



## **Strengthening Malaysia's Capacity in Implementing and Tracking Ambitious Climate Change Actions**

### **Part I: Project Information**

#### **GEF ID**

#### **Project Type**

MSP

#### **Type of Trust Fund**

GET

#### **CBIT/NGI**

**CBIT No**

**NGI No**

#### **Project Title**

Strengthening Malaysia's Capacity in Implementing and Tracking Ambitious Climate Change Actions

#### **Countries**

Malaysia

#### **Agency(ies)**

UNEP

#### **Other Executing Partner(s)**

Ministry of Environment and Water (KASA)

#### **Executing Partner Type**

Government

#### **GEF Focal Area**

Climate Change

#### **Taxonomy**

Focal Areas, Climate Change, United Nations Framework Convention on Climate Change, Capacity Building Initiative for Transparency, Influencing models, Strengthen institutional capacity and decision-making,

Convene multi-stakeholder alliances, Stakeholders, Civil Society, Non-Governmental Organization, Academia, Type of Engagement, Participation, Information Dissemination, Consultation, Private Sector, Large corporations, SMEs, Gender Equality, Capacity Development, Gender results areas, Participation and leadership, Awareness Raising, Beneficiaries, Gender Mainstreaming, Capacity, Knowledge and Research, Enabling Activities, Knowledge Generation, Workshop, Training, Knowledge Exchange, Conference

**Sector**

Mixed & Others

**Rio Markers**

**Climate Change Mitigation**

Climate Change Mitigation 1

**Climate Change Adaptation**

Climate Change Adaptation 0

**Submission Date**

5/7/2022

**Expected Implementation Start**

10/1/2022

**Expected Completion Date**

9/30/2025

**Duration**

36In Months

**Agency Fee(\$)**

173,516.00

**A. FOCAL/NON-FOCAL AREA ELEMENTS**

<b>Objectives/Programs</b>	<b>Focal Area Outcomes</b>	<b>Trust Fund</b>	<b>GEF Amount(\$)</b>	<b>Co-Fin Amount(\$)</b>
CCM-3-8	CBIT	GET	1,826,484.00	200,000.00
<b>Total Project Cost(\$)</b>			<b>1,826,484.00</b>	<b>200,000.00</b>

## B. Project description summary

### Project Objective

To strengthen Malaysia's ability to identify, implement and track ambitious mitigation and adaptation action, its costs, benefits, support and impacts on sustainable development.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Strengthening capacities and systems for NDC Tracking and designing ambitious climate actions	Technical Assistance	The GoM with enhanced capacities adopts tools and methodologies complying ETF provisions for tracking progress of NDCs and their impacts in the Energy and AFOLU sectors.	<p>1.1. GHG modelling tools developed and operationalized to develop scenarios for Energy and AFOLU sector to report on NDC implementation.</p> <p>1.2. Integrated platform for climate change information for NDC progress and long term low GHG strategy tracking developed and operationalized.</p> <p>1.3. Climate Change Knowledge Sharing platform established to inform all the stakeholders on country efforts and outcomes of addressing climate change.</p> <p>1.4. Technical capacity built of decision makers to meet transparency provisions stipulated under Article 13 of the Paris agreement.</p>	GE T	978,250.00	105,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Regular, accurate and timely GHG emissions inventories submitted to UNFCCC on regular basis	Technical Assistance	The GoM implements GHG DIS and Higher tier methodological approaches to submit accurate GHG emissions inventories reports on regular and timely basis to UNFCCC.	2.1. An online GHG database and information system (GHG-DIS) established and operationalized to enable regular and timely preparation of GHG Inventory  2.2: Tools and methods for higher tier GHG emission estimation methodology for high GHG impact sectors available to stakeholders	GE T	440,200.00	50,000.00
Assessment of systems and tools for tracking support	Technical Assistance	A tracking system of support needed and received for implementing climate actions endorsed by the NSCCC	3.1. Tables and guideline documents for collection, tracking and reporting of climate finance, technology transfer and capacity-building support.  3.2: Process, timelines and responsibilities developed for regular assessment of needs for technology, finance, and capacity building in implementing climate actions presented for approval to NSCCC	GE T	216,800.00	25,000.00
Monitoring and Evaluation	Technical Assistance	Project is effectively monitored and evaluated	5.1: Monitoring and evaluation activities are executed (see Sec 9 and Annex J).	GE T	45,250.00	



**C. Sources of Co-financing for the Project by name and by type**

<b>Sources of Co-financing</b>	<b>Name of Co-financier</b>	<b>Type of Co-financing</b>	<b>Investment Mobilized</b>	<b>Amount(\$)</b>
Recipient Country Government	KASA	In-kind	Recurrent expenditures	200,000.00
<b>Total Co-Financing(\$)</b>				<b>200,000.00</b>

**Describe how any "Investment Mobilized" was identified**

NA

**D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds**

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programming of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>	<b>Total(\$)</b>
UNEP	GET	Malaysia	Climate Change	CBIT Set-Aside	1,826,484	173,516	2,000,000.00
<b>Total Grant Resources(\$)</b>					<b>1,826,484.00</b>	<b>173,516.00</b>	<b>2,000,000.00</b>



**E. Non Grant Instrument**

NON-GRANT INSTRUMENT at CEO Endorsement

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Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

**F. Project Preparation Grant (PPG)**

PPG Required **false**

PPG Amount (\$)

PPG Agency Fee (\$)

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
<b>Total Project Costs(\$)</b>					<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## Core Indicators

### Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	<b>Number (Expected at PIF)</b>	<b>Number (Expected at CEO Endorsement)</b>	<b>Number (Achieved at MTR)</b>	<b>Number (Achieved at TE)</b>
<b>Female</b>		150		
<b>Male</b>		150		
<b>Total</b>	0	300	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

The project addresses the need for enabling conditions to mainstream climate change concerns into the national planning and development agenda through its support for enabling activities, including obligations of the Convention and the CBIT through sound data, analysis, and policy frameworks. The beneficiaries of the activities planned under the project (capacity development, knowledge and research, direct participation) include: ? The National focal point and other national institutions under the respective TWGs and SWGs; ? Policy makers in the Ministries and agencies involved in the mitigation action policies and long-term policy planning activities; namely the Ministry of Energy and Natural Resources, Ministry of Transport, Ministry of Plantation Industries and Commodities, Ministry of Local Housing and Local Government to name a few; ? Central Agencies such as Ministry of Finance and the Economic Planning Unit, Prime Minister?s Department; and ? Civil society (NGOs and academia).

## **Part II. Project Justification**

### **1a. Project Description**

#### **1) Global environmental and/or adaptation problems, root causes and barriers that need to be addressed**

This project addresses increasing social, economic, and environmental damage because of increased greenhouse gases in the atmosphere. To address this problem, the global community needs to develop the evidence and expertise to identify, implement and track solutions that build resilience and reduce global greenhouse gas (GHG) emissions. This requires the need for improved data and evidence on trends and projected scenarios of greenhouse gases and risks and vulnerabilities associated with climate trends and scenarios as well as improved understanding of solutions to reduce GHG emission and increase removals and to mitigate risks of loss and damage.

With the aim to strengthen the global response to the threat of climate change, Malaysia ratified the Paris Agreement on 16 November 2016. As part of the Paris Agreement, an Enhanced Transparency Framework (ETF) for action and support was established under Article 13 of the Paris Agreement, which outlines the information countries should provide to take global assessment of GHG emissions/removals as well as progress towards Net-Zero Emissions goal.

The ETF builds on the existing Measurement, Reporting Verification (MRV) system under the Convention. It intends to provide a clear understanding of climate change action in light of the objective of the Convention as set out in its Article 2, including clarity and tracking of progress towards achieving Parties' individual nationally determined contributions, and Parties' adaptation actions, including good practices, priorities, needs and gaps, to inform the global stock take under Article 14 of the Paris Agreement. By preparing and providing information on greenhouse gas (GHG) emissions and climate change policies through different communication vehicles under the Convention, Parties can build national institutional arrangements for climate change and strengthen relevant policy frameworks.

The project address the global challenge of gap of data collection systems, methods and tools to collect data and estimate the GHG emissions, impacts of climate policies and measures (PAMs), and capacities in the countries to apply the knowledge in preparing regular, accurate and reliable data for tracking progress in addressing climate change as to report to the UNFCCC.

#### **Barriers and gaps relating to transparency**

The technical analysis by the team of technical experts (TTE) for Malaysia's BUR3 report noted improvements in the reporting of Malaysia's BUR3 compared with its Second BUR. Information on institutional arrangements, GHG inventories, mitigation actions and their effects, and needs and support reported in the BUR3 demonstrated that Malaysia had taken into consideration the areas for

enhancing transparency noted by the previous TTE in the summary report on the technical analysis for Malaysia's first BUR. The TTE also noted significant improvement in the information provided on Malaysia's MRV system. However, several gaps remain to be addressed before Malaysia can successfully comply with the ETF requirements of the Paris Agreement. Several priority capacity-building needs as identified in the technical analysis of Malaysia's BUR3 report through the international consultation and analysis (ICA) process are listed below:

- a. Developing methodologies and collecting data for estimating GHG emission reductions for non-quantified initiatives, especially for reducing fugitive emissions by oil/gas operators, substituting material in the cement and iron and steel industries, and recycling non-paper materials;
- b. Long-term modelling especially on the AFOLU sector, modelling mitigation assessment scenarios from the waste and IPPU sectors, as well as sector-wise factor/decomposition analyses;
- c. Enhancing the national capacity to estimate emissions from soils and use models, such as the Yasso model.
- d. Developing country-specific EFs to enable application of the tier 2 methodology for the largest emissions sources in the energy sector;
- e. Developing country-specific EFs and improving AD to enable application of the first-order decay model in the waste sector;
- f. Enhancing the national capacity to conduct the technology needs assessment, when required, by improving access to adequate financial resources and technical support from international source; and

The main barriers relating to transparency in Malaysia are as below:

? **Lack of Tools and methodology for assessing impact of sector-specific mitigation actions and long-term mitigation analysis**

Like many other developing countries, Malaysia lacks comprehensive sector-specific emission inventories and long-term sectoral mitigation analysis. These challenges were also highlighted in Malaysia's BURs, where the development and assessment of (long-term) national mitigation plans and strategies has been challenging due to the lack of sector specific mitigation actions assessment (reported only for the energy, waste and forestry (REDD+) sectors) and expertise in conducting economy-wide long-term scenario assessment (using appropriate modelling tools). KASA is in the process of strengthening its function under its Climate Change Division (CCD) and a new unit dedicated for GHG inventory and mitigation analysis has been established recently in 2019. The team requires strengthening of its capacity in the area of modelling as well as those of the related ministries to enable them. Two priority sectors for developing long-term projections to support policy include the energy and AFOLU sectors, while other sectors projections to be developed include the IPPU and waste sectors.

? **Lack of well developed system for tracking of NDC progress**

Currently, Malaysia is yet to establish any systematic tracking tool for implementing its NDC. Additionally, there is no formal arrangement or comprehensive mechanism that exists to report the overall impact in terms of GHG emission reduction from mitigation actions by government departments responsible for implementing climate actions to KASA. Currently these process are undertaken whenever a report to UNFCCC is prepared and is primarily done by consultants. The stakeholders directly responsible act as data providers and reviewers of the assessment.

#### ? **Lack of data and capacity to develop robust and accurate national GHG inventory**

Currently GHG inventory is developed using Tier I methodology and default values for various parameters. This results in not so reliable and higher uncertainty estimates. A robust and accurate GHG inventory is critical to support verification of reduction in GHG emissions of a country through its actions as well as a well-designed policy planning system. Notably in Malaysia's First, Second and Third BUR, developing country-specific emission factors especially for key categories and performing uncertainty analysis remain among the main challenges to achieve transparency, accuracy, consistency, completeness, and comparability (TACCC) principles. The development of country-specific emission factors and improved activity data has been highlighted in the inventory improvement plan in various reviews. But lack of capacities to apply more accurate methodologies and availability of associated data continues to be a challenge. One of the main factor is that data collected currently is for tracking economic aspects and not tailored to climate change. Thus data tailored to estimating GHG inventory, where it is not captured in current systems, needs to be developed. It also includes tools and processes for collecting such data.

#### ? **Coordination and capacities**

Coordination between relevant stakeholders (e.g., between sectoral focal points, national experts, inventory compilers and data providers, verification bodies etc.) on long-term low-GHG emissions pathways and on GHG reporting and MRV continues to be a challenge. The process of coordination and collection of data is initiated as per requirements of the reporting to the UNFCCC and is mostly manual and collected through excel sheets. There is a lack of an information management system and database to coordinate interaction between the relevant stakeholders to allow for information and data flow in a timely manner. Such a plan of streamlining GHG inventory reporting, if successfully executed, could increase the efficiency of coordination among the relevant ministries/agencies and states, while minimizing duplicity of efforts in other agencies. This also will support institutional memory strengthening as there is currently no system to easily retrieve historical data and underlying thinking.

In addition, the issue of weak coordination in tracking of climate finance, technology transfer and capacity-building support needed and received because of lack permanent institutional arrangement at the national level.

There are very limited capacities regarding NDC implementation and tracking, mitigation analysis, and MRV still needs to be improved and further institutionalized. The reports currently rely on external consultants and staff at ministries and other partners is purely in the role of data provider. Further there

is no systemic approach to capacity building which affects retaining of capacities within the organizations or creating capacity among new members.

The areas indicated as priority capacity-building needs by the TTE and barriers to increasing transparency are currently hindering Malaysia's ability to develop effective climate change strategies and effectively implement cost-effective mitigation actions to achieve the country's NDC. Sound planning for climate change in Malaysia would require the following:

- a. *Comprehensive data and institutional capacity to conduct continuous and robust GHG inventory cycles including addressing inventory improvement plan;*
- b. *The application of sound assessment methods for evaluating policies, strategies and programmes to enhance transparency and to inform sound climate action planning; and*
- c. *An enabling environment for enhanced transparency across all the level of governance.*

## **2) Baseline scenario and any associated baseline projects**

Malaysia has started to increase capacity in its transparency systems (governance, expertise, data flows, tools and stakeholder engagement activities) to support the development of its strategies, policies and actions on climate change, focusing on both mitigation and adaptation. This is evident through the range of reports produced over the last 5 years, the planned pipeline of reports and transparency system development projects (see table 1). Malaysia continues to focus on establishing the capacity to fully integrate climate related evidence and expertise advice into its national and subnational decision making, planning and strategy processes as well as developing the basis for transparent reporting on its climate change related ambition, efforts, and successes to the international community.

### **Transparency Framework**

Malaysia ratified the UNFCCC on the 13<sup>th</sup> of July 1994. On November 2015, Malaysia submitted its (Intended) Nationally Determined Contribution (NDC) to the UNFCCC, with a pledge to reduce 45% of its greenhouse gas (GHG) emissions per GDP by 2030, relative to its emissions intensity in 2005. This target encompasses a 35% reduction on an unconditional basis, and a further 10% reduction subject to receipt of climate financing, technology transfer and capacity building from developed countries. The NDC covers economy-wide emissions intensity of GDP and focuses on reducing emissions from the sectors of energy; industrial processes; waste; agriculture; and land use, land use change and forestry (LULUCF). The government is preparing a NDC implementation roadmap, which is expected to be finalized by end of 2022.

An updated submission to Malaysia's first NDC was submitted in July 2021. Based on the updated submission, Malaysia intends to reduce its economy-wide carbon intensity (against GDP) of 45% in 2030 compared to 2005 level. The updated NDC includes the following increased ambition:

- ? The 45% of carbon[1] intensity reduction is unconditional;
- ? This target is an increase of 10% from the earlier submission; and

? The GHG coverage is expanded to seven (7) greenhouse gasses (GHG): Carbon dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous oxide (N<sub>2</sub>O), Hydrofluorocarbons (HFCs), Perfluorocarbon (PFCs), Sulphur hexafluoride (SF<sub>6</sub>) and Nitrogen trifluoride (NF<sub>3</sub>).

Climate change has also been an increasingly important issue and has been emphasized as a key focus of the Malaysian government. Climate change has been mainstreamed into national development planning with climate change considerations integrated into the 11<sup>th</sup> Malaysia Plan (2016-2020) and highlighted within the strategic thrust on 'Pursuing Green Growth for Sustainability and Resilience'. The Mid-Term Review of the 11<sup>th</sup> Malaysia Plan which outlines the focus of the government for the remaining period of the 11<sup>th</sup> Malaysia Plan from 2018-2020 also provides prominence to climate change under Pillar V on 'Environmental Sustainability through Green Growth'. One of the key priority areas of Pillar V provides the national priorities for intensifying climate change mitigation in the key emitting sectors, and on augmenting climate change adaptation to increase resilience and adaptive capacity.

The 12<sup>th</sup> Malaysia Plan from 2021-2026[2], Theme 3, focuses on advancing green growth as well as enhancing energy sustainability and transforming the water sector. The next five years will see a nationwide shift to more sustainable economic practices and lifestyles that value natural endowments and environmental health and will address the issues of climate change, unsustainable consumption and production practices, loss of biodiversity, lack of coherence in the implementation of policies and inefficient water resources management. The energy sector will address the energy trilemma, while the water sector will focus on ensuring water security for all. The effective execution of policies and strategies under Theme 3 will contribute to sustainable and resilient growth as well as the achievement of the 2030 Agenda around sustainable development goals.

Malaysia is also drafting a Climate Change Act, an overarching climate change law, which will create a legally binding mandate or legislative power to the institutional arrangements for transparency. Additionally, by developing a formal directive, this climate change act can legitimize resource requests and facilitate reforms and the formulation of new responsibilities which will assist in Malaysia's obligations to the UNFCCC and the Paris Agreement including its related reporting processes.

