



Fourth National Communication and 4th Biennial Update Report to the United Nations Framework Convention on Climate Change (UNFCCC)

Part I: Project Information

GEF ID

10441

Project Type

EA

Type of Trust Fund

GET

CBIT

CBIT No

Project Title

Fourth National Communication and 4th Biennial Update Report to the United Nations Framework Convention on Climate Change (UNFCCC)

Countries

Indonesia

Agency(ies)

UNDP

Other Executing Partner(s)

Ministry of Environment and Forestry

Executing Partner Type

Government

GEF Focal Area

Climate Change

Taxonomy

Focal Areas, United Nations Framework Convention on Climate Change, Climate Change, Enabling Activities

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 2

Climate Change Adaptation

Climate Change Adaptation 1

Type of Reports	Submission Date	Expected Implementation Start	Expected Completion Date	Expected Report Submission to Convention
UNFCCC National Communications (NC)	6/30/2023	7/1/2020		
UNFCCC Biennial Update Report (BUR)	6/30/2023	7/1/2020		

Duration

36In Months

Agency Fee(\$)

270,940.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CCM-EA	GET	2,852,000.00	34,186,123.00
Total Project Cost(\$)		2,852,000.00	34,186,123.00

B. Project description summary

Project Objective

The project "Fourth National Communication to the United Nations Framework Convention on Climate Change" is aimed to (1) enable the GoI to design public policies and measures for mitigation and adaptation to address climate change, through (a) assessing environmental, social, and economic impacts of implementing these mitigation and adaptation policies, (b) strengthening of technical capacity and institutional arrangement at national and local levels, and (2) to assist the GoI to carry out all the necessary activities to prepare the NC 4 and BUR 4 to comply with its commitments to the UNFCCC, in agreement with Convention's Articles 4.1 and 12.1.

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co- Financing(\$)
------------------------------	------------------------------	-----------------------------	--------------------------------------	--

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
A. National GHG Inventory 2000-2022 updated	A.1. Established national and local institutional system for developing GHG inventory	<p>A.1.1 Improved guidelines for organizing quality assurance and quality control (QA/QC) of sectoral activity data</p> <p>A.1.2 Protocols designed on the process for collecting, organizing and validating activity data, selecting emission factors and methods, and estimating emission in the sectoral ministries and at sub-category level</p> <p>A.1.3 Improved guidelines for GHG emission estimation and validation (QA/QC)</p> <p>A.1.4 Established institutional system for and developing GHG Inventory in collecting data at sectoral and subnational level and integration with national-level SIGN</p>	180,950.00	3,500,000.00

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
A. National GHG Inventory 2000-2022 updated	A.2. Improved accuracy of national GHG inventory for 2000-2022 using 2006 IPCC Guidelines	<p>A.2.1 Improved quality and level of detail of activity data</p> <p>A.2.2 Developed application program for integrating SIGN and sectoral mitigation measures for improving/updating the activity data to be used in inventory calculation</p> <p>A.2.3 Development of higher-tier emission factors and improvement of the database system of local emission factors</p> <p>A.2.4 Trained technical staff from local governments and relevant sectors on the development of the GHG inventory</p> <p>A.2.5 Published and updated national GHG inventory for sectors: energy, IPPU, AFOLU and waste for the period 2000-2022 with lower uncertainty</p>	175,000.00	3,500,000.00

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
B. Assessment of the impacts and vulnerability to climate change and evaluation of adaptation policies and measures to address climate change, variability and extreme events	B.1. Multi-model ensemble climate change and extreme climate events projections at the national level produced and accessible by public	<p>B.1.1 Integrated system for managing historical climate and multi-model ensemble climate change projections over Indonesia in a grid-based system</p> <p>B.1.2 Improved Information system on Vulnerability Index Data (SIDIK) for defining adaptation actions</p> <p>B.1.3 Projections of extreme climate events at the national level with staff trained and methodology for projections developed</p> <p>B.1.4 Development of web-based information of multi-model ensemble climate change and extreme climate events projections at the national level</p>	250,000.00	3,300,000.00

