAOSTAT the FNC the SNC predicts more conservative trend in the sink capacity. In 2020, a total emission of about 7.74 MtCO<sub>2</sub> and a total removal of -5.9MtCO<sub>2</sub> have been reported respectively in the FNC and SNC. Thus, by 2020, the status of Cambodia's forests would change from a net sink to a net emitter according to the FNC. The SNC predicts that emission uptake decreases from 30.4 MtCO<sub>2</sub>eq in 2000 to 4.8 MtCO<sub>2</sub>eq in 2050; this amounts to an uptake reduction of 84.1%. Between 2000 and 2015, significant contributions to the net uptake of GHG emission in Cambodia are attributable to the sink function of abandoned lands.

<sup>62</sup> Full name of category is “changes in forest and other woody biomass stock”

<sup>63</sup> In the FNC this category is also called “forest/land use change”

<sup>64</sup> Included Elsewhere (i.e.): the estimate of emissions is included in the total of (net) removals of the changes in forest and other woody biomass stock

<sup>65</sup> Contrary to Agriculture emissions, FAOSTAT does not provide projections for the forestry and land use sector



**Figure 4: Net GHG emissions/removals for land use and forestry from FNC, SNC and FAOSTAT (MtCO<sub>2</sub>eq)**

#### Forest emission reference level and other sources [Paragraph 24]

Cambodia, with support from the FAO, has submitted on a voluntary basis its first National Forest Reference Emissions Level (FREL)<sup>66</sup> to the UNFCCC in July 2016. It should be noted that forest reference level submitted to the UNFCCC covers three REDD+ activities including deforestation and limited emissions caused by forest degradation and removals from forest carbon stock enhancement. The estimates are based on activity data analyzed from Landsat 8 imagery for the years 2006, 2010 and 2014. Cambodia has never conducted a National Forest Inventory (NFI) and therefore values of above ground biomass have been estimated using sources from literature and various available data. Overall Cambodia intends to improve the land use/cover map every two years from 2014 onwards and to invest in emission factors for the next FREL submission. Overall consistency between the FREL and National GHG report is strengthened by establishment of a REDD+ Database.

**Table 5: Total annual CO<sub>2</sub> emissions and removals of the FREL for two reference periods**

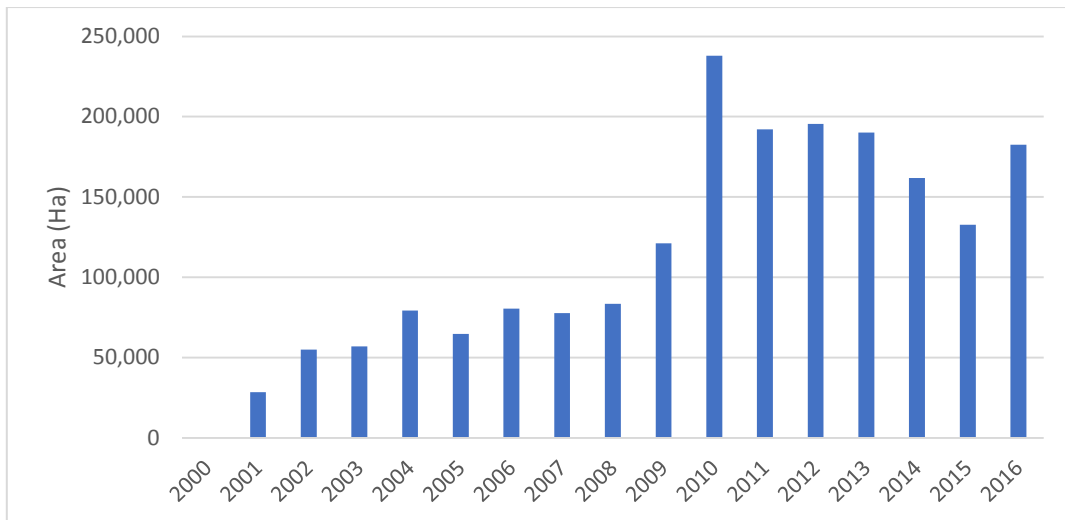
Emissions / removals (Mt CO <sub>2</sub> /year)	2006-2010	2010-2014	AVG (2006-2014)
CO <sub>2</sub> Removals	-6.6	-20.2	-13.4
CO <sub>2</sub> Emissions	34.1	151.2	92.7
Net Total CO <sub>2</sub> Emissions	27.5	130.9	<b>79.2</b>

Note that in **Table 5** extracted from the FREL the average net annual CO<sub>2</sub> emissions are estimated 79.2 MtCO<sub>2</sub>eq, meanwhile the SNC results into more than 3 times less emissions, respectively 23.5 MtCO<sub>2</sub>eq due to difference in methodology and scope of the FREL compared to the SNC.