### **Institutional arrangements on climate change & MRV**

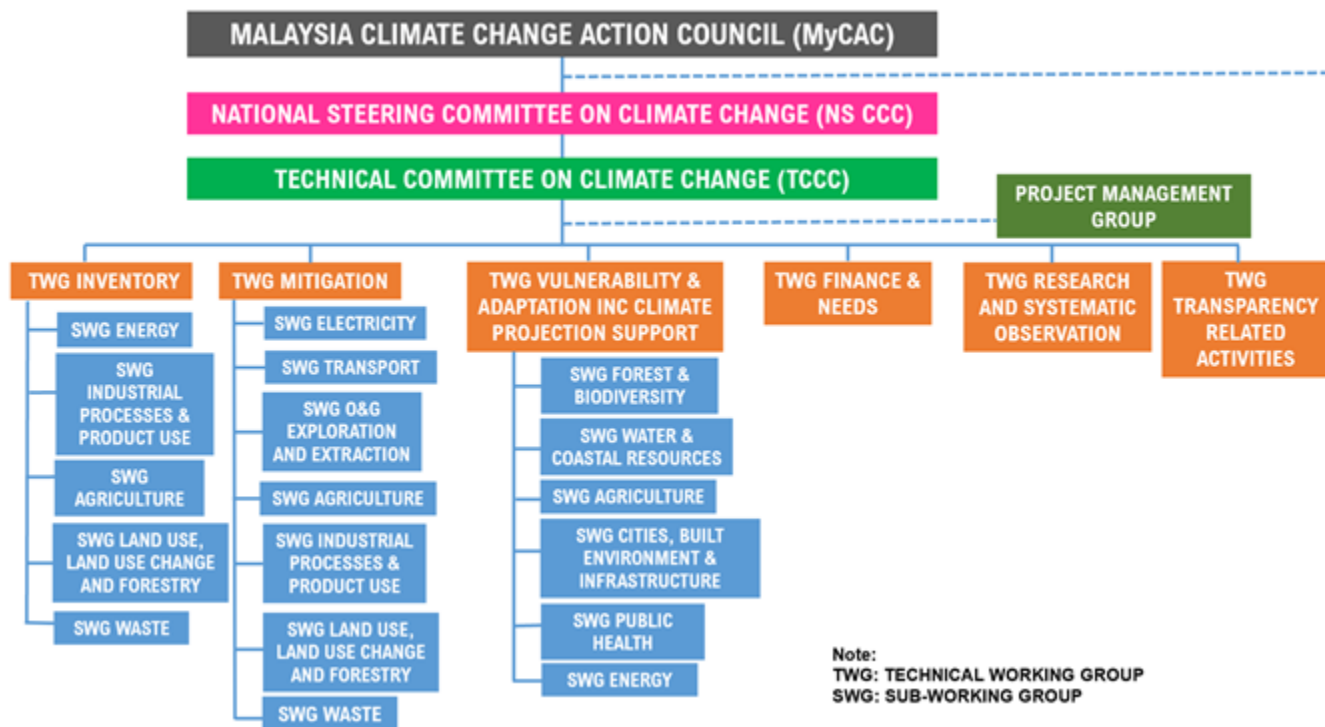
KASA is the national focal point of climate change and for the reporting obligations under the UNFCCC. Development planning and implementation, including for climate change are coordinated by the Economic Planning Unit, under the Prime Minister's Departments, in consultation with the relevant Ministries/Agencies. These are carried out through five-year development plans.

Under the current institutional arrangement on climate change, the Malaysia Climate Change Action Council (MyCAC) is chaired by the Hon. Prime Minister of Malaysia. The National Steering Committee on Climate Change (NSCCC) under the KASA guides and endorses all operational matters on climate change, and this committee includes representatives from key ministries and agencies, the private sector and non-governmental organizations. Coordination for the preparation of national communications and BURs to the United Nations Framework Convention on Climate Change (UNFCCC) is under the Technical Committee on Climate Change (TCCC), with the work carried out



with the support of six thematic Technical Working Groups (TWGs) and supported by the relevant thematic Sub-working Groups (SWGs). The SWG membership comprise of a multi-level stakeholder such as Federal and State Ministries/Agencies, national experts, academic and research bodies, public and private sectors, local communities, and NGOs. Coordination for the preparation of national communications and Biennial Update Reports (BURs) to the UNFCCC is under the TCCC, with the work carried out by six TWGs. The Project Management Group (PMG) is the unit that supports the TCCC in undertaking the preparation of reports to the UNFCCC. Figure 1 shows the institutional arrangements and thematic grouping for climate change reporting.

Figure 1: Institutional Arrangements and Thematic Groupings for Climate Change Reporting and MRV



### Policy and regulatory framework on climate change

The National Policy on Climate Change, approved by Cabinet in 2009, provides a national framework for climate change to guide government agencies, industries, and other stakeholders in Malaysia and to mobilize resources to address the challenges of climate change. The policy recognizes the need for both mitigation and adaptation to be carried out and focuses on the principles of (i) Development on a sustainable path; (ii) Conservation of environment and natural resources; (iii) Coordinated implementation, (iv) Effective participation; and (v) Common but differentiated responsibilities and respective capabilities.

Sectoral climate change mitigation policies and actions relating to the power generation; transport; industries; waste; agriculture; and land use, land use change and forestry sectors have also been developed and carried out by various Ministries and their Agencies.

## Reporting to the UNFCCC

As a non-Annex I party to the UNFCCC, Malaysia has submitted the following reports to the UNFCCC in fulfillment of the UNFCCC reporting obligations to submit a National Communication (NC) once every four years and a Biennial Update Report (BUR) once every two years and from December 2024 Biennial Transparency Reports (including a National Inventory Document) once every two years. To date Malaysia have submitted:

- ? NC: Initial (2000), Second (2011) and Third (2018);
- ? BUR: First (2016), Second (2018) and Third (2020).

Malaysia submitted its first Biennial Update Report (BUR1) on 3 Mar 2016, which was analysed by a Team of Technical Experts (TTE). The summary report by the TTE concluded that Malaysia has presented transparent information on its national circumstances and institutional arrangements, national GHG inventory, and that mitigation actions were reported in a generally transparent manner. However, the TTE suggested several areas to improve transparency of the GHG inventories, namely the inclusion of more detailed information on methods and underlying assumptions to estimate emissions and removals, and sectoral/ subsectoral information on uncertainty levels. The TTE also suggested to include more information on domestic Monitoring, Reporting and Verification (MRV) arrangements, and the translation of constraints and gaps in the BUR to related financial, technical and capacity-building support needs to increase the transparency of the BUR.

On 27 September 2018, Malaysia submitted its Third National Communication (NC3) together with its Second Biennial Update Report (BUR2) which was a summary of parts of the NC3. During the development of the NC3 and the BUR2, strong emphasis has been placed in improving the quality of the GHG inventory, projection of GHG emissions until 2030, quantification of mitigation actions and their effects, vulnerability and adaptation assessment and establishing a sustainable low-cost MRV system for GHG inventory and mitigation actions. The process of preparing the NC3 and BUR2 has led to the further development of the institutional arrangements for UNFCCC reporting, and strengthening of the capacity, capability and coordination for the Technical Working Groups and Sub Working Groups.

On 31 December 2020, Malaysia submitted its Third Biennial Update Report. The submission was noted as a challenging task due to the global pandemic situation.

## **Current situation with the GHG Inventory Preparation, Climate Change Action progress tracking and impact assessment and Support Needs Assessment**

? The 2006 IPCC Guidelines for National Greenhouse Gas Inventories were used to **estimate the GHG emissions and removals for Malaysia's** BUR3 (published 2020). All significant sources and removals (with methods included in the 2006 IPCC) and direct GHG gases (carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>)) are included. Generally, tier 1 IPCC methodology with IPCC default emission factors have been applied including tier 1 (default 2006 IPCC

emissions factors and aggregated activity data) for key categories of energy industry and transport which should be estimated using tier 2 or higher. Tier 2 methodology have been used in a few cases for sub-sectors where country specific emission factors were available.

? Malaysia's GHG inventory use the 2006 IPCC software database and a flat file system of spreadsheets used for each of the five sectors (Energy, IPPU, Agriculture, LULUCF and Waste). The data files, 2006 IPCC Guidelines software database, analysis spreadsheets, reports and sectoral USEPA documentation templates are deposited with the GHG Inventory and Reporting Unit (UGHG) of the Ministry of Environment and Water. The agency heading each sectoral GHG inventory group also keeps a copy of their sectoral data files, analysis spreadsheets, reports and USEPA documentation templates as a second level backup. Malaysia does not have an online web based GHG inventory system.

? Operational matters on climate change are guided and endorsed by the NSCCC chaired by the Secretary General of the KASA. The coordination for the preparation of national communications (NCs) and biennial update reports (BURs) is under the TCCC which reports to the NSCCC. The secretariat to these Steering Committees is the CCD of KASA which is also the national focal point for climate change to the UNFCCC. The technical work of the NCs and BURs is carried out through six Technical Working Groups (TWGs) established under the NSC NC/BUR. However, data collection is still extremely difficult. A responder to the 2022 MRV questionnaire indicated that "Data are provided as requested by the Ministry, and to get the data, letters, invitation, and many engagements must first be formalized. Also, data on some of the sectors such as IPPU and Agriculture has not been gathered yet due to the lack of awareness/engagements of its data custodians."

? **Mitigation and adaptation action for Malaysia's NCs, BURs and NDCs are tracked and assessed** through the work of the sectoral ministries covering energy, transport, industry, agriculture, forestry and waste and coordinated by the NSCCC chaired by the Secretary General of the KASA. The gathering of data and engagement of stakeholders is ad-hoc and focused around report production activities (e.g. NC/BUR). Currently the process of data gathering and analysis are done manually, mostly through excel. A responder to the 2022 MRV questionnaire indicated that "We do have some models that we use, mainly for the energy sector and primarily developed for energy planning but there are no systems or tools put in place to centralize the whole processes for all of the sectors. The collaboration between data providers to report preparation team is also manually done."

? Malaysia's **domestic MRV system** has broadly defined institutional arrangements and processes for collecting and preparing reports. Domestic measurement, reporting and verification of mitigation actions and their effects is coordinated by the KASA. Key elements include the TCCC and its TWGs, specially on MRV. Monitoring and measurement of emission reduction are at different levels of integration into the functions of the implementing agencies. The mitigation action data is collated by the SWGs with the assistance of consultants. First level verification is carried out by the UGHG with the assistance of independent experts. The results are then submitted to the TWG on Mitigation for second level verification and endorsement. The final verification and endorsement is carried out by the MRV TWG. Malaysia also has the National Steering Committee and Technical Working Committee for REDD plus and The National Committee on Clean Development Mechanism. However, the domestic MRV system lacks the data flows, systems and tools and the expert capacity to improve the

quality and detail of data needed to support decision makers and report in accordance with the Paris Agreement. One respondent to the 2022 MRV questionnaire indicated that mitigation impact analysis is a very challenging task to take on for such a small unit as there are so much work to be done on different fronts (work on gathering and analyzing data, improving governance structure, building capacity and training, identifying potential systems and tools in place). Another indicated that currently, there are no official mandates that covers the need for data providers to regularly report their data to the focal point (KASA). The work on getting this information i.e. collecting data and stakeholder consultations are still manually done by the secretariat (BPI KASA) through formal engagement and invitations as needed.

Malaysia has some basic tools and methodologies for **assessing the impact of mitigation impacts** which are documented in the BUR3 tables 3.4 and 3.15.

Malaysia's 2021 NDC was developed through participatory process through inter-ministerial/agencies/NGOs/private sector/academia working groups and consultations and has been endorsed by the National Steering Committee on Climate Change and approved by the Malaysian Cabinet.

Malaysia does not have a web-based system for engaging the public in climate action. As indicated by a responder to the 2022 MRV questionnaire, Malaysia has a list of stakeholders that are usually engaged, primarily made of government bodies, and some private sectors and non-profit organizations. Information made available to general public is only available through publicly published reports and communications. A project developed by National Hydraulic Research Institute of Malaysia [3] developed a public platform MALAYSIA CLIMATE CHANGE KNOWLEDGE PORTAL which focuses on climate and weather scenario analysis for risk and vulnerability assessment. Other than that, there are **no websites providing information on Malaysia's climate action**.

Malaysia presents some information on **financial support received and needed** in its NC and BURs. This information is compiled specifically for these reports by the national team and consultants and Malaysia does not have a centralised system for financial support received tracking. One responder to the 2022 MRV questionnaire indicated that Malaysia has a system to budget, monitor and report on financial flows and expenditures, but these are generally not designed for climate finance. Recently the Government has fully aligned the national budgets to the sustainable development goals (SDGs). Data was collected on adhoc basis to fulfil the reporting requirement and does not capture all sources. Reporting is on a voluntary basis. Financial flows received outside the national government, for example to NGOs, are often not systematically tracked.

### **Past and ongoing initiatives on transparency**

Malaysia has implemented several actions aligned with the objective of the Transparency Framework, and these are summarized in the **Table 1** below. A number of these are implemented with the assistance of international support.

*Table 1: Malaysia's Past and Ongoing Initiatives on Transparency*

<b>Donor</b>	<b>Implementing agency</b>	<b>Implementing partner</b>	<b>Initiative</b>	<b>Description of support</b>	<b>Relevance to CBIT project</b>	<b>Budget (USD)</b>	<b>Period</b>
GEF	UNDP	Ministry of Environment & Water	Malaysia's Fourth National Communication and fourth Biennial Update Report Project	To assist Malaysia in the preparation and submission of its Fourth National Communication and Fourth Biennial Update Report for fulfillment of obligations under the UNFCCC (expected to be submitted in 2022).	The Fourth BUR is the final BUR submission prior to Malaysia's first BTR in 2024. The methodological tiers reported in the Fourth BUR for the estimation of GHG emission and removal as well as mitigation assessment will serve as the starting point for future improvement plans in the respective BTR chapters.	852,000	2020-2022
GCF			NAP				

Donor	Implementing agency	Implementing partner	Initiative	Description of support	Relevance to CBIT project	Budget (USD)	Period
Government of Malaysia		Ministry of Environment & Water	NDC Roadmap	Sets out the roadmap to achieve Malaysia's NDC, specifically in achieving sectoral targets. This is following to Malaysia's First NDC Update in July 2021.	The NDC roadmap will inform the work of Component 1 on developing models for tracking NDCs and making projects to see the adequacy of actions identified in the NDC roadmap.	375,000	2021-2022
Government of Malaysia		Ministry of Environment & Water	Long-Term Low Emission Development Strategy (LT-LEDS)	Malaysia aspires to achieve net-zero GHG emissions target earliest by 2050, pending the completion of its LT-LEDS in 2022. Malaysia LT-LEDS will outline strategies and actions for GHG emission mitigation for key economic sectors of the country which include energy, industry processes and product use, agriculture, land use and land use changed (LULUCF) and waste sector.	The work and analysis will be used to develop the deliverables under Component 1.	250,000	2021-2022

Donor	Implementing agency	Implementing partner	Initiative	Description of support	Relevance to CBIT project	Budget (USD)	Period
Government of Malaysia		Ministry of Environment & Water	GHG Information Management System	<p>A web-based communication system that allows for the streamlining of GHG inventory activities (compilation of GHG inventory and the relevant analysis) between data providers and inventory compilers which will increase the efficiency of coordination among the relevant ministries/agencies and/or states, which can then complete the GHG inventory compilation process in a timely manner for the reporting of NCs, BURs/BTRs.</p>	Initial phase of system development yet to be tested for the preparation of the NIR. The project will work closely with CBIT project to augment its features and enhance system capacity.	250,000	2021-2023

Donor	Implementing agency	Implementing partner	Initiative	Description of support	Relevance to CBIT project	Budget (USD)	Period
Australia	Department of Industry, Science, Energy and Resources	Ministry of Environment & Water	Malaysia-Australia Comprehensive Strategic Partnership	To provide technical assistance to Malaysia on GHG emissions reporting and inventory arrangement, particularly on the development of the GHG Information Management System. This is technical support to project mentioned in above row.			
UNDP	UNDP	Ministry of Environment & Water	Climate Promise- Updating of Malaysia's NDC	To provide technical support to Malaysia in improving the clarity, transparency and understanding of Malaysia's NDC, allowing Malaysia to increase its transparency on assumptions and methodological approaches used to track NDC implementation. The Climate Promise project supports the Malaysian government in the review and updating of its NDC through robust data, information and modelling.	Provides Malaysia's updated NDC.	300,000	2020



### **Summary of 2022 analysis of stakeholder views on the current Baseline scenario**

A questionnaire was sent as part of the design of the project to 61 key stakeholders in Malaysia, engaged in the transparency system with 27 responders identifying their thematic areas of interest and view of the current state of the MRV system.

**Stakeholder responses** (number of responses in brackets) included full coverage across the seven **transparency themes** with the following response by theme:

- **GHG inventory** (12) ? Energy, Industrial Process and Product Use (IPPU), Agriculture, Land Use, Land Use Change, and Forests (LULUCF), Waste and Cross cutting on Quality Assurance and Quality Check (QA/QC).
- **GHG Projections** (4) - Energy supply and Demand and Agriculture
- **Mitigation Actions** (11) - Energy supply and Demand, IPPU, Waste and Agriculture
- **Risks and Vulnerability** (2) ? Water security
- **Adaptation Action** (2) ? Water security and food and farming
- **Support and Climate Finance**
- **Wider impacts** - Economy, job security and just transition, Social equity (including gender, youth, race and other social groups), Energy security, Human Rights

25 of the respondents had contributed to the following **outputs and reports**:

- (6) Malaysia's Report to UNFCCC for NC, NDC & BUR
- (7) GHG inventory projections and accounting including GHG Inventory, Mitigation Assessment, Energy Systems Modelling
- (3) Climate information such as temperature and rainfall trends, extreme weather of the country. Investigations on the transboundary haze.
- (1) Developed the National REDD+ implementation and National REDD Plus Strategy for Malaysia
- (1) Climate finance data for reporting
- (1) National Climate Change Policy 2009, and drafting the draft of the new NCCP (2022-2030).
- (1) Climate change coverage on coal and renewable energy transition in Malaysia

- (1) Improving climate journalism in Malaysia.
- (1) National Business and Human Rights Plan
- (1) WHO's report for health and women in COP26 Glasgow.
- (1) National Adaptation Plan
- (1) Company level sustainability strategy including Climate Risks, Mitigation & Adaptation, Climate Strategy

17 responders identified the following **priority future output** to which the MRV system could contribute. These responses indicate the expected focus of the outputs expected from the MRV system developed during the CBIT work.

- (12) 4th National Communication and 4th Biennial Update Report for Malaysia. Expected publication time - December 2022 and future Nationally Determined Contribution (NDC and NDC roadmap, NC, BUR, Biennial transparency Report (BTR), Climate finance and support reports and National Adaptation Plan (NAP)
- (6) National Adaptation Plans and National Adaptation Policy - the national adaptation plan, research on integration of climate change adaptation and disaster risk reduction, assessment of loss and damage. Water resources under Climate Change.
- (4) Long Term Low Emissions Development Strategy document
- (3) GHG Information Management System, GHG forecasting in AFOLU sector. GHG inventory and carbon offsetting
- (2) Carbon Accounting and Benchmarking index, Carbon benchmarking for iron and steel industry
- (2) National Climate Change Act and policy on climate change (phase: developing a legal framework),
- (1) National GHG Center (to streamline reporting processes).
- (1) Finance framework for mobilisation, management and targeting international climate finance (multilateral funds, bilateral) and other sources (private finance).
- (1) Climate Journalism Report - January 2023

- (1) Annual Sustainability Reporting in accordance with Sustainability Reporting, Carbon Accounting
- (1) National Agricommodity Policy 2021-2030
- (1) Access to public domain data collected by local agencies such as Malaysian Meteorological Service

20 of the responders provided inputs to identify priority transparency system improvements, as follows:

**For GHG inventories**

- Uncertainty assessment and incorporating inter-annual variable in GHG estimates (2019 Refinement)
- GHG inventory management system
- Development of QA/QC and verification
- Development of uncertainty analysis
- Higher tier and improved data accuracy (e.g., tier 2 and tier 3 plant specific data and approaches. Improvement in AD and Ef)
- Improvement of GHG inventory systems and tools
- Agency and Ministry training in GHG inventory
- Improving stakeholder engagement

**For GHG Projections**

- Capacity building and training of agency representatives in projections - Modelling team - capacity building to various types of models and to assess suitability in a country-context.
- Stakeholder engagement is convened prior to any national submission
- Scenario analysis, robustness of the model (uncertainty assessment), replicability, consistency, and completeness
- Improve collation of data from published reports and other parameters into projection scenario models
- Sharing of information on projections, activity data and emission factors, methods, data sources and assumptions of projections with stakeholders

### **For Mitigation action**

- Capacity building, training, and resources for expertise (representatives from each agency) in tracking action
- Systematic platform for sharing information on actions
- A mandate for project custodians to report their progress to the focal point on a periodic basis
- Further engagement with policy holders for certain sectors that have yet to be reported
- Identification of tools/systems to help with quantitative analysis for mitigation actions quantification and mitigation assessments
- Process and requirement for regular updates on the progress with actions
- Mapping and development of key indicators

### **For support and climate finance**

- ? Identifying funding availability
- ? Climate resilient projects taxonomy
- ? Representative from each agency to be trained on the climate/carbon finance
- ? Data on transition funding still new
- ? Develop common guidance to indicate whether finance received is being used for mitigation, adaptation, or both based on international standard (if any).