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
B. Assessment of the impacts and vulnerability to climate change and evaluation of adaptation policies and measures to address climate change, variability and extreme events	B.2. Enhanced local capacity for using climate projection, assessing vulnerability risk and climate change impact	<p>B.2.1 Tools and methods for the assessment of vulnerability, risk, and climate change impact on vulnerable) and staff trained on V&A tools</p> <p>B.2.2 Case studies conducted on gender, climate change vulnerability, risk and impact assessment of vulnerable sectors</p> <p>B.2.3 Developed tools and methods and guidelines for monitoring and evaluation of CCA (climate change adaptation) in specific sectors</p>	300,000.00	4,000,000.00
B. Assessment of the impacts and vulnerability to climate change and evaluation of adaptation policies and measures to address climate change, variability and extreme events	B.3. National and sectoral climate change impacts, vulnerability, risk, and adaptation assessment	<p>B.3.1 Produced national assessment on the impact of climate change scenarios for at least three vulnerable sectors (agriculture, water resources, and health) and national economy with associated capacity building</p> <p>B.3.2 Produced a portfolio of prioritized adaptation options by sectors</p>	520,000.00	4,000,000.00

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
C.GHG mitigation policies and measures to address climate change	C.1. Updated GHG emissions scenarios under BAU from sources and sinks; and reviewed GHG mitigation policies and measures including their macro-economic impacts	<p>C.1.1 Refined integrated model for NDC in projecting GHG emission under BAU and mitigation scenarios and staff trained</p> <p>C.1.2 Adjusted trajectory of GHG emissions and mitigation scenarios with reviewed and adjusted mitigation policies and measures</p> <p>C.1.3 Portfolio of prioritized mitigation options and strengthened capacity of sectoral ministries for adjusting and monitoring actions</p>	311,190.00	4,500,000.00

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
C.GHG mitigation policies and measures to address climate change	C2. Strengthened sectoral and local capacity in measuring the achievement of the implementation of GHG mitigation actions	<p>C.2.1 Refined methodologies and protocol for defining baseline emissions including MRV of the specific GHG mitigation actions with staff trained</p> <p>C.2.2 Improved data management system at the sectoral level with capacity strengthening of officials and non-Party stakeholders and integration with the national GHG Inventory</p>	407,500.00	6,250,000.00
C.GHG mitigation policies and measures to address climate change	C3. Verified achievement of the implementation of mitigation policies and measures in the period 2011-2022	<p>C.3.1 Analyzed mitigation policies and measures implemented in the period 2017-2020 and implementation of NDC in 2020-2022 by national and local governments and other non-Party stakeholder to determine their contributions to the NDC target</p> <p>C.3.2 Analyzed financial scheme for the implementation of the mitigation policies and measures</p>	200,000.00	1,800,000.00

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
D. Description of national circumstances and other relevant information	D1. Updated information for 2010-2022 on national circumstances and national and regional development priorities, as well as key additional information on the capacity, technology and financial needs	<p>D.1.1 Collected and updated information on national circumstances, development priorities, and research activities, and other additional information</p> <p>D.1.2 Knowledge increased and information disseminated on climate change mitigation and adaptation</p>	152,500.00	1,500,000.00
E. Publication and dissemination of the Fourth National Communication and Fourth Biennial Update Report	E1. Submitted Indonesian NC 4 and BUR 4 to UNFCCC	<p>E.1.1 Presented NC 4 and BUR 4 to Government and relevant stakeholders</p> <p>E.1.2 Disseminated information contained in the NC 4 and BUR 4</p> <p>E.1.3 Submitted documents of the NC 4 and BUR 4</p> <p>E.1.4 Communicated materials of the NC 4 and BUR 4 and a brief for the general public including gender focus</p>	155,000.00	1,500,000.00

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Monitoring and evaluation (M&E)	Monitoring and evaluation (M&E)		64,050.00	
Sub Total (\$)			2,716,190.00	33,850,000.00
Project Management Cost (PMC)				
			135,810.00	336,123.00
Sub Total(\$)		135,810.00		336,123.00
Total Project Cost(\$)		2,852,000.00		34,186,123.00

C. Source of Co-Financing for the Project by Name and by Type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Ministry of Environment and Forestry	In-kind	Recurrent expenditures	34,186,123.00
Total Co-Financing(\$)				34,186,123.00

Describe how any "Investment Mobilized" was identified

The Government of Indonesia is dedicated to put a National Communications as an integral element of a continuous process into the development of climate policy in national level, including the commitment to allocate the in-kind funding to achieve project's objective. The investment mobilized refers to recurrent expenditures which are incurred on a regular basis such as employer contribution and does not result in the creation of fixed assets.