The other sources include information from the Global Forest Watch<sup>67</sup>. The initiative showcases the Hansen (2013) information interactively online to check the tree cover changes over time. The trend shows that tree cover loss has increased over time with higher losses since 2010, measured towards 2016. Tree cover includes also tree cover in forest and agriculture plantations which might be subject on periodical harvest and therefore includes those fluctuations.

<sup>66</sup> Initial Forest Reference Level for Cambodia under the UNFCCC Framework, July 2016 [online]

<sup>67</sup> <http://www.globalforestwatch.org/country/LBR>



**Figure 5: Tree cover loss in Cambodia (from GFW, Hansen 2013)**

## Annex 11: References to Inform the Design of Measurement Frameworks for Climate-change Adaptation<sup>68</sup>

Reference	Topic(s)	Level	Sector (intended users)
Tracking Adaptation in Agricultural Sectors: Climate Change Adaptation Indicators (FAO, 2017)	Methods and indicators for tracking climate-change adaptation	National and sub-national	AFOLU (national decision-makers and MRV practitioners)
Monitoring and reporting toolkit of PPCR (CIF, 2015)	Processes related to adaptation planning and mainstreaming	National and program/project level	Multi-sectoral (national policy-makers)
Framework for the assessment of skills for national adaptation planning (Mackay et al., 2015)	Assessment of capacities to design NAP processes	National	Multi-sectoral (stakeholders involved in NAP processes)
Stocktaking for national adaptation planning (SNAP) tool (GIZ, 2014)	Self-assessment of capacities to undertake NAP processes	National	Multi-sectoral (stakeholders involved in NAP processes)
Tool for monitoring progress, effectiveness, and gaps (PEG) under NAP processes (UNFCCC, 2015)	Assessment of the essential functions of NAP processes	National	Multi-sectoral (stakeholders involved in NAP processes)
Index for risk assessment (INFORM) (De Groeve et al., 2015)	Assessment of country resilience and ranking	National	Multi-sectoral (national decision-makers and international organizations)
Framework on making adaptation count (Spearman and McGray, 2011)	Monitoring and evaluation of adaptation processes and outcomes	National and local	Multi-sectoral (adaptation practitioners)
Tracking adaptation and measuring development (TAMD) approach (Brooks et al., 2011)	Monitoring of climate risk management processes and outcomes	National and local	Multi-sectoral (adaptation practitioners)
The Vulnerability Sourcebook (Fritzsche et al., 2014)	Changes in outcomes, with a specific focus on vulnerability	National and sub-national	Multi-sectoral (adaptation practitioners)

<sup>68</sup> Table adapted and expanded from FAO. (2017). *Tracking adaptation in agricultural sectors: Climate change adaptation indicators*.

<b>Reference</b>	<b>Topic(s)</b>	<b>Level</b>	<b>Sector (intended users)</b>
Impact evaluation guidebook for climate change adaptation projects (GIZ, 2015)	Assessment of adaptation interventions contributing to a given outcome	National	Multi-sectoral (adaptation practitioners)
Participatory monitoring, evaluation, reflection and learning (PMERL) for community-based adaptation (CARE International, 2014)	Participatory monitoring, evaluation, reflection and learning to help design and implement community-based adaptation	Community	Multi-sectoral (communities)
Resilience index measurement and analysis (RIMA) (FAO, 2016)	Assessment of households' reactions to shocks and stressors	Household	Agriculture (households)
Self-evaluation and holistic assessment of climate resilience of farmers and pastoralists (SHARP) (FAO, 2015)	Farmers' self-evaluations to assess resilience	Program/ project (household/ community)	Agriculture (farmers and pastoralists)
Adaptation monitoring and assessment tool (AMAT) (GEF, 2012)	Assessment of project-specific processes, outputs, and outcomes	Program/ project	Multi-sectoral (GEF projects' executing partners)
Strengthening Monitoring and Evaluation of Climate Change Adaptation (GEF STAP, 2017)	M&E challenges and frameworks	Program/ project	Multi-sectoral (development agencies and financial institutions)
International and Donor Agency Portfolio Evaluations: Trends in Monitoring and Evaluation of Climate Change Adaptation Programmes (Sea Change & UKCIP, 2017)	Trends in M&E approaches from donor and development agencies	Program/ project	Multi-sectoral (donor agencies and development agencies)
Guidance Note 1: Twelve Reasons Why Climate Change Adaptation M&E is Challenging (Sea Change & UKCIP, 2014)	Strategies for addressing common challenges for CCA M&E	Program/ project	Multi-sectoral (donor agencies and development agencies)
Guidance Note 2: Selecting Indicators for Climate Change Adaptation Programming (Sea Change & UKCIP, 2014)	Considerations and frameworks for CCA indicators	Program/ project	Multi-sectoral (donor agencies and development agencies)

Reference	Topic(s)	Level	Sector (intended users)
Guidance Note 3: Theory of Change Approach to Climate Change Adaptation Programming (Sea Change & UKCIP, 2014)	How to apply a “Theory of Change” approach to designing CCA projects and programs	Program/ project	Multi-sectoral (donor agencies and development agencies)