### **For wider impacts**

- ? Development of systems and tools and platforms to assess wider impacts including the economic assessment
- ? Engagement of stakeholders from grassroots, women and youth, and Indigenous People, as well as CSOs. Inclusion of vulnerable groups in government consultations, and financing of capacity building. Financing is needed for these groups to own and implement projects from community level.
- ? Appointment of coordinators and champions - somebody needs to lead the conversation
- ? Development of resources to engage stakeholders and undertake analysis and reporting. - Under resourced and not enough experts. If there are experts, they're not regularly engaged. there are also pseudo experts who are experts from engagement.

**3) Proposed alternative scenario with a description of project components, outcomes, outputs, and activity/deliverables**

The CBIT project objective is to strengthen Malaysia's ability to identify, implement and track ambitious mitigation and adaptation action, its costs, benefits, support, and impacts on sustainable development. The implementation of project and use of its outputs will result in:

? Regular reporting of robust, accurate and reliable National GHG emissions/removals as per the decision 18/CMA.1 and subsequent decisions.

? Enhanced regular scientific analysis of the current climate challenges, GHG emissions trends and projections, climate scenarios and risks, vulnerabilities, and loss and damage for better decision making.

? Regular, credible analysis of climate benefits and co-benefit, costs and investment potential, as well as needs and provisioning of resources to effectively implement climate actions.

? Ambitious climate actions to reduce GHG Emissions and increase adaptive capacities supported by:

- provision of advice to sectoral decision makers on the best mitigation and adaptation options to build into climate, environmental, social, and sectoral plans and long-term low GHG emissions development strategies, e.g., to 2050 and beyond.

- Regular tracking of progress in implementing climate actions their impacts towards meeting the NDC targets, long term climate and sectoral strategies and climate related aspects of Malaysia's twelfth (2021-2025), and subsequent plans.

? Strengthened institutional capacities and coordination mechanisms relating to transparency for reporting and to support decision makers in designing climate policies and measures (PAMs).

? Increased awareness among stakeholders on Malaysia's climate actions, through provision of transparent information to the public, private sector, and sub-national administrations.

The work will focus on relevant key categories and contribute to mid-century, long-term zero GHG emission development strategies (including NDC goal) in accordance with Article 4, paragraph 19, of the Agreement. The work will help Malaysia to build informed policies to avoid inadequate responses in mitigation planning. The project will also support the transitioning from BUR to BTR.

The project will directly support the preparation of first BTR, which is expected to run concurrently with the current project. The deliverables of the project will be applied in preparing information for the BTR. The project will result in strengthened expertise, data flows, stakeholder engagement and tools (including projection models, cost models, GHG databases, action plans, continuous improvement and quality assurance and control, stakeholder engagement tools, data gathering and reporting templates

etc.) to meet the Paris Agreement requirements for reporting. This will include developing the requisite capacities to be able to compile the BTRs required elements. The project will also provide a roadmap for continuous improvement of systems and capacities to increase the robustness and transparency of the reporting to UNFCCC as well as better quality information for climate policy making.

*Outline of the biennial transparency report, pursuant to the modalities, procedures, and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement (annex to decision 18/CMA.1)[4] and areas of support by the project*

Overview chapter

## **Outcome 2**

? National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases (paras. 17-58 of the MPGs) *(with flexibilities) including reporting tables pursuant to the annex to decision 18/CMA.1 ? The CBIT project will work on further enhancing the coverage and accuracy of the national GHG inventory and a GHG inventory database for reporting under the Paris Agreement.*

## **Outcome 1**

? Information necessary to track progress made in implementing and achieving nationally determined contributions under Article 4 of the Paris Agreement (paras. 59-103 of the MPGs) *(with flexibilities)*

? National circumstances and institutional arrangements (paras. 59-63 of the MPGs)

? Description of a Party's nationally determined contribution under Article 4 of the Paris Agreement, including updates (para. 64 of the MPGs)

? Information necessary to track progress made in implementing and achieving nationally determined contributions under Article 4 of the Paris Agreement (paras. 65-79 of the MPGs) *? The CBIT project will work on developing the expertise, data flows and tools, templates, and indicators necessary to track progress with the NDC.*

? Mitigation policies and measures, actions, and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, related to implementing and achieving a nationally determined contribution under Article 4 of the Paris Agreement (paras. 80-90 of the MPGs) *? The CBIT project will work on developing the expertise, data flows and tools, templates, and indicators necessary to identify analyse and report on climate (mitigation and adaptation) policies and measures and actions and link them to sustainable development and diversification plans.*

? Summary of greenhouse gas emissions and removals (para. 91 of the MPGs) *? The CBIT project will work on developing clear and concise GHG emissions and removal summaries and reported in the required reporting tables.*

? Projections of greenhouse gas emissions and removals, as applicable (paras. 92-102 of the MPGs) *(with flexibilities) ? The CBIT project will work on developing clear and concise GHG emissions and removal projections scenarios, linked to policies and measures and actions and reported in the required reporting tables.*

## **Outcome 3**

? Other information (para. 103 of the MPGs)

? Information related to climate change impacts and adaptation under Article 7 of the Paris Agreement

? Information on financial, technology development and transfer and capacity building support needed and received under Articles 9-11 of the Paris Agreement *? the CBIT project will integrate with work on support needed and received data gathering and reporting for the BTR. This will be particularly important to align with work on policies and measures and actions data collection that should link to support needed and received.*

? Information to be reported when national communications and biennial transparency reports are submitted jointly every four years

? Information on flexibility

## Component 1: Strengthening capacities and systems for NDC Tracking and designing ambitious

### climate actions

The application of sound assessment methods and tools which focuses on sector-specific mitigation scenario analysis plays an important role in informing national decision makers and in tracking and communicating progress made in implementing and achieving the NDC. Enhanced capacity of the team established within the KASA to lead the Government of Malaysia's efforts to transparently and timely reporting to UNFCCC, and staff from other ministries will enable use of the tools to undertake regular analysis of implementation of NDC roadmap to the decisions makers and policies makers. The policy makers and decision makers will have access to better quality information on options and actions to design ambitious NDC actions and supporting policies to implement them. The scenario analysis would also allow for developing ambitious NDC targets for future reporting periods as well as integrating these into the sustainable developments of Malaysia.

The systems for coordinating the data gathering, quality assurance, and analysis of the information will become more streamlined over time allowing regular updating of the analysis and better integration of data collection into economy wide data collection systems. Increase public support and engagement through increased information availability to all stakeholders on efforts of the government to address climate change will enable governments to take stronger and better designed PAMs to address climate change.



**Outcome 1: The GoM with enhanced capacities adopts tools and methodologies complying ETF provisions for tracking progress of NDCs and their impacts in the Energy and AFOLU sectors.**

**This component will:**

- 1) Identify the models to be used that can assess scenarios for the NDC to 2030 and beyond to Net-Zero (e.g. LT-LEDS 2050).
- 2) Adapt the models to Malaysia's need, develop data flows and develop projection scenarios;
- 3) Identify the approach and systems for regularly collecting data to update the model and to update projections.
- 4) Develop templates and data flows to support the delivery of reporting according to 18/CMA.1 and the Decision 5/CMA.3 templates Annex II, III and IV (BTR).

**The KASA and related agencies will be able to:**

- ? Regularly run integrated assessment models for robust analyses of GHG projection scenarios, options and pathways to reduce emissions and increase sinks for the NDC 2030 target and short-term pathways towards it, as well as analysis of other longer-term national strategies and plans.
- ? Maintain a detailed, accurate and transparent GHG inventory and flow of other datasets and indicators to feed into integrated model projection scenarios and to use to track and share progress towards NDC 2030 targets.
- ? Collect, analysis and share information on greenhouse gas reduction trends and possible pathways, long term strategies and mitigation (and adaptation) actions and their expected and actual direct and wider impacts, costs, timeframes, and support needed and/or provided.

Outcome 1 has 4 outputs.

**Output 1.1:** GHG modelling tools developed and operationalized to develop scenarios for Energy and AFOLU to report on NDC implementation.

**Output 1.2:** Integrated platform for climate change information for NDC progress and long term low GHG strategy tracking developed and operationalized.

**Output 1.3:** Climate Change Knowledge Sharing platform established to inform all the stakeholders on country efforts and outcomes of addressing climate change.

**Output 1.4:** Technical capacity built of decision makers to meet transparency provisions stipulated under Article 13 of the Paris agreement.

Output 1.1: GHG modelling tools developed and operationalized to develop scenarios for Energy and AFOLU to report on NDC implementation

The Energy and AFOLU are the two main sectors where mitigation actions will be implemented to meet the NDC target of Malaysia. They contribute 80 % of the total GHG reductions required as per the NDC. This output will support the identification of most appropriate models for these two sectors,

customize these models to Malaysia's circumstances and requirements. The model will be chosen based on the data requirements of the models and data availability, the capacity of the models to assess the mitigation actions planned, the flexibility of models to integrate additional elements as the diversity of actions grow over time, capacities of the users, etc.

The output will support the collection of necessary data and populate the model to operationalize it. The model will be developed to generate scenarios for short term (e.g., latest historical year and 3 -5 years), mid-term (2030) and long term (2050 or longer to align with the countries net zero emission goals). The models will be used to develop the baseline scenario for the two sectors without NDC actions and calibrated to the Malaysia's circumstances and development priorities. The model will also develop projection for NDC trajectory based on the PAMs for the two sectors designed in the NDC Action Roadmap that is currently being developed. The model will also be used to assess the impacts of mitigation actions in the two sectors for each reporting cycle to the UNFCCC.

The models will also support policy makers in Malaysia on:

- ? Regular revisions of mitigation actions plan of NDC actions based on progress assessed and likely gap in achieving NDC goal including the uncertainties of reductions from existing PAMs;
- ? Information on costs and cost-effectiveness of PAMs in meeting the NDC and to identify most cost-effective and beneficial options for achieving NDC goals; and,
- ? In developing future ambitions NDCs through identification of additional sectoral and sub sectoral PAMs (focusing on energy and Agriculture, Forest, and other Land Use (AFOLU)) lowering GHG concentration using transparent and sectoral detailed metrics.

The output will support the regular reporting on NDC progress tracking and NDC projects are per the Decision 18/CMA.1 and the Decision -/CMA.3 templates Annex II, III and IV (BTR). It will also support Malaysia in transparent documentation of methods, data sources and assumptions for quantifying and reporting impact of sectoral policy measures as well undertake sensitivity and uncertainty analysis of estimates.

The output will be developed through the following steps:

- ? **gathering** information on user needs through engagement with decision makers, users and expert, and other stakeholders. This will include identification of the sectors, categories, gases and other variables, geographies, short-term (for NDC tracking) and long-term (to support long term strategies) timeframes PAMs that need modelling etc.
- ? **Selection of the modelling tools** based on development of a short list of models, evaluation of the shortlisted models according to criteria developed based on the needs assessed and finalizing the models.

? **Adaptation and customization** of selected models through engagement of the national experts to produce an operational country specific model for the two sectors calibrated to the national circumstances and baseline situation.

? **Templates and methods to collect data** for regular updating of the models and undertaking assessments. This will include economic analysis and forecasts, technology and sectoral policy assumptions policies and measures, actions, and projects. The model will also be linked with the GHG inventory data systems to both ensure consistency as well as optimize data collection requirements. The Gender expert will also work with the team to identify entry points for developing sex-disaggregated co-benefits and related data requirements.

? **Development and documentation of methods, data sources and assumptions** for integrated short and long-term modelling and ex-post analysis of individual or groups of PAMs. This will include enhancements to the methods, data sources and assumptions documentation of the National Inventory Document, Reports on the GHG projections and on the mitigation (and where relevant adaptation) actions.

The output will support assessment of methods and approaches required to assess the impacts of PAMs in sectors other than Energy and AFLOU sector. This will be based on the PAMs identified in the NDC Roadmap being developed. The output will support an action plan to improve the impact assess of these PAMs and their reporting to UNFCCC.

The work will be led by Technical Working Group ? Mitigation (TWG-M) which is responsible for developing regular reports to the UNFCCC on climate action and established as part of the regular reporting process. It will be supported by the international experts. The other relevant ministries and national experts will be engaged through the TWG-M.

The output will also support participation of the key staff in regional and international events organized by the CBIT/UNFCCC to create awareness on the new requirements as well as peer-to-peer exchange.

The output will explore the possibility of integrating sex-disaggregated data on impact assessment of climate actions. Such assessment will support the improving policy making with respect to its inclusiveness.

**Deliverable:**

- 1.1.1 Customized and calibrated models for Energy and AFLOU sector to assess and develop integrated short-term (intermediate years to NDC target 2030) and long-term (2050 and beyond) projections.
- 1.1.2 Guidance material on the use of models including methods, data sources, and assumptions, as well as use of models in estimating sex-disaggregated co-benefits.
- 1.1.3 Tools and protocols for data collection, data sources, responsibility of various agencies in supporting data collection to support the continual update and use of models, including assessment of sex-disaggregated impact of PAMs and number of PAMs covered.

- 1.1.4 Short-term (latest historical years plus next 5 years) scenario analysis of GHG trends against target pathways consistent with the database of actions in output 1.2, including use of models to assess the impact/GHG savings for several PAMs or groups of PAMs.
- 1.1.5 Road map to develop approaches and methods for assessing impacts of PAMs other than AFLOU and Energy Sector.
- 1.1.6 Participation in 2 Regional/international events organized on application of new NDC tracking and progress reporting requirements.

Output 1.2: Develop and integrated platform for climate change information for NDC progress and long term low GHG strategy tracking

This output will support a centralized database management system (DBMS) to support the use of models as well as data collection, organization, quality management and reporting. The NDC tracking DBMS will enable collection and storage of data on a regular basis including for the use in operating the models developed in Output 1.1. The NDC DBMS will act as the centralized MRV system. The NDC DBMS will complement the on-going establishment of the domestic MRV system by providing a centralized focal point for MRV.

The output will support policy makers with a central repository of knowledge and structured information on Malaysia's historical GHG trends, short and long-term low-GHG emissions pathways and climate action, its costs and direct and wider impacts, and support. This would assist decision-making by the relevant ministries/agencies/states in the formulation of climate actions to support a continuous long-term low GHG emission development strategies (lead, plan, coordinate, implement, monitor, and evaluate policies, strategies, and programmes). This will enable policy makers in mainstreaming climate change (design and prioritization of sectoral mitigation actions) into national development strategies and activities, such as national planning and budgeting activities. This will support the analysis of progress along the pathway to the NDC 2030 target and in long-term strategy development beyond 2030. It will also support Malaysia to populate several the relevant tables and sections (e.g., the BTR, National Inventory Document and other tables) as outlined in Annexes II - V of Decision 5/CMA.3 Guidance operationalizing the modalities, procedures and guidelines for the enhanced transparency framework referred to in Article 13 of the Paris Agreement.

The output will, based on the data collection protocols developed in Output 1.1, support the UGHG in coordination collection of information to track the NDC implementation from all the stakeholders. The NDC DBMS will be designed to allow updating of data by agencies responsible for implementation mitigation actions and collecting data. The DBMS user manual will include the role and responsibilities of the government department and other stakeholders with responsibility to provide data. This will enable cost effective and timely collection and updating of data for preparing reports to UNFCCC.

The NDC DBMS will include the following:

- ? Climate resilience and adaptation as well as mitigation and greenhouse gas related information on -actions, outcomes, and indicators as well as information on support received.
- ? Information and knowledge related to NDC implementation such as products plans, strategies, guidance, methodologies, impacts of PAMs, cases studies, best/good practices, analysis, etc. This will be accessible by all stakeholders of Malaysia.

The output will support an assessment, building on the ongoing work on MRV system and the NDC and related PAMs, through consultation with the stakeholders in identifying the scope and coverage of information of the integrated platform, the data collection and access requirements, etc. This will be used in designing the web platform and underlying NDC DBMS defining thematic scope, contents, functionality, and stakeholder engagement rules/permissions. Based on the design various DBMS and web interface options will be assessed to finalize the most suitable software/services.

The NDC DBMS will sit under a web interface to enables access to the stakeholders (ministries, agencies, private sector that are required to provide GHG related information, research/academic organization that support government, etc.) to provide data. The interface also enables sharing of knowledge on various aspects of NDC tracking as well as tools/methodologies, best practices, etc. This web interface will enable government disseminate information on climate actions and impacts to the national and international stakeholders. The web interface and NDC DBMS will be prepared with the flexibility of adding additional elements to it as the need may arise.

The NDC DBMS will be located on the KASA servers.

The output will support preparation of manual for operating and maintaining the NDC DBMS including roles and responsibilities, access levels, protocols for data inputs, etc. of various stakeholder. This will be based on the stakeholders and their interests, roles, and responsibilities toward NDC implementation and reporting on climate actions, etc. This will include development of data flows and data collection templates, quality assurance and data search, browse, export and summarization functions. This will also be used to develop training material.

The output will support development of the NDC DBMS by populating the platform and working with national expert engagement to test the beta version before finalizing the platform. This will be done through **engaging the stakeholders** in contributing to populating the platform and making use of the platform. This exercise will also work as a training step for users.

The work on the output will be led by TCCC and will be developed with the engagement of TWG for Mitigation as well as Sectoral lead agencies and Ministries. The consultations will also be undertaken with private sector, where the private sector is required to provide information on climate actions.

### **Deliverables**

- 1.2.1 Design of scope and contents of the NDC DBMS and its web interface for operationalizing the NDC tracking system, including the domestic MRV system.
- 1.2.2 Operational NDC DBMS and its population by the stakeholders, including testing of the beta version for going public.

- 1.2.3 Methods and tools to undertake assessment of PAMs for mitigation and adaptation actions, other than those covered in output 1.1.
- 1.2.4 Operation and maintenance manual for the NDC DBMS.