D. GEF Financing Resources Requested by Agency, Country and Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)
UNDP	GET	Indonesia	Climate Change	CC STAR Allocation	2,000,000	190,000
UNDP	GET	Indonesia	Climate Change	CC Set-Aside	852,000	80,940
Total Gef Resources(\$)					2,852,000.00	270,940.00

Part II. Enabling Activity Justification

A. ENABLING ACTIVITY BACKGROUND AND CONTEXT

Provide brief information about projects implemented since a country became party to the convention and results achieved

Global environmental issues and previous work

Indonesia signed the Climate Change Convention (UNFCCC, United Nations Framework Convention on Climate Change) in Rio in 1992, which was then ratified in 1994 through Law no. 6/1994. The Director-General of Climate Change is the National Focal Point (NFP) for the UNFCCC, Kyoto Protocol, and the Paris Agreement to the UNFCCC. Indonesia has committed to fully implementing the existing framework for monitoring, reporting, verification (MRV) under the Convention. The National Communications (NC) and Biannual Update Reports (BUR) form part of this MRV framework. Preparation of National Communications is an important document not only for fulfilling commitments under the UNFCCC but also as an instrument of great utility to set national policies and strategies to address climate change at the national level and sub-national level. The Government of Indonesia (GoI) has successfully submitted the First National Communication (NC 1), NC, and NC 3 in 1999, 2011, and 2018. in line with the guidelines for the preparation of BURs contained in Annex III of Decision 2/CP.17, submitted its First BUR in 2014, BUR 2 in 2018, and the BUR 3 is **scheduled for** in 2021.

In September 2015, the GoI submitted the Intended Nationally Determined Contribution (INDC) to the UNFCCC Secretariat. The INDC was then reformulated into the First Nationally Determined Contribution (NDC) in November 2016 along with the ratification of the Paris Agreement through Act 16/2016. The Government committed to reducing CO₂ emissions unconditionally by 29% and conditionally by at least 38% of the Business-as-Usual (BAU) scenario by 2030. The target will be achieved through mitigation actions from the five sectors: energy, industrial processes and product use (IPPU), waste, agriculture, forestry and other land uses.

In the preparation of the previous NCs as well as two BURs, the level of involvement on sectoral agencies has increased significantly. In the NC 1, the involvement of the related ministries was still limited to the facilitation process of collecting data and information required for the national communication. In the NC 2, the sectoral ministries were more involved in the data collection process while the technical work still fully relied on consultants. In the NC 3 and BUR 2, some sectoral ministries (such as Ministry of Environment and Forestry, Ministry of Agriculture, and Ministry of Energy and Mineral Resources and Ministry of Industry) were already involved not only in the process

of data collection but also in some of the technical work, in particular, in estimating emissions and achieving emissions reductions required for the NC as well as the BUR.

B. ENABLING ACTIVITY GOALS, OBJECTIVES, AND ACTIVITIES

The proposal should briefly justify and describe the project framework. Identify also key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable. Describe also how the gender equality and women's empowerment are considered in project design and implementation

Project justification

Since Indonesia has produced three NC reports and 2 BURs (and with BUR 3 planned for 2021), no major barriers are anticipated in producing the next NC and BUR. However, there are some potential gaps and implementation limitations that need to be addressed by the project "Fourth National Communication and Fourth Biennial Update Report to the United Nations Framework Convention on Climate Change (UNFCCC)", hereafter shortly referred to as the "NC 4 Project" or as the "Project". The following table provides a summary of these limitations and the elements of the project strategy that address these gaps and limitations.