Output 1.3: Climate Change Knowledge and Information sharing platform established to inform all the stakeholders on country efforts and outcomes of addressing climate change

To inform the public at national and international level a Climate Change Knowledge and Information (CCKI) platform will be developed. The platform will provide access to number, type, objectives, timelines and impact of climate actions and support measures. It will provide information on projections of GHG emissions, future planned actions towards net zero emissions, actions to increase resilience, ongoing initiatives, etc. This will be using the NDC DBMS developed under Output 1.2. This information will be presented in an aggregated manner enabling public engagement in understanding ambition and tracking progress. This knowledge platform will:

- ? Provide structured, aggregated, searchable information on short and long-term mitigation scenarios and pathways, climate actions, their costs, support, timeframes, status, direct and wider impacts, and indicators (where information is available).
- ? Allow feedback to be provide on the short and long-term mitigation scenarios and climate actions and related information to future scenario modelling and PAMs analysis activities through broad stakeholder engagement.

The output will also support undertaking assessment of human and financial resources required for sustaining the knowledge platform. The assessment will be taken up through the NSCCC to discuss and finalize with relevant authorities the budgetary requirements post project period.

This will also be the knowledge sharing platform for the Capacity Building Initiative for Transparency (CBIT) project and will continue post the project completion.

The platform development will be undertaken in consultation with the civil society organizations, private sector representatives, research/academic institutions, and journalist associations. The design of the platform will be shared through workshops with all the stakeholders listed above to socialize it and seek feedback in finalizing the platform. The platform will also include information knowledge products related to gender aspects of climate change.

### **Deliverables**

- 1.3.1 Web based Climate Change Knowledge and information platform implemented and populated, including gender related aspects integrated, to inform and engage the public.
- 1.3.2 User manual for maintaining and updating the web-based communication system.
- 1.3.3 Assessment Financial and Human resources to operate and maintain the platform.

Output 1.4: Technical capacity built of decision makers to meet transparency provisions stipulated under Article 13 of the Paris agreement

This output will support the building of technical capacity of UGHG and other relevant ministries/agencies/private sector to enable them to use the models and other tools developed under output 1.1 and 1.2 towards undertaking GHG emissions projections, impact assessment of PAMs, and report to the UNFCCC.

Government of Malaysia has established UGHG, a dedicated unit/team (within the KASA) to coordinate and prepare regular reports to the UNFCCC. This team will be the primary focus of training as the team will also support others (ministries/agencies) on tracking progress of mitigation actions and provide feedback mechanism for monitoring and for other transparency-related activities in line with national priorities. Ministries of Energy and Natural Resources will be specifically engaged on the models developed under output 1.1. It will also include that other relevant ministries, agencies and organizations and national network are built and/or sufficiently engaged and included in the developed Transparency system. The training will cover the following areas:

- ? UNFCCC reporting requirements for BTR and NC.
- ? Use of GHG projection and PAM assessment models for Energy and AFOLU sector.
- ? Tools and methods for assessment of PAMs in sectors other than Energy and AFOLU developed under Output 1.2.
- ? Methods of data collection.
- ? Quality check and assurance training on data and estimations for UGHG staff.
- ? Use of NDC DBMS.

Training material based on the tools and methods as well as various other deliverables developed in 1.1 and 1.2 will be developed. Training material will also be developed for creating a thorough understanding of reporting requirements for NDC tracking and progress reporting, including the reporting process and timelines as per Decision 5/CMA.3. Guidance operationalizing the modalities, procedures and guidelines for the enhanced transparency framework referred to in Article 13 of the Paris Agreement.

The training material will be prepared based on the analysis of current activities, roles and responsibilities, mandates and terms of reference, identification of gaps and needs for additional capacity. Training material will include aspects of gender inclusiveness as well to create better awareness in addressing gender aspects.

The output will support development of an improvement plan for further development of the transparency system, recruitment, training and mentoring. The improvement plan will include all recommendations for improvements gathered from international ICA and review processes, BUR/BTR

and National Communications, and the transparency systems data provider, expert and user communities. Roadmap for improvement implementation.

The training material will be developed in partnership with national experts and research/academic institutions.

The output will ensure that women are provided equal opportunity for accessing training. 50% of the trainee?s shall be women.

### **Deliverables**

- 1.4.1 Training needs assessment to identify the training requirements and to guide the development of training materials.
- 1.4.2 Training modules and material prepared on: guidelines for reporting through BTR and NC under the Paris Agreement; Energy and AFOLU models for GHG projections and assessment; assessment of PAMs for mitigation and adaptation other than energy and AFOLU sector; Data collection and screening methods; QA and QC methods for reviewing and finalizing the data used and estimations; use of NDC DBMS.
- 1.4.3 2 -3 number of training events conducted with 50% women participation, and training evaluation and feedback reports prepared.
- 1.4.4 Training of Trainers conducted for national experts and research/academic institutions supporting government on related issues.
- 1.4.5 Capacity Improvement plan based on the feedback received from review of reports submitted to the UNFCCC, further developments in reporting requirements, and needs identified through capacity building workshops conducted under the project.

### **Component 2: Enhancement of the national GHG inventory**

This component will provide support to strengthen the national GHG inventory by improving the quality of data sources and methods for estimating, developing a GHG inventory database system and addressing barriers and gaps as highlighted by the TTE described in the earlier section.

The outputs of the component will result in country reporting regularly and with increasing accuracy the National GHG emissions and removals. Continuous improvements will be undertaken to comprehensively cover all source of emissions and with detailed sector specific approaches to increase the accuracy of estimates. The GHG inventory data will support both verifying the impact of NDC actions on reducing emissions as well as identify new areas and sources of emissions/removals to be included in action plans.



**Outcome 2: The GoM implements GHG DIS and Higher tier methodological approaches to submit accurate GHG emissions inventories reports on regular and timely basis to UNFCCC.**

The focus will be on:

- ? developing higher tier methodological approach for GHG estimation, such as improving country-specific emissions factors and activity data for key categories.
- ? establishment of an online GHG database and information system.

This outcome has 2 outputs:

- ? Output 2.1: An online GHG database and information system (GHG-DIS) established and operationalized to enable regular and timely preparation of GHG Inventory
- ? Output 2.2: developing higher tier methodological approach for GHG estimation

Output 2.1: - An online GHG database and information system (GHG-DIS) established and operationalized to enable regular and timely preparation of GHG Inventory

This output will support the development and operation of an online database and information system tool for the preparation of GHG emissions Inventory annually. This will streamline GHG inventory preparation activities by enabling data providers to provide data through the online database reducing the time in manual collection and reporting of data. The systems will also have inbuilt data quality checks that enables faster check of data and ensures improvements over time. The online GHG database and information system would:

- ? Provide a structured database and information system containing GHG inventory information with functionality for data collection, data management, and analysis, file management and archiving.
- ? Provide in-build QA/QC and documentation functionality to help ensure the integrity and transparency of the data.
- ? Provide outputs for meeting tabular data reporting for international reporting requirements (e.g. in the Common reporting tables for the electronic reporting of the information in the national inventory reports of anthropogenic emissions by sources and removals by sinks of greenhouse gases as defined by Annex I to Decision -/CMA.3 Guidance operationalizing the modalities, procedures and guidelines for the enhanced transparency framework referred to in Article 13 of the Paris Agreement<sup>[5]</sup>)
- ? Provide other indicators and tabular outputs needed for NDC tracking and reporting.
- ? Populate the relevant tables and sections of the National Inventory Document as outlined in Annex V to Decision 5/CMA.3 Guidance operationalizing the modalities, procedures and

guidelines for the enhanced transparency framework referred to in Article 13 of the Paris Agreement(6))

This will also create ownership and greater participation of stakeholders providing data to the GHG inventory preparation. The tool will also integrate the IPCC methodology of GHG inventory preparation building on the UNFCCC provided tool for reporting GHG inventory based on the 5/CMA.3 decision templates for inventory reporting. This is expected to increase the efficiency of coordination among the relevant ministries/agencies and/or states, which can then complete the GHG inventory compilation process, data management and analysis, and archiving in a timely manner.

The output at minimum will ensure a linkage with the CCKI and the NDC DBMS developed under component 1. Possibilities be explored of online GHG Inventory database and information system (GHG DIS) could be part of the integrated platform for climate change information.

The development of the output will be under the leadership of the Technical Working group on Inventory and supported by national/international experts. The output will be developed through the following the process:

- Assess the system requirements, including, identification of the databases, its contents, functionality and stakeholder engagement rules/permissions, data import and outputs. The technical specification will be based on the information to be reported to UNFCCC, common reporting templates, the IPCC GHG inventory methodologies.
- Based on the requirements identified above, a short list of database options will be developed. This will include both GHG Inventory database software available in the market or possibility of database systems for developing customized tool. The options will be evaluated according to criteria, selection of software/services.
- Design of the GHG Inventory and information tool based on the design parameters agreed and consulted with the stakeholders in finalizing the design.
- Development and implementation of the database and information system tool with national expert engagement based on the agreed design. The draft tool will be populated with the historic data and tested to ensure full functionality and finalize the tool with the engagement of the stakeholders who will use the tool.

The output will also develop a manual to use the GHG-DIS tool. This will include development of data flows and data collection templates, calculations, import and export functions, file and other data storage, quality assurance and data search, browse, export and summarisation functions.

As the project will run parallel to the preparation of BTR, the GHG-DIS tool will be used to develop the GHG inventory and other reports for the first BTR report to be submitted in 2024.

The training of the stakeholders to use the GHG-DIS will be continuous process through their engagement in using the test version, population of the data, and then its use in preparing the GHG

Inventory for first BTR. The technicians for GHG-DIS and national/international experts will accompany this process of hands-on training.

The output will also produce training material for use of the GHG-DIS based on the user manual developed. This training material will be embedded into the existing training systems of the government to provide continuous training to existing staff as well as new staff in the future.

The output will also ensure that the development of the GHG-DIS engage women to integrate the women perspective in design and use. The output will also ensure training opportunities are equally provided to man and women. It will be ensured that 50% of the trained personal will be women.

The output will work in Tandem with the Australian government technical support for preparing a GHG Inventory data base and use as co-finance the funding provided by the Government of Malaysia. This project too is led by the UGHG in KASA.

**Deliverables:**

- 2.1.1 Process document for GHG Inventory preparation, including the process flow, timelines, responsibilities, aligned with the regular UNFCCC reporting.
- 2.1.2 A functioning GHG-DIS delivered and operationalized.
- 2.1.3 User Manual for operating GHG-DIS.
- 2.1.4 Training material, based on user manual, embedded in existing training system of the government.
- 2.1.5 Hands on training provided through data population, testing and development of GHG inventory using GHG-DIS, including 50% of women.

Output 2.2: tools and methods for higher tier GHG emission estimation methodology for high ghg impact sectors available to stakeholders

This output will support filling the gaps in current GHG inventory preparation process to meet the GHG inventory requirements as per decisions 18/CMA.1 and 5/CMA.3. As a first step the output will support a thorough analysis of the decisions 5/CMA.3 and common reporting templates for GHG inventory reporting and assess the gaps based on current Malaysian reporting to UNFCCC. It will support assessment of steps required to address the gaps covering data availability, tools available, capacity, etc. Based on the analysis a roadmap will be prepared to address the gaps and key performance indicators (KPIs) developed for tracking progress in strengthening the system to meet the BTR requirements and enhance the transparency and accuracy of the GHG Inventory. This assessment will also cover the roadmap to move up the methodology Tier for all emissions sources in a timebound manner. This assessment will include feedback and recommendations from ICA and the TTE as well as any improvement recommendations and needs identified by national stakeholders (gathered during inception activities).

Energy sector emissions are the key emissions source (~ 75%) for Malaysia and within energy sector, emissions from stationary (1A1ai electricity generation) and mobile (1A3b road transportation) represent the highest share (~70%). The output will support the improvement in accuracy of the emission from these two sectors and reduce the uncertainty by, both, using higher Tier of estimation (currently estimated using Tier 1) as well as country specific emission factors. The output will support the assessment of data requirement for these two sectors to apply higher tier methodology, ways and approaches to collect the data, stakeholders who could provide the data, etc. The output will support assessment of key country emissions factors for the energy sector that have the largest impact on the accuracy of GHG emissions estimate and support the work in develop these country specific emission factors.

The output will support development of data collection protocols as well as define the data flow process to enable the application of higher Tier methodology. This will be integrated with the GHG-DIS prepared in Output 2.2.

The work will be led by the TWG-Inventory with support from international/national experts. The process of developing the deliverables will include consultations with all relevant stakeholders, especially private sector, and public sector entities with significant energy consumption. Inputs and feedback will be sought through, both, focused group discussions, and workshops.

The output will support the organization of workshops to improve the understanding of the members of the TWG-Inventory and other relevant stakeholders on the new requirements of GHG inventory reporting through BTR/NC. It will also support training workshops for energy industry and transport sector stakeholders on data collection for higher tier estimation as well as use of higher Tier methodology for GHG emission estimations.

This work will be carried in close collaboration with the CBIT global platform and UNFCCC which will be developing the online templates and other training material for improving the GHG inventory of countries.

The output will also support participation of the key staff in regional and international events organized by the CBIT/UNFCCC to create awareness on the new requirements as well as peer-to-peer exchange.

### **Deliverables**

- 2.2.1 Roadmap with specific actions and KPIs to enhance the GHG Inventory accuracy and reliability based on assessment of BTR/NC Reporting requirements and templates and gaps in the current GHG inventory preparation.
- 2.2.2 Data collection protocols, responsibilities, and data flow processes to strengthen higher Tier estimation of GHG emissions for Energy production Industries and Transport sector energy use.
- 2.2.3 Training workshops conducted with 50% women participation to train relevant stakeholders in preparing higher tier inventory as mentioned in 2.2.2, including training materials.

2.2.4 Participation in 2 Regional/international events organized on application of new GHG Inventory reporting requirements.

Component 3 - Systems and tools for tracking support needed/received.

This component will provide support to strengthening the information flows, structuring and knowledge management pertaining to the reporting of climate finance, technology transfer and capacity-building support needed and received. The outputs will enable regular reporting to UNFCCC on the support received and required to meet the short and long term climate goals. Regular feedback will be provided to the Global Stock Take to enable assess the global support requirements. Policies makers and decisions makers will have the necessary information to design actions and policies to facilitate the flow of support for enabling climate actions.

**A tracking system of support needed and received for implementing climate actions endorsed by the NSCCC**

This will include information and knowledge management structure to assist the relevant stakeholders to take part in reporting and tracking climate finance, technology transfer and capacity-building support needed and received.

**Output 3.1** ? Tables and guideline documents for collection, tracking and reporting of climate finance, technology transfer and capacity-building support.

**Output 3.2** - Process, timelines and responsibilities developed for regular assessment of needs for technology, finance, and capacity building in implementing climate actions presented for approval to NSCCC

Output 3.1 ? Tables and guideline documents for collection, tracking and reporting of climate finance, technology transfer and capacity-building support developed for use by the stakeholder

The output will support in enabling tracking the finance and technology transfer support received for climate change actions as well as capacity building. The output will also support the development of process and systems to periodically undertake needs assessment for technology, finance, and capacity building in implementing climate actions. This information will, both, enable the country to identify support needed and support gap, and develop strategies for addressing the support gap. This will also help in reporting to the UNFCCC as per the requirements of the Decision -5/CMA.3. Clarity on support received will, to the extent possible, inform the Global Stocktake under Article 14.

Based on the information to be reported to the UNFCCC via BTR/NC and the templates as per Decision 5/CMA.3 (tables 6 ? 13), analysis would be undertaken to assess the data required to complete the templates, existing data sources, gaps in data sources, stakeholders who can and should provide the data. The analysis will also review the existing system of recording and tracking the international support provided by the development partner organizations.

Based on the analysis data collection process will be developed identifying the data required, data collection approaches, stakeholders for providing the data, the timelines as per the BTR and NC submission cycles. Templates will be localized for use by stakeholders in the country to provide the information. These table and templates will be integrated into the NDC-DBMS system developed in Output 1.2.

Guidelines will be prepared to complement the data collection protocol and preparation of the reporting templates. This will also be used to prepare training material to impart training to public servants and NGOs for gathering and reporting financial, technology transfer and capacity-building support needed and received.

The work of the output will be supported by a gender expert. The Gender expert will identify and integrate data requirements for sex disaggregated data collection through the needs assessment tools and process. This will enable the policy makers to better design climate PAMs.

The output will be led by the TWG on Finance and needs of which Ministry of Finance is the lead.

### **Deliverables**

- 3.1.1 Assessment of data requirements and data sources for preparing the templates on finance, technology and capacity building support received and needed, including for sex-disaggregated data to better capture gender aspects of climate issue.
- 3.1.2 Data collection protocol and process for completing the reporting tables, including timelines for preparing and submitting the tables, including processes and timelines for regular needs assessment.
- 3.1.3 Integration of reporting templates and data with the NDC-DBMS developed in Output 1.2
- 3.1.4 Guidelines and training material to train stakeholder in providing the data and completing the reporting templates.
- 3.1.5 Training conducted of relevant stakeholders with 50% women participation in the training programmes.

### Output 3.2: Process, timelines and responsibilities developed for regular assessment of needs for technology, finance, and capacity building in implementing climate actions presented for approval to NSCCC

As described in the baseline, currently the support received and needs assessment process is initiated for each UNFCCC report. The information is collected either through individual interaction or through workshops. This Output, building on the templates and tools prepared in Output 3.1 above, will develop a standardized process of preparing the needs assessment and collation of information on support received. The standardized process will include:

- (i) Steps of completing the collection of data and information as well as assessment on support received and needs assessment;
- (ii) Timelines for the steps to ensure completion of the analysis in line with the BTR requirements.
- (iii) Identification of clear responsibilities of KASA as the coordinating entity and all the stakeholders in providing data and information; and,
- (iv) Templates for collecting information and data (these are developed as part of output 3.2)

The Process document will be prepared and socialized with the stakeholders through focused group meetings and workshops. The process document will be based on good practices adopted by other countries and in close collaboration with the CBIT platform. The process document will be presented to NSCCC for endorsement.

### **Deliverable**

3.2.1 Standard operating document for preparing support received and needs assessment

3.2.2 Workshops and focussed group meetings to socialize the standard operating document.

### **4) Alignment with GEF Focal Area and/or Impact Program strategies**

This project addresses GEF Focal Area Climate Mitigation 3-8 ?Foster enabling conditions for mainstreaming mitigation concerns into sustainable development strategies through capacity building initiative for transparency?.

The GEF-7 Climate Change Focal Area Strategy aims to support developing countries to make transformational shifts towards low emission and climate-resilient development pathways. The CBIT, as per paragraph 85 of the COP decision (1/CP.21) adopting the Paris Agreement, complies with this Focal Area Strategy by:

- i. Strengthening national institutions for transparency-related activities in line with national priorities;
- ii. Providing relevant tools, training and assistance for meeting the provisions stipulated in Article 13 of the Agreement; and
- iii. Assisting in the improvement of transparency over time.

The requested support also neatly aligns with CBIT activities outlined in paragraph 18 of the CBIT programming directions document, as described in each output. The proposal aims to:

- i. Strengthen Malaysia?s national institutions for transparency-related work.
- ii. Assist in establishing more robust processes for data and information monitoring, reporting and verification.

- iii. Support the development of guidelines and tools, for more correct and precise data generation, storage and management, and scenario building.
- iv. Provide targeted training and capacity-building for meeting the provisions stipulated in Article 13 of the Paris Agreement, as well as assist with the improvement of transparency work over time.
- v. Temporarily compensate for the lack of national funding available, while ensuring the establishment of capacities and systems that become self-sustainable over time.