Gap and implementation limitation	Project strategy elements	Corresponding project outcome

Gap and implementation limitation	Project strategy elements	Corresponding project outcome
<p><i>Institutional and technical capacity restriction. Limited coordination between sectors and levels of government</i></p> <p>? Adequate institutional arrangements within sectoral ministries for the collection of activity data and preparation of the inventory has not been established fully</p> <p><i>Limited institutional and technical capacity (at sectoral, sub-national level)</i></p> <p>? The process of data collection and management related to the GHG inventory and climate change mitigation and adaptation within the sectors have not been fully institutionalized. There is a need for further enhancement of the technical capacity of the sectoral ministries to have an expanded role in the analysis of collected data;</p> <p><i>Lack of a robust system for GHG inventory processes</i></p> <p>? In some sectors, there is a problem of inconsistencies in some of the activity data due to overlapping of data between institutions, and also as a result of changes in methodology for data collection. Similarly, the role of the sectoral Data Center and Information Agency in some ministries/agencies in providing activity data in the development of the inventory is also limited;</p> <p>? Indonesia's previous use of IPCC default data did not appropriately describe the national conditions and has rather increased uncertainty over national emissions, and its lack of a QA/QC protocol further induce mistakes at the national level and submission of incorrect values for GHG inventories;</p> <p>? Activity data has been mostly generated using the Tier 1 method and applying IPCC default emission factors. To be able to have more Tier 2 and Tier type of analysis of emissions and removals in upcoming reports, here is a need to disaggregate more at sub-sector categories or even at the unit or plant level;</p> <p>? Use of local emission factors need to be expanded and there is no SOP (Standard Operational Procedure) available for adopting new local EF by the inventory developers</p>	<p><i>Institutional arrangements, consultations and coordination: national-sectoral, and sub-national</i></p> <p>? Improvements of the institutional system for the National Inventory will focus on setting up working mechanism between units within each sectoral ministry and coordination between the GHG-responsible divisions within the sectoral ministry and DGCC of MoEF;</p> <p>? Protocols and guidance required for establishing the working relationship within ministries and between ministries in the development of the GHG inventory will be developed</p> <p><i>Capacity building and training;</i></p> <p>? Improvement of GHG accuracy will relate to the enhancement of the technical capacity of the developers of the GHG Inventory (of men and women) in each sectoral ministry and local governments (and institutes/private sector</p> <p><i>More robust GHG inventories with higher-quantity and higher-quality data</i></p> <p>? This project's efforts will be to translate the National GHG Inventory System (SIGN) into the sub-</p>	<p>Outcome A.1</p> <p>Outcome A.1-A.2</p> <p>Outcome A.2</p> <p>Outcome C.1</p>

Gap and implementation limitation	Project strategy elements	Corresponding project outcome
<p><i>Limited institutional and technical capacity (at sectoral, sub-national level). Gaps in institutional coordination between levels</i></p> <p>? There is a need for improving technical capacity among the national, sectoral, and provincial data collection and V&A experts at the provincial level to adopt the most recent models, methodologies, and guidelines. Similarly, there are substantial gaps in technical capacities and local governments and other Non-Party stakeholders, which cause ineffectiveness and inefficiency in data gathering at the local and activity level;</p> <p>? Verification of mitigation and adaptation actions face several constraints. Due to the limited monitoring and evaluation of mitigation actions in verification process, therefore most of reported emissions reduction achievements in NC 3, BUR 1 and BUR 2 have not been verified. The MRV Guidelines for adaptation define six indicators of adaptation achievement, but there is no well-defined institutional arrangement for monitoring, collecting, and recording adaptation actions</p> <p>? Gender inequality is a critical issue with regard to climate change adaptation and it is not yet mainstreamed into local climate adaptation policy</p> <p><i>Limitations in the assessment of vulnerability, extreme events, and adaptation to climate change impacts</i></p> <p>? Guidance for monitoring and evaluating the implementation of adaptation actions and also measuring their impact is not fully available;</p> <p>? Limited studies on climate change impact are available, but previous assessments only employed historical climate and used climate-related disaster information to identify the impacts of climate change and their implications to specific sectors. The use of climate projections for assessing the impact on sectors at the national level is still limited</p>	<p><i>Institutional arrangements, consultations and coordination: national-sectoral, and sub-national. Improved capacity and training:</i></p> <p>? Development institutional arrangements for identifying the basis for cooperation and information exchange and strengthening the link between line ministries and local governments and with MoEF for reducing GHG emission, adaptation plans, and mitigation actions</p> <p>? The Project's interventions are particularly designed to improve the capacity of technical staff of the line ministries and local governments in the development of MRV, in close coordination with the CBIT project</p> <p><i>Improved assessment of vulnerability, extreme events and adaptation to climate change impacts</i></p> <p>? An integrated system for managing multi Multi-model ensemble climate change and extreme climate events projections at the national level will be developed and made accessible. The projections will be integrated with the existing system known as Vulnerability Index Data Information System (or SIDIK) which allows public</p>	<p>Outcome B.2-B.3</p> <p>Outcome B.1-B.2</p> <p>Outcome B.2-B.3</p>