Moreover, the proposed components reflect the capacities identified as most needed in Malaysia's NCS, NDC, and BURs and the corresponding technical analysis, complying with paragraph 19 of CBIT's programming direction. This proposal is in line with UNEP's Climate Change sub-programme Direct Outcome 1.3 'Transparency and accountability of government and non-government climate actions, including from the private sector and the financial community are strengthened'.

The project addresses the need for enabling conditions to mainstream climate change concerns into the national planning and development agenda through its support for enabling activities, including obligations of the Convention and the CBIT through sound data, analysis, and policy frameworks.

The proposed scope of work aligns with the following activities listed in the CBIT national programming directions[7].

Outputs

	Alignment with the CBIT National Programming Directions
1.2, 1.4, 2.2, 3.1	Paragraph 18: Activities to strengthen national institutions for transparency-related activities in line with national priorities: (a) Support to national institutions to lead, plan, coordinate, implement, monitor, and evaluate policies, strategies, and programs to enhance transparency, including identification and dissemination of best/good practices for institutional strengthening and national network of practitioners at sectoral level; (b) Support on how to integrate knowledge from transparency initiatives into national policy and decision-making; and (c) Assistance with deployment and enhancement of information and knowledge management structure to meet Article 13 needs.



1.1, 1.2, 1.4, 2.1, 2.2, 3.1	<p>Paragraph 18: Activities to provide relevant tools, training, and assistance for meeting the provisions</p> <p>stipulated in Article 13: (d) Access to tools, templates, and applications to facilitate the use of improved methodologies, guidelines, datasets, and database system tools and economic</p> <p>models needed for implementation of enhanced transparency-related activities; (e) Country-specific training and peer exchange programs on transparency activities, such as establishing domestic MRV systems, tracking nationally determined contributions (NDCs), enhancement of greenhouse gas (GHG) inventories and economic and emissions projections, including methodological approaches, data collection, and data management, and adaptation monitoring, evaluation, and communication measures; (f) Development of country-specific emissions factors and activity data; (g) Assistance in quantifying and reporting impact of policy measures; (h) Clarifying key NDC information, e.g. baseline projections including for business-as-usual targets, and reporting progress towards achieving their NDCs; and (i) Assistance in quantifying and reporting on support provided and received.</p>
1.2, 2.1	<p>Paragraph 18: Activities to assist with improvement of transparency over time: (j) Capacity needs assessment for transparency, in particular to assess institutional arrangements for data collection, analysis, and reporting: the assessment supports mapping of current baseline and planned reporting and related activities, including associated institutions, tools, methodologies, MRV systems,</p> <p>associated data systems; and (k) Support to introduce and maintain progress tracking tools for transparency-related actions and progress towards targets/goals.</p>
1.1, 1.2, 1.4, 2.1, 2.2, 3.1	<p>Paragraph 19: Addressing recently completed analyses, such as identification of capacity building needs as identified in the technical analysis of Biennial Update Reports through the international consultation and analysis (ICA).</p>
1.1, 1.3, 2.2,	<p>Paragraph 20 and 21: Regional and global level - The proposed scope of work aligns to the following activities listed in the CBIT national programming directions: Global coordination platform: 20, and other eligible support at regional and global level 21 (b), (c), (e), (g).</p>

**5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing**

Malaysia has been investing in approving its systems to meet the requirements of reporting under the UNFCCC continuously. However, the new requirements as per Decision 5/CMA.3 poses a great challenge to countries requiring them to significantly enhance their transparency systems as a whole, including transparency of mitigation, adaptation, and support needs and support received. The current efforts at incremental improvements through BUR/NC funding and other government efforts will result in significant time to meet the new requirements.

The CBIT project is targeted towards addressing the barriers, gaps, and needs identified in preparing its NC and also in the NDC Roadmap as well as learning from BUR process. The need for improved

data collection processes from the various agencies involved in the GHG inventory process will be addressed through this CBIT project. There are very limited capacities within sectoral line ministries and other stakeholders to provide support to UGHG to strengthen data collection, monitoring, and reporting on GHG sinks and removals within their sectors. There are no clear mandates for sectoral line ministries and other stakeholders as well as related to support MRV.

The outputs of the project will allow the country to develop and enhance its transparency system in line with the requirements of the ETF. Enhancing data quality and strengthening capacities to monitor progress are preconditions for the effective implementation of climate actions outlined in the NDC and NDC Roadmap being developed, and ultimately to enhance NDC ambition. In absence of these projects, the country will continue to slowly build its capacity through limited funding available for NCs/BURs. Without this CBIT project, country's technical and institutional capacities will remain insufficient to fulfill the transparency provisions of the Paris Agreement.

The GEF CBIT program is designed to improve the mandatory reporting of signatories of the UNFCCC. As such, this project is financed on a fully agreed cost basis. In the case of this program, eligible activities have been described in the GEF document Programming directions for the Capacity Building Initiative for Transparency (GEF/C.50/06). The activities of this project are consistent with the scope of the programming directions. Co-financing is not a requirement for this project; however, Malaysia, through the KASA, has anticipated contributing to the project with an in-kind co-financing of USD 430,000.

Implementation of this project is cost-effective as this will assist in technical and institutional capacities as identified during BUR and NC processes. The project is also designed in a way that any future assistance will be built on the groundwork from CBIT, hence ensures its value for money. Co-financing in terms of in-kind assistance will ensure that UGHG retains its coordinating role and in-house capacity for replicability of this project.

## **6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)**

Global environmental benefits from this project are directly related to supporting Malaysia in the implementation of its first NDC as well as enhancing ambition for future rounds of NDC submissions. This project with the establishment of web-based database to collect and analyse data for GHG inventory and climate PAMs, including models for two main emitting sectors, Energy and AFLOU, as well as regular needs assessment to implement climate actions will enable timely and rigorous analysis for supporting reporting as well as decision making on climate policy. The enhanced capacities to collect data and analyse it will enable policy/decision makers to continuously review the progress of actions and update actions to achieve its 2050 Net Zero emission goal. Tracking progress in the implementation of NDC will also inform the Global Stock take to enhancing the global response to climate change in line with the long-term temperature goals of the agreement.

## **7) Innovativeness, sustainability and potential for scaling up**

### Innovativeness:

The key objective of project is to build institutional and human capacity in the country to meet the new UNFCCC reporting requirements in shortest time possible, which will also help country take decisions based on more accurate and timely data. It is building on the experience of other countries, specially developed countries, who have built their systems over time. The key addition to the current system is

providing modeling tools to the country that will enable better assessment of impact of climate PAMs designed to implement NDCs and ensure that goals and targets set by the country are met. The modeling tools will be integrated with the knowledge web and database systems for streamlining the data collection and analysis of GHG inventory preparation as well as NDC progress assessment. The project builds on existing experience and tools that will be customized to Malaysia's requirements.

Sustainability:

The key factor that ensures sustainability of outputs is the fact the design and its implementation is led by UGHG, the unit within KASA responsible for preparing reports to the UNFCCC. The ownership of the project is thus high as the tools and skills built will directly benefit the UGHG. This is also reflected in co-financing for developing the GHG-IDS by the government. Further, it is embedded within the existing institutional system for climate change oversight body the NSCCC, which will act as the PSC for the project. The database and information systems developed will also formalize the roles and responsibilities of the ministries and private sector entities that currently work through the TWGs and SWGs for preparing the reports for UNFCCC. The knowledge gain through the capacity building will ensure capacity retains in the Government agencies as well as in relevant sectoral and line ministries. This is to ensure that future initiatives could be implemented cost-effective ways. Replication of such knowledge could see capital expenditure savings from such replication. The project will also support assessment of resources required for maintaining and operating the systems, which will be the basis for future funding of the UGHG and units within other ministries to support the monitoring and reporting.

Potential for scaling-up:

The experience and capacity created in the project will enable further deepen the system through the following:

- i. Over time upgrade the data collection to estimate GHG Inventory based on Tier II and Tier III methodologies for various sectors.
- ii. Expand the coverage of data collection on entity-level GHG emissions to private sector entities in the waste and IPPU sector.
- iii. Expanding the coverage of PAMs to sectors other than Energy and AFLOU, based on the roadmap prepared.
- iv. Develop similar systems at sub-national level.

The capacities created at the national level will enable the undertaking of the replication as described above. Also, the created capacity will enable the national team to identify the priority needs, resources required and seek additional resources where required from donors and other international partners.

Malaysia closely interacts with AWGCC which coordinates the efforts between all ASEAN countries. The learnings from this project will be shared with the members countries in AWGCC and provides an opportunity for its scale up in other countries of the sub-region.

[1] Carbon refers to CO<sub>2</sub> equivalent emissions of all 7 GHGs.

[2] Twelfth Malaysia Plan, 2021-2025 ([epu.gov.my](http://epu.gov.my))

[3] <https://www.itu.int/net4/wsis/archive/stocktaking/Project/Details?projectId=1513216305>

[4] See Guidance operationalizing the modalities, procedures and guidelines for the enhanced transparency framework referred to in Article 13 of the Paris Agreement - Annex IV [unfccc.int](https://unfccc.int)

[5] Decision 5/CMA.3 Guidance operationalizing the modalities, procedures and guidelines for the enhanced transparency framework referred to in Article 13 of the Paris Agreement ([unfccc.int](https://unfccc.int))

[6] *ibid*

[7] [CBIT Programming Directions \(thegef.org\)](https://thegef.org)

#### 1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

This is a national project and will not have any specific location for implementation. Most of the activities will be in Kuala Lumpur. Workshops may be carried out in others cities of Malaysia.



#### 1c. Child Project?

**If this is a child project under a program, describe how the components contribute to the overall program impact.**

NA

**2. Stakeholders**

**Please provide the Stakeholder Engagement Plan or equivalent assessment.**

The Stakeholder engagement in the development of project design is described in the baseline section above. The Key stakeholders, listed in the table below, were identified in that process and will be engaged during the project implementation phase as described below.

<b>Stakeholder main group</b>	<b>Stakeholder name</b>	<b>Existing activities with potential to be leveraged</b>	<b>Content engagement, contributions to the project (identified by Component)</b>
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Government	Ministry of Environment and Water (Kementerian Alam Sekitar dan Air - KASA)	KASA is the national focal point to UNFCCC and GEF, and responsible for coordination and management of climate change programmes and policies through MyCAC and NSCCC. KASA is also the lead agency for transparency mechanism, GHG inventory, mitigation, MRV, and climate change reporting to the UNFCCC.	<p>KASA will be the main Executing Agency of the project, and responsible for project management and implementation of all project components and activities.</p> <p>KASA will sit in the Project Steering Committee (PSC), be responsible for communication and coordination with the office of the GEF OFP and UNEP on project managements, and coordinate with project stakeholders in project implementation.</p> <p>The current institutional arrangement involving the TCCC and NSCCC will monitor the implementation and progress of CBIT project.</p>
Government	National Water Research Institute of Malaysia (NAHRIM)	The National Water Research Institute of Malaysia (NAHRIM) under KASA will engaged in implementation of project activities related to climate adaptation actions.	NAHRIM is the TWG lead for adaptation.

Government	Economic Planning Unit (EPU)	Coordinates the overall national policy direction and development planning. Facilitates the adoption of policies related to sustainable development, climate change, and natural resources	EPU will monitor and provide guidance during implementation to ensure the mainstreaming of climate change into national policies and development priorities through well informed climate data. EPU is also the TWG lead for Mitigation.
Government	Ministry of Energy and Natural Resources, (KeTSA)	Under Ministry of Energy and Mineral Resource (KeTSA), the Energy Commission is responsible for the regulatory provision and implementation of energy efficiency actions under the National Energy Efficiency Action Plan (NEEAP).  Sustainable Energy Development Authority (SEDA) is responsible for implementation of the Feed-in-Tariff (FiT) Mechanism which is one of the key mitigation actions in Malaysia.	KeTSA is the SWG lead for the SWG (Mitigation-Electricity) and SWG (Transparency-Electricity). While representatives of the Energy Commission and SEDA will be involved in relevant TWG and SWG, provide data for GHG inventory, and participate in capacity building and training programs.
Government	Ministry of Transport (MOT)	Land Public Transport Agency  Marine Department Malaysia  Civil Aviation Authority of Malaysia	MoT is the SWG lead for the SWG (Mitigation-Transport).

Government	Ministry of International Trade and Industry (MITI)	MITI is responsible to attract quality investment and further innovate industrial activities to produce high value-added goods and services. This is to elevate Malaysia's competitiveness among the top global trading nations	MITI is the SWG lead for SWG (Mitigation ? Industry).
Government	Ministry of Works (KKR) - Public Works Department, Jabatan Kerja Raya (JKR)	KKR is responsible for the infrastructure development planning.	KKR is the SWG lead for SWG Adaptation (Cities, Built Environment, and Infrastructure).
Government	Ministry of Housing and Local Government, Kementerian Perumahan dan Kerajaan Tempatan (KPKT)	KPKT is responsible to provide comprehensive and dynamic national housing programme to achieve sustainable wellbeing of the people and implementation of actions through the local authorities.	KPKT is a member under the SWG Mitigation and SWG Adaptation (Cities, Built Environment, and Infrastructure).
Government	Ministry of Health (MoH)	Institute of Medical Research (IMR)  Disease Control Division	MoH and IMR are members of the SWG Adaptation and TWG Research and Systematic Observation.
Government	Ministry of Women, Family and Community Development	The Ministry is at the forefront to achieve gender equality, family and community development.	The Ministry is a member of the TWG Adaptation.  The Ministry will be included in consultation on gender related deliverables.



Private sector	<p>Tenaga Nasional Berhad (TNB)</p> <p>Sarawak Energy Berhad (SEB)</p> <p>Sabah Electricity Sdn. Bhd. (SESB)</p> <p>TNB Research Sdn Bhd (TNBR)</p> <p>Malaysia Association Of Energy Service Companies (MAESCO)</p> <p>Cement and Concrete Association of Malaysia (CNCA)</p> <p>Malaysian Iron &amp; Steel Federation (MISIF)</p> <p>Chemical Industries Council of Malaysia (CICM)</p> <p>Petroliam Nasional Berhad (PETRONAS)</p> <p>Malaysian Biodiesel Association (MBA)</p> <p>Malaysian Photovoltaic Industry Association (MPIA)</p>	<p>TNB, SESB and SEB are responsible for generation, transmission, and distribution of electricity in Malaysia. These utilities have maintained a database of electricity consumption by consumers in all end-use sectors in their respective service areas.</p> <p>The other private sectors are also involved in the reporting of SWG (GHG inventory) under IPPU and energy sector and SWG (Mitigation).</p> <p>ARROW is a regional non-profit women's organisation based in Kuala Lumpur, Malaysia. It has consultative status with the Economic and Social Council (UN ECOSOC) of the United Nations.</p>	<p>Private sectors who are members of the relevant thematic SWGs (Inventory and Mitigation).</p> <p>ARROW will be consulted in implementation and monitoring of gender-related activities/results.</p>
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Civil Society	<p>WWF-Malaysia</p> <p>Malaysian Environmental NGOs (MENGO)</p> <p>Centre for Environment, Technology and Development, Malaysia (CETDEM)</p> <p>Malaysia Nature Society (MNS)</p> <p>Global Environmental Center (GEC)</p> <p>Sahabat Alam Malaysia (SAM)</p> <p>Asian-Pacific Resource and Research Centre for Women (ARROW)</p>	Advocacy and awareness on climate change issues, conduct assessments of government policies and suggest recommendations	CETDEM will participate in capacity building and training programs.
Research Institutes and Academic Institute	<p>Forest Research Institute Malaysia (FRIM)</p> <p>Malaysian Agriculture Research and Development Institute (MARDI)</p> <p>Institute of Energy Policy and Research under Universiti Tenaga Nasional (UNITEN)</p> <p>National University of Malaysia (UKM)</p> <p>University of Malaya (UM)</p> <p>University of Putra Malaysia (UPM)</p> <p>Sunway University</p>	Research institutes such as FRIM, MARDI and UNITEN are the GHG inventory sector leads for LULUCF, Agriculture and IPPU respectively. The rest are also members of the thematic SWGs.	Relevant research and academic institutes will provide data and information, and participate in capacity building and training programs.

International Development Partner Organizations	<p>JICA (DISER)</p> <p>UN System (represented by UN Resident Coordinator)</p> <p>GIZ</p>	<p>The CBIT Global Platform</p> <p>International Partnership on Mitigation and MRV</p> <p>ASEAN Working Group on Climate Change</p>	<p>UNEP and UNDP are implementing CBIT Global Platform project. They will be kept informed and regular exchanges held to share project information and needs.</p> <p>These organizations will be regularly interacted with through Development Partner group as well as invited to the various events of the project.</p>
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In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.

The key engagement of stakeholders is through the already existing TWG and SWGs under the TCCC for the preparation of reports to UNFCCC. These groups engage all the key stakeholders described in table above. The involved stakeholders were grouped, based on:

1. Stakeholders who will participate in the overall coordination process,
2. Stakeholders who will provide relevant activity data and where the tools and processes will be applied (e.g., GHG inventory development, climate change mitigation assessment.
3. Stakeholders involved in implementing training course and technical support for example Academic and Research Institutes.
4. Stakeholders who participate in the development and revision of the policy framework for e.g., LEDS, NDC, NAP and the Climate Change Policy. This includes Private sector, Government Agencies and Civil Society.
5. Stakeholders that participate in the climate change awareness activities and social inclusion. This includes CSOs and local NGOs.

Key stakeholders will be engaged and consulted through participation in the Project Steering Committee (PSC) and Technical Working Group (TWG) and Sub-Working Group (SWG). The PSC members will receive periodic reports on progress, and full project updates will be provided during the PSC meetings which will be organized at least once per year. It is envisaged that the TWG and SWG members will be more frequently engaged through the working group meetings in which specific technical matters related to project activities will be discussed. Other project stakeholders will be engaged through organization of consultation meetings which will be organized during the course of project implementation period as well as in the training workshops. The project will ensure a gender-balanced representation of male and female participations from these key stakeholders.

**Select what role civil society will play in the project:**

**Consulted only;**

**Member of Advisory Body; Contractor;**

**Co-financier;**

**Member of project steering committee or equivalent decision-making body; Yes**

**Executor or co-executor;**

**Other (Please explain) Yes**

They shall be invited to all the consultation and training events held by the project.

**3. Gender Equality and Women's Empowerment**

**Provide the gender analysis or equivalent socio-economic assesment.**

Malaysia introduced the National Policy on Women (NPW) in 1989. The NPW, which was last updated in 2009, aimed to develop human capital, and empower women, across different sectors. Malaysia ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1995, and the Sustainable Development Goals (SDGs), which includes a goal on gender equality (Goal 5), have been adopted since 2015. These been viewed as signs of the government's commitment to gender equality and elimination of gender-based discrimination. In Malaysia, the Ministry of Women, Family and Community Development (MWFCD) is the national body responsible for enforcing the legal framework that upholds gender equality and non-discrimination against women in Malaysia. It is also responsible for monitoring this framework's impact. In these efforts, it is largely supported at the subnational level by the respective state departments of women's development. In addition to MWFCD, the creation of a Cabinet Committee on Gender Equality in 2003 and piloting a

system of Gender Focal Points and Gender Responsive Budgeting in five ministries in 2003, as well as strengthening capacity building programmes for women have further demonstrated Malaysia's commitments in gender equality and women's empowerment.