Gap and implementation limitation	Project strategy elements	Corresponding project outcome
<p><i>Institutional and technical capacity restrictions; Limitations to the effective implementation of climate change policy and measures</i></p> <p>? There is a need to enhance the capacity of sectoral ministries and local government capacity in measuring the achievement of the implementation of mitigation policy and measures and establishing a clear connection between the mitigation and the GHG Inventory;</p> <p>? There is no clear understanding by local government entities (and sectoral ministries) on how emission reduction targets with respect to baseline values can be translated into mitigation policies and measures;</p> <p>? There is a need to increase the contribution of the non-Party stakeholders in meeting the NDC emission reduction targets that will be included in the next submission of NC and BUR.</p>	<p><i>Prioritization of policies and measures</i></p> <p>? The Project will support verification of emissions reduction achievements that have not been verified, and analyze macro-economic and socio-economic impacts and measure the contribution of non-Party stakeholders (NPS). The Project will assess the progress of the mitigation policies and mitigations achievement implemented between 2016 and 2020 by national and local governments to determine their contributions to the NDC target (including gender mainstreaming climate change mitigation);</p> <p>? The Project will focus on updating the GHG emission trajectory toward the NDC target and improvement of sectoral ministries and local government understanding on how emission reduction target in connection with the baseline is translated into mitigation actions;</p> <p>? The project will endeavor the achievement of mitigation actions under the NDC could be compared with the GHG emission reduction from the difference of GHG emission trajectory and the BAU baseline</p> <p>? The Project will assist (national and local)</p>	<p>Outcome C.1-C.2</p>

Gap and implementation limitation	Project strategy elements	Corresponding project outcome
<p><i>Gaps in information and awareness</i></p> <p>? Local communities (engaging men and women) and non-government organizations (including women's organizations) need to play increasingly important roles in implementing pilot climate actions and in data collection;</p> <p>? Encouraging participation and input from the public, including communities and academia, will enable a better holistic understanding of conditions;</p> <p>? The role of the private sector as Non-Party stakeholders (NPS) in contributing to the achievement of the NDC target needs to be strengthened;</p> <p>? ? .</p>	<p><i>Information dissemination and consultation; Updated information in and support to submission of NC 4 and BUR 4</i></p>	All outcomes
	<p>? Expert consultations and engagement will be carried out on a continuous basis with all the institutions involved in the preparation of the NC, including the local government and other, non-Party stakeholders;</p>	All outcomes
	<p>? The project's interventions are particularly designed to improve the capacity of technical staff of the line ministries, research institutions, and local governments in the development of GHG inventory, MRV, climate modeling and statistical climate downscaling, and vulnerability and climate impact assessments</p>	Outcome D.1 Outcome E.1
	<p>? The Project aims at improving the knowledge and awareness of the opportunities for Indonesia for reducing GHG emissions and adapt to climate change impacts.</p>	
	<p>? Media campaign and communication strategy for public and youth-related to climate change mitigation and adaptation in the light NDC and Paris Target</p>	Outcome D.1 Outcome E.1
	<p>? Brief of NC 4 and BUR 4 for the general public (including gender focus); in particular, there will be dissemination of</p>	

Description of the project framework

This section describes in detail activities under each output of the five components of the Project and which GEF Agency is responsible for which Outcome. A more detailed description of the outputs and activities is provided in the UNDP Project Document (section 4.2; and the results framework with outcome indicators and target value in its section 5).