Overall Malaysia performs well on human development indicators in international indices, however, it scores poorly in gender-related indicators. Malaysia scored 0.810, putting the country in the 'very high' human development category with a rank of 62 out of 189 countries, according to the Human Development Index (HDI) 2020. However, Malaysia's Gender Development Index (GDI) value is 0.972, falling short of the average of 0.981 for countries within the 'very high' human development category. In the Gender Inequality Index (GII), Malaysia performs slightly better coming in at 59 out of 189 countries, with a value of 0.253, in the 'very high' human development category.<sup>[1]</sup>

While the overall portion of funds allocated to MWFC is reflected in the government's annual budget, it is less clear how much of this is dedicated to human, technical and financial resources needed as there is a lack of information to monitor, enforce and evaluate efforts in promoting gender equality. The Department of Statistics Malaysia (DOSM) has released Statistics on Women Empowerment in Selected Domains, Malaysia, 2021 with the overall gender equality improved to 71.4 per cent in 2020. This report presents statistics relating to gender in Malaysia for the years 2018 to 2020 focusing on the core set of gender indicators covering eleven main domains. The statistics were prepared based on updated data from DOSM and various agencies.

Malaysia Gender Gap Index (MGGI) identifies the gap between women and men across four sub-indices encompassing Economic Participation and Opportunity, Educational Attainment, Health and Survival and Political Empowerment. A score with a value of 1.0 (100%) indicates the equality of women and men has been achieved. Achievement of women has surpassed men in the Educational Attainment sub-index with a score of 1.059. Health and Survival sub-index recorded a score of 0.956, followed by Economic Participation and Opportunity (score 0.738). Labour force participation rate (LFPR) for women was still low at 55.3 per cent in 2020 as compared to other South-East Asia countries such as Singapore (69.7%) and Thailand (66.8%). Generally, women's LFPR for developed nation exceed 60 per cent. Political empowerment recorded the lowest at 10.0 per cent (score 0.100) that shows women were still lagging behind men in the Ministerial position and Parliament." Based on the MGGI 2020 score, Malaysia ranked 74th from 156 countries in the world. Simultaneously, within East Asia and the Pacific, Malaysia remained at the eighth position as in 2020 ahead of Thailand, Viet Nam, Indonesia, China, and Brunei Darussalam. However, Malaysia is still behind New Zealand, Philippines, Australia, and Singapore.

Climate-related disasters have impacted human populations in many areas including agricultural production, food security, water management and public health. The level of impacts and coping strategies of populations depends heavily on their socio-economic status, socio-cultural norms, access to resources, poverty as well as gender. Research has also provided more evidence that the effects are not gender neutral, as women and children are among the highest risk groups. Key factors that account for the differences between women's and men's vulnerability to climate change risks include: gender-based differences in time use; access to assets and credit, treatment by formal institutions, which can constrain women's opportunities, limited access to policy discussions and decision making, and a lack of sex-disaggregated data for policy change. Malaysia recognizes the link between gender and the

environment, and the role of women in the planning, management and preservation of the environment. The average percentage of women representation in climate-related policymaking and implementation within the Ministry of Environment and Water (KASA) is 67%. As of February 2021, only 14.9% of seats in parliament were held by women.

In Malaysia, there are issues related to deforestation, logging, and land use, particularly in rural or indigenous communities, especially in East Malaysia. Top-down environmental planning by the state governments, in which land use is a state prerogative, has led to social and economic consequences. According to women leaders of Sarawak's indigenous communities, their rural communities are experiencing significant changes in crop patterns, production, and unpredictable weather patterns including changing temperature, longer drought, intense rain, and stronger winds. They also raise critical concerns on the lack of gender inclusion in planning and development processes of large plantations and infrastructure development, ignoring the differences of priorities and needs. It is also found that there remain persistent challenges in gaining access to basic healthcare services, in terms of delivery frequency, quality, and urgency, which further impede women's sexual and reproductive health, which in turn affects their resilience to natural disasters and climate change.[2]

Recognising the significant role of women, Malaysia is committed in achieving gender equality and promoting the rights of women and girls. The government's continuous efforts and commitments towards achieving gender equality are in line with the Sustainable Development Goals and 12th Malaysia Plan (RMK-12). To date, 75% of legal frameworks that promote, enforce and monitor gender equality under the SDG indicator, with a focus on violence against women, are in place. However, work still needs to be done in Malaysia to achieve gender equality. As of December 2020, only 45.1% of indicators needed to monitor the SDGs from a gender perspective were available, with gaps in key areas, in particular: violence against women and women in local governments. In addition, many areas – such as gender and poverty, physical and sexual harassment, women's access to assets (including land), and gender and the environment – lack comparable methodologies for regular monitoring. Closing these gender data gaps is essential for achieving gender-related SDG commitments in Malaysia.

Activities under the previous NC and BUR projects have been carried out in a gender inclusive manner at project workshops, technical working groups and sub working groups and secretariat formation. However, gaps remain in obtaining sex disaggregated data and fostering a stronger integration of gender elements into the NCs and BURs. A gender analysis will be conducted under the Fourth National Communication project, and will be finalised by the end of 2022. Finding of these will be used to adjust the project work where applicable.

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[1] Malaysia Country Gender Note 2021, The World Bank Group, August 2021

[2] *ibid*

**Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?**

**Closing gender gaps in access to and control over natural resources;**

**Improving women's participation and decision making** Yes

**Generating socio-economic benefits or services or women**

**Will the project's results framework or logical framework include gender-sensitive indicators?**

Yes

#### **4. Private sector engagement**

**Elaborate on private sector engagement in the project, if any**

The private sector is engaged through SWG membership comprise of a multi-level stakeholder such as Federal and State Ministries/Agencies, national experts, academic and research bodies, public and private sectors, local communities, and NGOs. The project will strengthen the existing private sector stakeholder engagement platforms, i.e., NSCCC, TCCC, TWGs and SWGs, through establishment of multiple online database management systems which will enable access to the private sector stakeholders that are required to provide GHG related data. The project will support this voluntary engagement by engaging the private sector in the consultation and preparation of various project outputs, including training. The private sector representatives will be invited to the consultation meetings and training workshops.

#### **5. Risks to Achieving Project Objectives**

**Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):**

The project is subject to possible risks that can be managed and mitigated to ensure successful project implementation. The possible risks and mitigation measures as well as more detailed assessments of possible risks associated with climate change and COVID-19 are summarized below. Note that the project does not envision any challenges regarding the implementation of gender-related activities.

<b>Risk description</b>	<b>Main categories</b>	<b>Risk level rating</b>	<b>Risk Mitigation Strategy and Safeguards</b>	<b>By Whom / When?</b>
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<p>Changes in priority, political will and commitment of the Malaysian Government</p>	<p>Political / Institutional</p>	<p>Low</p>	<p>The project will conduct direct consultation with key project partners to secure commitments in strengthening institutional coordination</p> <p>Create high-level awareness and seek final approval from political authorities from the line ministries at the outset of project implementation (before the project kicks-off);</p> <p>Provide regular progress reports to the Ministers whose sectors are included in the CBIT project.</p>	<p>KASA, UNEP/ Throughout the project</p>
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<p>Changes in management-level personnel leading to passive participation of key project partners</p>	<p>Institutional/ Capacity</p>	<p>Low</p>	<p>NSCCC, which will act as the PSC for the project, will be utilized as the communication platform to inform project activities and progress and to ensure active participation of key project partners.</p> <p>Government has sourced and set up special unit to enhance its reporting capacities under Paris Agreement. Thus, a dedicated team is established to enable coordination and follow up with all key partners. This team will also host the project management group.</p>	<p>KASA / Throughout the project</p>
<p>Limited cooperation on data and information sharing by government and private sector stakeholders</p>	<p>Institutional/ Technical</p>	<p>Moderate</p>	<p>Smooth coordination with government stakeholders will be ensured through NSCCC.</p> <p>The key challenge in data sharing by private sector stakeholders due to concerns of leakage of commercially sensitive data will be mitigated through active communication and coordination with responsible government agencies with mandates to manage and collect data in different economic sectors.</p>	<p>KASA / Throughout the project</p>

<p>Overlapping and redundancy of MRV activities among relevant projects</p>	<p>Institutional/ Technical</p>	<p>Low</p>	<p>KASA as the focal point for UNFCCC communication is executing partners/direct beneficiary of most initiatives in the country. Hence, the coordination with other projects is ensured.</p> <p>An informal coordination group of development partners will be constituted for regular interaction, this will enable effective coordination.</p> <p>Communication between relevant stakeholders and coordination of ongoing projects is essential to harvest synergies and avoid overlaps. TWG and SWG under NSCCC will be consulted to ensure the flow of information and minimize redundancies. Any concerns or issues will be discussed to determine resolutions in NSCCC meetings.</p>	<p>KASA / Throughout the project</p>
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<p>Staff turnover leading to loss of knowledge and capacity built</p>	<p>Capacity/ Technical</p>	<p>Moderate</p>	<p>The provision of capacity-building support is an integral part of this project. A high staff turnover, especially in key institutions, can lead to a loss of technical capacities and the overall institutional memory.</p> <p>The project through establishing access to training on MRV issues at national institutions will enable the availability of training of new staff. Further, tools and templates along with permanent archiving systems will help establish institutional memories to overcome the loss of knowledge through staff turnovers.</p> <p>The project will also explore the Memorandum of Understanding (MoU) with technical institutes to provide technical backstopping to ministries.</p>	<p>KASA / Throughout the project</p>
<p>Physical risk from climate change impact that could affect implementation of project activities (e.g. floods, droughts, landslide, etc.),</p>	<p>Environmental/Climate change</p>	<p>Low</p>	<p>Project activities are unlikely to be affected by climate related hazards. However, the infrastructure created (the databases and knowledge platform) will be hosted on the existing government platforms. It will follow the government policies on integrating climate resilience.</p>	<p>KASA/ Throughout the project period</p>

<p>Delay in implementation of project activities due to impacts of the COVID-19 pandemic.</p>	<p>Project Implementation and changes in Timelines</p>	<p>Low/Moderate</p>	<p>The Government of Malaysia already announced that the whole country is in Phase 4 of NRP in January 2022 with all economic sectors reopened, social activities resumed, and interstate travel allowed. As a result, the likelihood of the COVID-19 to severely impact the project implementation activities due to restriction of travels, physical meetings and field data collections by PMU and national stakeholders is low.</p> <p>The possible restriction anticipated is international travel to Malaysia by international experts.</p> <p>All government agencies and private sector stakeholders in Malaysia have already equipped with necessary infrastructure for organizing web-based meetings/consultations. Protocols for such engagements are already in place and will be used to address any situations of restrictions.</p> <p>The proposed response measures include the followings:</p> <p>Regular quarterly review of the situation as needed.</p> <p>? Prepare a human resource management plan for the Project team to ensure continuous operations of the project.</p>	<p>KASA, PSC members and all project partners / Throughout the project</p>
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## Climate Change Risk Assessment

Malaysia is a tropical nation in Southeast Asia, comprising Peninsular Malaysia (West Malaysia) and East Malaysia (Sabah and Sarawak). Malaysia features diverse land cover and topography, with a coastline of over 4,800 km, mountain ranges, and more than 50% forest cover. As of 2019, Malaysia had a population of around 32 million, and remains one of the most developed economies in the region. Around 22% of the population live in the greater area of the capital city, Kuala Lumpur and about 77% of the population live in urban areas[1]. Malaysia's climate can be characterized by two monsoons which are separated by two shorter inter-monsoon periods. North-eastern winds are strong during the boreal winter monsoon which usually occurs from November to March. The boreal summer monsoon occurs between May to September with southwestern winds prevailing strong during this period. During inter-monsoonal periods, it is a relative common occurrence of heavy rain and thunderstorms in the late afternoons and evenings. The highest daily maximum temperatures for each year from 1952 to 2016 from the various meteorological stations across Malaysia are shown in Figure 2. The highest daily maximum temperature shows an increasing trend with the highest daily maximum temperature over in Peninsular Malaysia, followed by Sarawak and Sabah.[2]

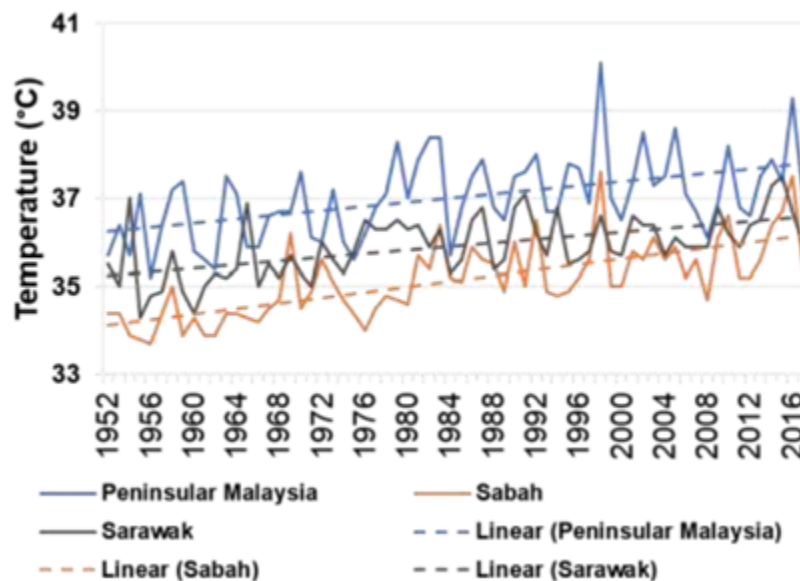


Figure 2: Highest Daily Maximum Temperature for Peninsular Malaysia, Sabah and Sarawak (Source: Malaysia ? Third Biennial Update Report to the UNFCCC, December 2020)

In general, Malaysia experiences a very stable temperature regime with an annual maximum of daily maximums of around 33°C. The current median probability of a heat wave (defined as a period of three or more days where the daily temperature is above the long-term 95th percentile of daily mean temperature) is very low, around 2%. [3]

Malaysia is particularly vulnerable to flooding, with this natural hazard contributing more damage than any other the country experiences. Frequency and extremity of flood events have increased in recent decades with projections they could increase with continued global warming. Malaysia recently suffered flood events with extensive damage to properties and lives in January 2022. Scientific studies suggest some flood zones will increase their area by more than 200 percent in the next two decades. The latest IPCC scenarios also indicate the increasing frequency of 'water bombs' extreme events in Southeast Asia, including Malaysia. The growing focus on adaptation to climate change may reduce the emphasis on climate mitigation and low carbon measures within the country.

In addition to the abovementioned climate related natural hazards, climate change impacts also present a major challenge to Malaysia's water planning, as 97% of the water supply in Malaysia is drawn from surface water flows, and storage depends almost entirely on reservoirs. Climate change also present additional risks to various economic sectors, such as:

? **Tourism Sector:** Tourism which directly employs 4.6% of the labor force and indirectly contributes to 11.8% of jobs could be impacted by the potential for extreme heats which lead to personal discomfort and potential health issues.

? **Agricultural Sector:** Climate change could influence food production via direct and indirect effects on crop growth processes. Direct effects include alterations to carbon dioxide availability, precipitation and temperatures. Indirect effects include through impacts on water resource availability and seasonality, soil organic matter transformation, soil erosion, changes in pest and disease profiles, the arrival of invasive species, and decline in arable areas due to the submergence of coastal lands and desertification.

? **Urban and Energy Sector:** Urban Heat Island (UHI) in the range of 4?6?C has been recorded in Kuala Lumpur, typically peaking at nighttime. Research suggests that on average a one degree increase in ambient temperature can result in a 0.5?8.5% increase in electricity demand, specifically for cooling needs. UHI contributes to the formation of haze pollution events. Haze damage can have considerable economic effect, for example it was estimated the aggregate value of haze damage in Kuala Lumpur throughout 1997 was \$321 million.

Malaysia has developed multiple climate change related policies, strategies, plans, and agreements to respond to potential climate change impacts. The National Policy on Climate Change was approved in 2009. Malaysia's Second National Communication places an increased emphasis on the importance of integrated water resource management and basin management, including nature-based solutions. The Third Biennial Update Report to the UNFCCC, submitted in December 2020, outlines various mitigation actions in the energy, waste, and forestry sector. The likely impacts of climate related risks on the infrastructure and capacities created by the project are identified and discussed in the above risk table.

### **COVID-19 Risk Assessment**

Malaysia detected its first three COVID-19 cases on 25 January 2020, but the Malaysian Government imposed a lock down or a Movement Control Order (MCO), closing its border and banning interstate travel, in mid-March 2020 following a wave of COVID-19 infections across the country triggered by a mass religious gathering near Kuala Lumpur. MCO measures encompass restrictions on movement,

assembly and international travel, and mandated the closure of business, industry, government and educational institutions to curb the spread of COVID-19. In May 2020, the Government of Malaysia implemented the Conditional Movement Control Order (CMCO or Conditional MCO) which aims at reopening the economy in a controlled manner. Different phases of MCO and CMCO have been implemented during in 2020 and 2021 to cope with Alpha and Delta variants. In January 2021, MCO was reinstated and transitioned to CMCO in March 2021, and then reinstated again in May 2021. In June 2021, the Malaysian Government introduced a four-phase National Recovery Plan (NRP) to help the country emerge from the COVID-19 pandemic and its economic fallout. Each phase of NRP is based on the amount of new cases, people requiring ICU treatment, and vaccination rates. In Phase 4, all economic sectors will be reopened, social activities will resume to some degree, and interstate travel will be allowed. In January 2022, Malaysia announced that the whole country is in Phase 4 of NRP.

Based on the WHO COVID-19 weekly situation report for Malaysia, as of 20 February 2022, COVID-19 cases are on the rise (see Figure 4), and Omicron become the dominant variant in Malaysia. The weekly situation report highlights that 78.8% of Malaysia's total population (97.5% of the adult population and 90.0% of the adolescent population) have received their second dose of the COVID-19 vaccine. An estimated 42.8% of the total population have received a booster dose. The Ministry of Health (MOH) have announced that adults that have received their COVID-19 booster vaccination and do not present with COVID-19 symptoms are no longer required to undergo mandatory quarantine upon their identification as a COVID-19 close contact. Such individuals will, however, be required to undergo the required testing. For those who are vaccinated but have not received their booster dose, they will be required to serve a five-day quarantine, regardless of symptom presentation. These directives come into effect from 1 March 2022 onwards.

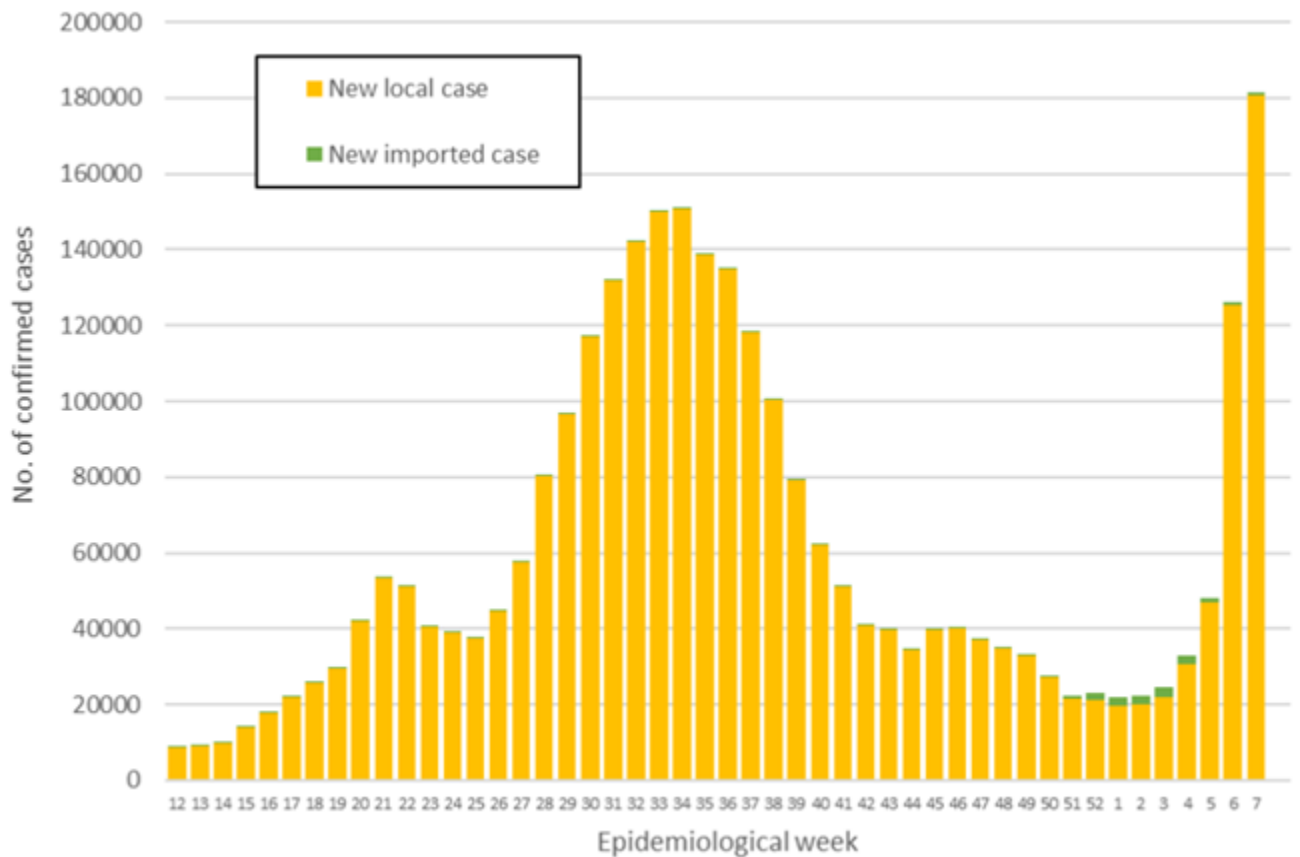


Figure 4: Number of Reported COVID-19 Cases by Week from 28 March 2021 to 20 February 2022 (Source: COVID-19 weekly report for the week ending 20 February 2022, the World Health Organization, Representative Office for Malaysia, Brunei Darussalam, and Singapore)

In addition to the abovementioned health related measures, the Malaysian Government has implemented various measures to manage COVID-19 impacts on the economy, and these include: economic stimulus measures (e.g., loans, moratorium on loans / financing repayments, grants for SMEs, Micro Credit Scheme and relaxation of the application conditions for qualifying micro entrepreneurs, rental waiver / discount for SME retailers renting premises owned by Government-linked companies etc.), direct and indirect tax measures, and employment related measures (e.g., wage subsidies, 25% reduction of the foreign worker levy, etc.)

Likely risks from COVID-19 to successfully implementing project activities generally involve restrictions of physical movements and interactions and different organizational policies and guidelines on COVID-19 adopted project stakeholders. More details on the identified risks and mitigation measures are summarized in the above risk table.

[1] Climate Risk Country Profile: Malaysia, ADB and the World Bank Group, 2021



[2] Malaysia ? Third Biennial Update Report to the UNFCCC, December 2020

[3] Climate Risk Country Profile: Malaysia, ADB and the World Bank Group, 2021

## **6. Institutional Arrangement and Coordination**

### **Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.**

UN Environment Programme (UNEP) has the role of the GEF Implementing Agency (IA). The CCD, under the KASA, will act as the Executing Agency (EA) of this project. KASA is also participating in all other GEF projects as coordinator or counterpart, therefore KASA will ensure that there is constant check of the activities and the synergies that can be created among initiatives. Institutional arrangement and coordination in this project will rely on the existing National Steering Committee on Climate Change (NSCCC) and the Technical Committee on Climate Change (TCCC) established to support formulation of national policies, strategies and action plans to address various issues related to climate change and green agenda in Malaysia. The CCD of KASA is the secretariat of the NSCCC and TCCC.

The proposed institutional arrangement and coordination for project implementation are illustrated in the diagram below. Please refer to Annex H for further details on the roles and responsibilities of organizations and bodies involved in the project implementation.

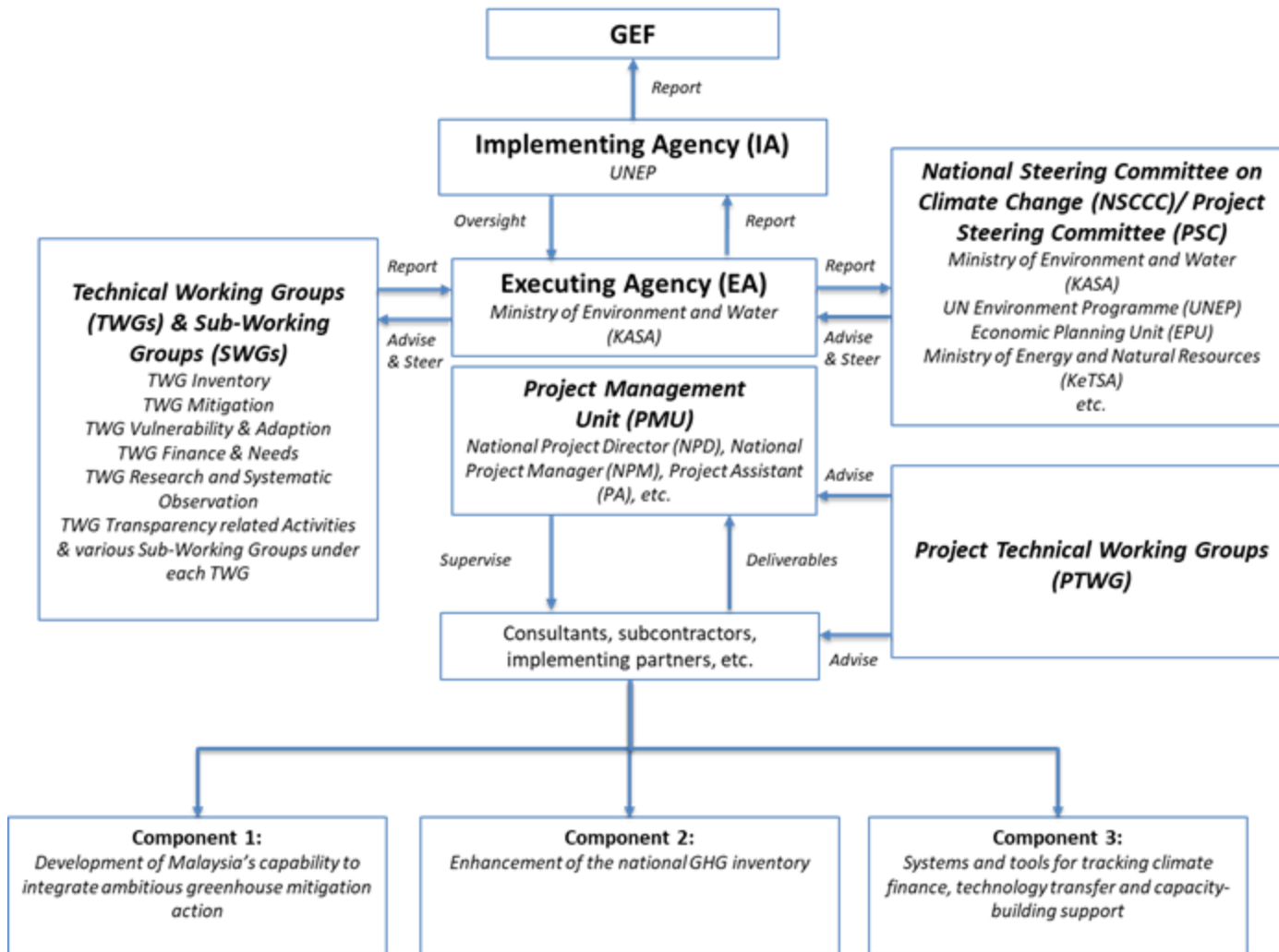


Figure 4: Institutional Arrangement for Project Implementation

The NSCCC will serve as the **Project Steering Committee (PSC)** for this project and will provide overall guidance and oversee the progress and performance of the project as well as to enhance and optimize the coordination and contribution with various project partners. NSCCC is chaired by the Secretary General of KASA and will convene at least twice per year.

The TCCC is chaired by the Deputy Secretary Generation (Environment) of KASA, and consists of six **Technical Working Groups (TWGs)** for inventory, mitigation, vulnerability & adaptation, finance & needs, research & systematic observation, and transparency related activities. Each TWG comprises representatives from relevant ministries and agencies and individual experts. TWGs will be supported by thematic **Sub-Working Groups (SWGs)**. The project will also ensure participation of gender-related entities in the project implementation with participation of the Ministry of Women, Family and Community Development (MWFCD) in the SWG for adaptation. ARROW will also be invited to participate in relevant SWGs as appropriate. The project will utilize existing TWGs and SWGs to facilitate implementation of project components and activities.

A **Project Management Unit (PMU)** will be established within KASA to manage day-to-day operation of the project. The PMU will be headed by the National Project Director (NPD), a full-time staff of the KASA, and will include the Chief Technical Advisor (CTA), the Project Assistant (PA) and the Project Accounting and Finance Officer. The GEF Funds will be available to staff the members of PMU other than NPD. The GHG Inventory and Reporting Unit (UGHG), under the CCD, KASA is responsible for the preparation and submission of national reports to the UNFCCC. The UGHG is also the interim unit to the National GHG Centre (NGC); an establishment which was approved by the Cabinet on 16 February 2022. The NGC will play an enriched role with additional functions to cater for the ETF under the Paris Agreement and its set-up is expected in early 2023.

UN Environment has the role of the GEF Implementing Agency work closely with PMU and play the role of oversight along with the NSCCC.

Additional **Project Technical Working Groups (PTWGs)** will be formed as needed by PMU to collaborate with TWGs and SWGs to address specific technical matters in implementation of specific project activities, e.g., development of modeling systems and tools. PTWGs? members are invited representatives from the key project partners, relevant government agencies/authorities, private sector, universities/institutes, and NGOs. PTWGs will meet regularly during project implementation to work inter alia on, but not limited to: development of GHG modelling tools; development of a web-based communication system; and, establishment of an online GHG database and information system.

#### **Coordination with other initiatives**

KASA will also set up a Development Partner Coordination Committee (DPCC) to coordinate with all the donors on various initiatives being supported on strengthening the ETF. At the beginning of the project, CTA will map all the key development partners providing support on climate change issues and develop a list of invitees to the DPCC. In consultation with all development partners in the country, CTA will prepare updates on the supported initiatives mentioned in this document and regularly update them using the DPCC meetings. CTA will be responsible for organizing the meeting in conjunction with the PSC, and at least twice a year. DPCC will also be the opportunity to share any additional requirements for strengthening ETF and seek support. UN Resident Coordinator will be invited to DPCC to represent the UN system and UN support to related activities. The UNEP representative of the UN Country Team (UNCT) will be regularly informed of the project progress. UNEP UNCT representative is provided inputs for his/her meetings to brief the UNCT on UNEP support to Maldives. This channel shall be used to inform and coordinate with the other UN agencies.

Malaysia is also part of the international CBIT community through the CBIT Global Coordination Platform, which facilitates coordination of peer-to-peer learning with CBIT projects in other countries. Moreover, the IA, UN Environment, is supporting over 70 countries with their national reporting, and more than 18 countries with CBIT projects, being the GEF Agency leading this type of initiative.

Malaysia as a Member State of ASEAN actively works on climate change issues with other Member States through the ASEAN Working Group on Climate Change (AWGCC). KASA will work through this group to share the information with other countries as well as learn from other countries on approaches adopted by them.

## 7. Consistency with National Priorities

**Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:**

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

Malaysia ratified the UNFCCC on the 13th of July 1994. As a non-Annex I party to the UNFCCC, Malaysia has submitted National Communication (NC) and Biennial Update Report (BUR) reports to the UNFCCC in fulfillment of the UNFCCC reporting obligations. On November 2015, Malaysia submitted its (Intended) Nationally Determined Contribution (NDC) to the UNFCCC, with a pledge to reduce 45% of its greenhouse gas (GHG) emissions per GDP by 2030, relative to its emissions intensity in 2005. This target encompasses a 35% reduction on an unconditional basis, and a further 10% reduction subject to receipt of climate financing, technology transfer and capacity building from developed countries. The NDC covers economy-wide emissions intensity of GDP and focuses on reducing emissions from the sectors of energy; industrial processes; waste; agriculture; and land use, land use change and forestry (LULUCF). An updated submission to Malaysia's first NDC was submitted in July 2021. Based on the updated submission, Malaysia intends to reduce its economy-wide carbon intensity (against GDP) of 45% in 2030 compared to 2005 level. Malaysia is developing an NDC Roadmap which is expected to be completed in December 2022. The CBIT project will provide modeling tools, web-based database systems, and capacity building and training programs. These will enable Malaysia to conduct scenario analysis which would allow for sectoral GHG emission reduction/avoided targets setting in the formulation of the roadmap. In addition, the tools, database systems, and communication platforms developed by the CBIT project will support establishment of a robust MRV system, enabling the monitoring and reporting of NDC implementation. This aspect of monitoring and reporting is considered as an important supportive element to ensure effective implementation of policies and strategies.

The 12th Malaysia Plan 2021-2025 aims to achieve sustainable economic growth and environmental sustainability in Malaysia, and the public and private sectors are encouraged to adopt Sustainable Development Goals (SDGs) in their decision making and operation. The United Nations Sustainable Development Cooperation Framework (UNSDCF) Malaysia 2021-2025 is consistent with the 12th Malaysia Plan. Two strategic priority areas, i.e., Planet and Prosperity, are highly relevant to SDGs No. 6 to 15, and this CBIT project will establish mechanisms which would complement and further provide a framework to help coordinate on tracking of the SDG indicators, e.g., CO2 emission per capita, renewable energy share in total installed capacity, level of inequality as measured by GINI coefficient.

The government's continuous efforts and commitments towards achieving gender equality are in line with SDGs and 12th Malaysia Plan. Activities under the previous NC and BUR projects have been carried out in a gender inclusive manner at project workshops, technical working groups and sub working groups and secretariat formation. Note that a gender analysis will be conducted under the 4th National Communication project which is expected to be finalised by the end of 2022.

## 8. Knowledge Management

**Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.**

The CBIT project will create knowledge through development of the appropriate models for the Energy and AFOLU sectors under Output 1.1. The models will be used to assess the mitigation actions planned. Under Output 1.2, the project will develop a centralized NDC database management system (NDC DBMS) to support the use of models and other data collection, organization, quality management and reporting for climate change information for NDC progress and long term low GHG strategy tracking. The NDC DBMS will act as the centralized MRV system. The NDC DBMS will complement the on-going establishment of the domestic MRV system by providing a centralized focal point for MRV. In addition, the project will establish a Climate Knowledge Sharing Platform (Output 1.3), and a GHG Database and Information System (GHG-DIS) (Output 2.1). The project will also develop the templates, tools, protocols and guidelines (Output 2.2 and 3.1) of how data will be collected and integrated into the systems developed by the project. This will allow for better information sharing between different institutions in the country, which also can act to reduce the challenges associated with staff changes, as the system will be institutionalized, used by numerous members of the personnel and will serve to preserve institutional memory.

To reach out to all stakeholders beyond those directly involved in preparation of the reporting, the project will establish a Climate Change Knowledge and Information Platform. This will provide access to all stakeholders on climate related information and programmes of the government, as well as the progress made in implementing climate actions.

Moreover, capacity of government and private sector personnel will be enhanced through training and capacity building activities under Activity 1.4 and 3.1. To ensure long-term sustainability, it is planned to have a Training of Trainers (ToTs) programs for national experts and research/academic institutions supporting government on related issues. Note that the project will collaborate with the relevant TWGs to embed the training modules and programs developed by the project in the existing training systems managed by the government and private sector organizations in Malaysia. The project will also allow relevant personnel and in-country expert to participate in regional/international events on application of new NDC tracking and progress reporting requirements, and new GHG Inventory reporting requirements. These participation will also allow Malaysia for sharing lessons learnt and experiences under the platform which will ensure alignment of The Malaysian CBIT project with other national, regional and global transparency initiatives. The project will mainstream gender consideration in the design and development processes of the above mentioned knowledge outputs, so that the contents and final products are gender-sensitive.

The table below includes proposed knowledge outputs to be produced and shared with stakeholders.

Table 2: Knowledge Outputs of the Project

Project Output	Knowledge Outputs which will be shared with stakeholders via the portal	Estimated Costs
	<b>Component 1:</b> Development of Malaysia's capability to integrate ambitious greenhouse mitigation action into short and long-term national decision making, strategies and plans and to track progress and ambition with its Nationally Determined Contribution (NDC)	

Output 1.1: GHG modelling tools developed and operationalized to develop scenarios for Energy and AFOLU sector to report on NDC implementation	<p>AGHG modeling tool for the Energy sector</p> <p>A GHG modeling tool for the AFOLU sector</p> <p>Analysis the impacts of policies and measure (PAMs)</p>	Training workshops and meetings: \$10,000
Output 1.2: Integrated platform for climate change information for NDC progress and long term low GHG strategy tracking developed and operationalized	<p>A centralized Database Management System for climate change information for (NDC DBMS)</p> <p>Operation and maintenance manual for the NDC DBMS</p>	Training workshops and meetings: \$17,500
Output 1.3: Climate Change Knowledge Sharing platform established to inform all the stakeholders on country efforts and outcomes of addressing climate change	<p>A Web-based Climate Change Knowledge Sharing Platform</p> <p>A User manual for maintaining and updating the web-based system</p>	Training workshops and meetings: \$7,500
Output 1.4: Technical capacity built of decision makers to meet transparency provisions stipulated under Article 13 of the Paris agreement	<p>Training modules and materials</p> <p>A Training of Trainers (ToT) program</p>	Training workshops and meetings: \$12,500
<b>Component 2: Enhancement of the national GHG inventory</b>		

Output 2.1: An online GHG database and information system (GHG-DIS) established and operationalized to enable regular and timely preparation of GHG Inventory	An online GHG database and information system (GHG-DIS) A user manual for GHG-DIS Training materials (based on user manual) for GHG-DIS	Training materials: \$20,000 Training workshops and meetings: \$7,500
Output 2.2: Higher tier methodological approach and processes for GHG estimation for high impact sectors developed	Data collection protocols	Training workshops and meetings: \$7,500
<b>Component 3:</b> Assessment of systems and tools for tracking support		
Output 3.1: Tables and guideline documents for collection, tracking and reporting of climate finance, technology transfer and capacity-building support.	Data collection protocols and process Reporting templates Guidelines and training materials	Training materials: \$10,000 Training workshops and meetings: \$7,500
<b>Total Budget</b>		\$100,000

## 9. Monitoring and Evaluation

### Describe the budgeted M and E plan

Monitoring and Evaluation (M&E) activities and related costs are presented in the cost M&E plan (Annex J) and are fully integrated in the overall project budget. The project will comply with UNEP standard monitoring, reporting and evaluation procedures. Reporting requirements and templates are an integral part of the legal instrument to be signed by the Executing Agency and the Implementing Agency. The project will have a project-funded full time Monitoring and Evaluation Specialist to support project M&E activities (see the terms of reference for information on that person's role).

The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Annex A includes SMART indicators for each expected outcome as well as end-of-project targets. These indicators along with the key deliverables and benchmarks included in Annex L will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification to track the indicators are summarized in Annex A.

The M&E plan will be reviewed and revised as necessary throughout the project to ensure project stakeholders understand their roles and responsibilities vis-?-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. General project monitoring is the responsibility of the Project Management Unit (PMU) but other project partners could have responsibilities in collecting specific information to track the indicators. It is the responsibility of the Chief Technical Advisor (CTA) to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

The executing agency will prepare periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E Plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility of the project's UNEP Task Managers. The UNEP Task Managers will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

Project supervision will take an adaptive management approach. The Chief Technical Advisors will develop a project Supervision Plan at the inception of the project, which will be communicated to the Project Management Unit and the project partners during the Inception Workshop. The emphasis of the Task Manager's supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring.

The project will be reviewed yearly through the Project Implementation Review (PIR). Its purpose is to assess project performance, to analyze whether the project is on track, what problems and challenges the project is encountering, and which corrective actions are required so that the project can achieve its intended outcomes by project completion in the most efficient and sustainable way. Progress vis-?-vis delivering the agreed project global environmental benefits will be assessed with the executing agency at agreed intervals. Project risks and assumptions will be regularly monitored both by the PMU, the project partners and UNEP. Risk assessment and rating is an integral part of the PIR. The PIR will be completed by the Chief Project Coordinator and ratings will be provided by UNEP's Task Managers. The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. UNEP's Task Managers will have the responsibility of verifying the PIR and submitting it to the GEF. Key financial parameters will be monitored quarterly to ensure cost effective use of financial resources. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented.

In line with the GEF Evaluation requirements and UNEP's Evaluation Policy, all GEF funded projects are subject to a performance assessment when they reach operational completion. This performance assessment will be either an independent Terminal Evaluation or a management-led Terminal Review (led by the UNEP Evaluation Office or UNEP CCM Unit, respectively).

In case a Review is required, the UNEP Evaluation Office will provide tools, templates, and guidelines to support the Review consultant. For all Terminal Reviews, the UNEP Evaluation Office will perform a quality assessment of the Terminal Review report and validate the Review's performance ratings. This quality assessment will be attached as an Annex to the Terminal Review report, validated performance ratings will be captured in the main report.

However, if an independent Terminal Evaluation (TE) of the project is required, the Evaluation Office will be responsible for the entire evaluation process and will liaise with the Task Manager and the project implementing partners at key points during the evaluation. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood



of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP staff and implementing partners. The direct costs of the evaluation (or the management-led review) will be charged against the project evaluation budget. The TE will typically be initiated after the project's operational completion. If a follow-on phase of the project is envisaged, the timing of the evaluation will be discussed with the Evaluation Office in relation to the submission of the follow-on proposal.

The draft TE report will be sent by the Evaluation Office to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. The final determination of project ratings will be made by the Evaluation Office when the report is finalized. The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process. The evaluation recommendations will be entered into a Recommendations Implementation Plan template by the Evaluation Office. Formal submission of the completed Recommendations Implementation Plan by the Chief Technical Advisor is required within one month of its delivery to the project team. The Evaluation Office will monitor compliance with this plan every six months for a total period of 12 months from the finalisation of the Recommendations Implementation Plan. The compliance performance against the recommendations is then reported to senior management on a six-monthly basis and to member States in the Biennial Evaluation Synthesis Report. A summary of the planned M&E activities is provided in Annex J. The total GEF contribution for M&E activities (including the Inception Workshop and the Terminal Evaluation) is US\$ 41,750. The details are provided below in the table.

M&E Activity	Description	Responsible Parties	Timeframe	Indicative budget (USD)
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M&E Activity	Description	Responsible Parties	Timeframe	Indicative budget (USD)
Inception Workshop (IW)	<p>Report prepared following the IW; which includes:</p> <ul style="list-style-type: none"> <li>- A detailed workplan and budget for the first year of project implementation,</li> <li>- An overview of the workplan for subsequent years, divided per component, output, and activities.</li> <li>- A detailed description of the roles and responsibilities of all project partners</li> <li>- A detailed description of the PMU and PSC, including an organization chart</li> <li>- Updated Procurement Plan and an M&amp;E Plan, Gender Action Plan</li> <li>- Minutes of the Inception Workshop with an attendance sheet (sex-disaggregated)</li> </ul>	<p>Execution: CTA</p> <p>Support:</p>	1 report to be prepared following the IW, to be shared with participants 4 weeks after the IW (latest)	GEF: USD 5,000
Gender Monitoring Framework	<p>The project will develop a gender monitoring framework to track the access to participation by gender and ensure equal benefits.</p> <p>The monitoring framework will be implemented, and data collected by the NPM</p>	<p>Execution: CTA</p>	Reported through Half-yearly report and PIR	GEF: USD 5.250
Final Workshop	<p>A final workshop will be conducted to present the outputs to the stakeholders and donors. The workshop will also share how the outputs are being implemented and the next steps in strengthening the ETF. It is also to seek additional support as may be required.</p>	<p>Execution: CTA</p> <p>Support: PMU</p>	Final Workshop Report to be submitted along with Final report	GEF: USD 5,000

M&E Activity	Description	Responsible Parties	Timeframe	Indicative budget (USD)
Terminal Evaluation (TE)	Further review the topics covered in the mid-term evaluation.  Looks at the impacts and sustainability of the results, including the contribution to capacity development and the achievement of global environmental goals.	Execution: Independent Evaluator / TM  Support: CTA, PMU	Can be initiated within six (6) months prior to the project's technical completion date	GEF:  US\$ 30,000
<b>TOTAL M&amp;E COST</b>			<b>GEF: US\$ 45,250</b>	

## 10. Benefits

**Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCE/SCCF)?**

The project supports enhanced reporting and assessments in the areas of national GHG inventories, GHG mitigation, finance and capacity building leading to data collection for in-depth assessment of existing climate actions and policies and development of new climate policy instruments. This CBIT project will also inform and guide the formulation of cost-effective policies in the areas of GHG mitigation as well as budgetary allocations for climate action. This can include responsive energy planning, reducing reliance on energy imports and freeing government resources, mitigating conflicts over scarce resources, improving the national and local economies, improving the health and wellbeing of the population and empowering communities and citizens. Enhanced coordination between government ministries, private sector, civil society, academia and communities ensures that sustainable development benefits are brought into focus. Thus, these initiatives will be in line with the convention obligation, national sustainable development needs and the SDG No. 13 to combat climate change and its impacts. The project is also associated with global benefits through capacity development mainly in the areas of GHG inventories and emission reductions, climate change vulnerability and adaptation understanding. In the absence of this project, there will be an uncoordinated approach in data collection and analysis, which will prevent effective implementation of the NDC and climate-smart projects programmes and policies. The National Climate Transparency System will also enable the tracking of sustainable development impact based on the overlaps with the mitigation actions. This process will improve the dialogue between sectors and relevant stakeholders, encouraging wider environmental, social and economic benefits with measurable indicators.

## 11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

**Overall Project/Program Risk Classification\***

<b>PIF</b>	<b>CEO Endorsement/Approva l</b>	<b>MTR</b>	<b>TE</b>
<b>Low</b>			

**Measures to address identified risks and impacts**

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

NA

**Supporting Documents**

Upload available ESS supporting documents.

<b>Title</b>	<b>Module</b>	<b>Submitted</b>
<b>SRIF MY CBIT Final</b>	<b>CEO Endorsement ESS</b>	

**ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).**

<b>Project Objective</b>	<b>Objective level Indicators</b>	<b>Baseline</b>	<b>End of project Target</b>	<b>Means of Verification</b>	<b>Assumptions &amp; Risks</b>	<b>UN Environment MTS reference</b>
To strengthen Malaysia's ability to identify, implement and track ambitious mitigation and adaptation action, its costs, benefits, support and impacts on sustainable development.	Indicator A: Improvement in the quality of reporting and transparency mechanism under the Parties Agreement (1: Low, 2: Medium, 3: High)	Baseline A: 1 (Low)	End-of-project target A: 3 (High)	<ul style="list-style-type: none"> <li>- Official government journals, publications, documents and news bulletins issued by KASA and other relevant government agencies</li> <li>- Project terminal evaluation reports</li> <li>- Project Activities reports</li> <li>- M&amp;E report of the program</li> <li>- Regulatory documents</li> <li>- Agreement documents</li> </ul>	<p>Assumption: Government is continuously committed to meeting its international obligations and allocate adequate resources to meet the obligations.</p> <p>Risks:</p> <ul style="list-style-type: none"> <li>- Changes in priority, political will and commitment of the Malaysian Government;</li> <li>- Limited cooperation on data and information sharing by government and private sector stakeholders;</li> </ul>	<p>UNEP MTS 2022-2023</p> <p>Climate Change Programme 1C. State and non-state actors adopt the enhanced transparency framework arrangements under the Paris Agreement.</p>
	Indicator B: Improvement in awareness, knowledge in in Malaysia's climate actions among stakeholders	Baseline B: To be determined during the inception phase	End-of-project target B: 30% improvement (through a survey to be conducted before EOP)			
<b>Project Outcomes</b>	<b>Outcome/Output level Indicators</b>	<b>Baseline</b>	<b>End of project Target</b>	<b>Means of Verification</b>	<b>Assumptions &amp; Risks</b>	<b>MTS Expected Accomplishment</b>

<p>Outcome 1: The GoM with enhanced capacities adopts tools and methodologies complying ETF provisions for tracking progress of NDCs and their impacts in the Energy and AFOLU sectors.</p>	<p>Indicator 1.1: Improvement in quality of institutional capacity on NDC reporting based on GEF Score 1 to 4 as per CBIT Programming direction Annex IV</p>	<p>Baseline 1.1: 1</p>	<p>End-of-project target 1.1: 4</p>	<ul style="list-style-type: none"> <li>- CBIT Global Coordination Platform self-assessment tool</li> <li>- Official government journals, publications, documents and news bulletins issued by KASA and other relevant government agencies</li> <li>- Project terminal evaluation reports</li> <li>- Project Activities reports</li> <li>- M&amp;E report of the program</li> <li>- Regulatory documents</li> <li>- Agreement documents</li> <li>- Based on access of information of Climate Knowledge platform.</li> </ul>	<p>Assumptions</p> <ul style="list-style-type: none"> <li>- National capacities, within and outside the government are developed over time to support the data gathering, analysis and know-how to assess and design effective climate actions.</li> <li>- Continued support from development partners to strengthen the integration of climate goals within all spheres of development planning.</li> </ul> <p>Risks:</p> <ul style="list-style-type: none"> <li>- Changes in management-level personnel leading to passive participation of key project partners;</li> <li>- Staff turnover leading to loss of knowledge</li> </ul>	<p>Direct Outcome 1.3 - Transparency and accountability of government and non-government climate actions, including from the private sector and financial community, are strengthened.</p> <p>1.7 - Public support and Political Engagement for climate action is catalyzed.</p>
	<p>Indicator 1.2: Number of NDC actions assessed using better tools and models in Energy and AFOLU sector</p>	<p>0</p>	<p>5</p>			
	<p>Indicator 1.3: % improvement in public awareness of the web-based Climate Change Knowledge Sharing Platform</p>	<p>Baseline 1.3: N/A</p>	<p>30% better awareness</p>			
	<p>Indicator 1.4: % of stakeholder trained for use and application of modelling tools</p>	<p>Baseline 1.4: N/A</p>	<p>End-of-project target 1.4: 50 (50% women)</p>			

<p>Outcome 2: The GoM implements GHG DIS and Higher tier methodological approaches to submit accurate GHG emissions inventories reports on regular and timely basis to UNFCCC.</p>	<p>Indicator 1.1: Qualitative rating of the GHG Inventory system in its ability to report emissions for all key category sectors.</p> <p>Based on the GEF 1-10 rating scale, outlined in Annex III of the CBIT's Programming Directions organizations with institutional</p>	<p>Baseline 2.1: 4</p>	<p>End-of-project target 2.1: 7(+3)</p>	<ul style="list-style-type: none"> <li>- CBIT Global Coordination Platform self-assessment tool</li> <li>- Official government journals, publications, documents and news bulletins issued by KASA and other relevant government agencies</li> </ul>	<p>and capacity built; - Delay in implementation of project activities due to impacts of the COVID-19 pandemic.</p>
	<p>Indicator 2.2: %age of government staff that are supposed to use are using the GHG inventory platform in reporting data and estimating GHG Inventory (sex disaggregated)</p>	<p>Baseline 2.2: 0 (no roadmap)</p>	<p>End-of-project target 2.2: 80%</p>	<ul style="list-style-type: none"> <li>- Project terminal evaluation reports</li> <li>- Project Activities reports</li> <li>- M&amp;E report of the program</li> <li>- Regulatory documents</li> <li>- Agreement documents</li> </ul>	
	<p>Indicator 2.2: No. of roadmap with specific actions and KPIs to enhance the GHG Inventory accuracy and reliability</p>	<p>Baseline 2.2: 0 (no roadmap)</p>	<p>End-of-project target 2.2: 1</p>		

	Indicator 2.4: % of women participating in the training/capacity building program for GHG-DIS and preparation of higher tier inventory	Baseline 2.4: 0	End-of-project target 2.4: 50%		
Outcome 3: A tracking system of support needed and received for implementing climate actions endorsed by the NSCCC	Indicator 3.1: No. of templates with sex-disaggregated data developed	Baseline 3.1: 0	End-of-project target 3.1: 5	<ul style="list-style-type: none"> <li>- Official government journals, publications, documents and news bulletins issued by KASA and other relevant government agencies</li> <li>- Project terminal evaluation reports</li> <li>- Project Activities reports</li> <li>- M&amp;E report of the program</li> <li>- Regulatory documents</li> <li>- Agreement documents</li> </ul>	
	Indicator 3.2: No. of persons trained utilizing the template developed by the project	Baseline 3.2: 0	End-of-project target 3.2: 300 (50% women)		

**ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).**

This is one step submission.

**ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:**



No PPG was requested as this is one step submission.

## ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.



This is a national project and will not have any specific location for implementation. Most of the activities will be in Kuala Lumpur. Workshops may be carried out in others cities of Malaysia.

## ANNEX E: Project Budget Table

Please attach a project budget table.

Expenditure Category	Detailed Description	Component (USDeq.)						Total (USDeq.)	Responsible Entity
		Component 1	Component 2	Component 3	Sub-Total	M&E	PMC		(Executing Entity receiving funds from the GEF Agency)[1]
		Outcome 1	Outcome 2	Outcome 3					
Contractual Services ? Individual	Terminal Evaluation				0	30,000		30,000	Executive Entity
Contractual Services ? Company	Web/database development	250,000	100,000	0	350,000			350,000	Executive Entity
	Capacity building and training tools & materials	0	20,000	10,000	30,000			30,000	Executive Entity
	Stakeholders' capacity survey	0	0	22,000	22,000			22,000	Executive Entity
	Workshops and meetings	47,500	15,000	12,500	75,000			75,000	Executive Entity
	Independent financial audits	0	0	0	0		12,000	12,000	Executive Entity
International Consultants	International GHG Energy Modeling expert - International Consultant (IC1)	81,900	0	0	81,900			81,900	Executive Entity
	International GHG AFOLU Modeling expert - International Consultant (IC2)	94,500	0	0	94,500			94,500	Executive Entity

	International MRV Expert - International Consultant (IC3)	207,000	18,000	27,000	252,000			252,000	Executive Entity
	International GHG Inventory Expert - International Consultant (IC4)	0	99,000	0	99,000			99,000	Executive Entity
	International Climate Finance Expert - International Consultant (IC5)	0	0	54,000	54,000			54,000	Executive Entity
<b>Local Consultants</b>	National IT Expert - National Consultant (NC1)	73,500	42,000	14,000	129,500			129,500	Executive Entity
	National MRV Expert - National Consultant (NC2)	117,250	35,000	24,500	176,750			176,750	Executive Entity
	National Gender Expert - National Consultant (NC3)	17,500	0	21,000	38,500	5,250		43,750	Executive Entity
	Mid level National GHG Inventory Expert - National Consultant (NC4)	0	55,000	0	55,000			55,000	Executive Entity
	National Climate Finance Expert - National Consultant (NC5)	0	0	21,000	21,000			21,000	Executive Entity
<b>Salary and benefits / Staff costs</b>	Chief Technical Advisor (CTA)	32,400	21,600	10,800	64,800		64,800	129,600	Executive Entity

	Project Assistant				0		28,800	28,800	Executive Entity
	Project Accounting and Finance Officer				0		21,600	21,600	Executive Entity
<b>Trainings, Workshops, Meetings</b>	Inception Workshop				0	5,000		5,000	Executive Entity
	Final Workshop				0	5,000		5,000	Executive Entity
<b>Travel</b>	Travel costs for staff	0	0	0	0		7,200	7,200	Executive Entity
	Travel costs for national consultants	4,200	2,100	0	6,300			6,300	Executive Entity
	Travel costs for international consultants	15,000	7,500	0	22,500			22,500	Executive Entity
	Travel costs for TWG/SWG members	37,500	25,000	0	62,500			62,500	Executive Entity
<b>Office Supplies</b>	General office supplies				0		3,600	3,600	Executive Entity
<b>Other Operating Costs</b>	Communication, IT, maintenance, etc.				0		7,200	7,200	Executive Entity
	Office furniture's				0		784	784	Executive Entity
<b>Grand Total</b>		<b>978,250</b>	<b>440,200</b>	<b>216,800</b>	<b>1,635,250</b>	<b>45,250</b>	<b>145,984</b>	<b>1,826,484</b>	

**ANNEX F: (For NGI only) Termsheet**

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

NA

**ANNEX G: (For NGI only) Reflows**

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agency is required to quantify any expected financial return/gains/interests earned on non-grant

instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

NA

**ANNEX H: (For NGI only) Agency Capacity to generate reflows**

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies' capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

NA