Component A National GHG Inventory 2000-2022 updated

Gap and implementation limitation	Project strategy elements	Corresponding project outcome

Gap and implementation limitation	Project strategy elements	Corresponding project outcome
<p><i>Institutional and technical capacity restriction. Limited coordination between sectors and levels of government</i></p> <p>? Adequate institutional arrangements within sectoral ministries for the collection of activity data and preparation of the inventory has not been established fully</p> <p><i>Limited institutional and technical capacity (at sectoral, sub-national level)</i></p> <p>? The process of data collection and management related to the GHG inventory and climate change mitigation and adaptation within the sectors have not been fully institutionalized. There is a need for further enhancement of the technical capacity of the sectoral ministries to have an expanded role in the analysis of collected data;</p> <p><i>Lack of a robust system for GHG inventory processes</i></p> <p>? In some sectors, there is a problem of inconsistencies in some of the activity data due to overlapping of data between institutions, and also as a result of changes in methodology for data collection. Similarly, the role of the sectoral Data Center and Information Agency in some ministries/agencies in providing activity data in the development of the inventory is also limited;</p> <p>? Indonesia's previous use of IPCC default data did not appropriately describe the national conditions and has rather increased uncertainty over national emissions, and its lack of a QA/QC protocol further induce mistakes at the national level and submission of incorrect values for GHG inventories;</p> <p>? Activity data has been mostly generated using the Tier 1 method and applying IPCC default emission factors. To be able to have more Tier 2 and Tier type of analysis of emissions and removals in upcoming reports, here is a need to disaggregate more at sub-sector categories or even at the unit or plant level;</p> <p>? Use of local emission factors need to be expanded and there is no SOP (Standard Operational Procedure) available for adopting new local EF by the inventory developers</p>	<p><i>Institutional arrangements, consultations and coordination: national-sectoral, and sub-national</i></p> <p>? Improvements of the institutional system for the National Inventory will focus on setting up working mechanism between units within each sectoral ministry and coordination between the GHG-responsible divisions within the sectoral ministry and DGCC of MoEF;</p> <p>? Protocols and guidance required for establishing the working relationship within ministries and between ministries in the development of the GHG inventory will be developed</p> <p><i>Capacity building and training;</i></p> <p>? Improvement of GHG accuracy will relate to the enhancement of the technical capacity of the developers of the GHG Inventory (of men and women) in each sectoral ministry and local governments (and institutes/private sector</p> <p><i>More robust GHG inventories with higher-quantity and higher-quality data</i></p> <p>? This project's efforts will be to translate the National GHG Inventory System (SIGN) into the sub-</p>	<p>Outcome A.1</p> <p>Outcome A.1-A.2</p> <p>Outcome A.2</p> <p>Outcome C.1</p>

Gap and implementation limitation	Project strategy elements	Corresponding project outcome
<p><i>Limited institutional and technical capacity (at sectoral, sub-national level). Gaps in institutional coordination between levels</i></p> <p>? There is a need for improving technical capacity among the national, sectoral, and provincial data collection and V&A experts at the provincial level to adopt the most recent models, methodologies, and guidelines. Similarly, there are substantial gaps in technical capacities and local governments and other Non-Party stakeholders, which cause ineffectiveness and inefficiency in data gathering at the local and activity level;</p> <p>? Verification of mitigation and adaptation actions face several constraints. Due to the limited monitoring and evaluation of mitigation actions in verification process, therefore most of reported emissions reduction achievements in NC 3, BUR 1 and BUR 2 have not been verified. The MRV Guidelines for adaptation define six indicators of adaptation achievement, but there is no well-defined institutional arrangement for monitoring, collecting, and recording adaptation actions</p> <p>? Gender inequality is a critical issue with regard to climate change adaptation and it is not yet mainstreamed into local climate adaptation policy</p> <p><i>Limitations in the assessment of vulnerability, extreme events, and adaptation to climate change impacts</i></p> <p>? Guidance for monitoring and evaluating the implementation of adaptation actions and also measuring their impact is not fully available;</p> <p>? Limited studies on climate change impact are available, but previous assessments only employed historical climate and used climate-related disaster information to identify the impacts of climate change and their implications to specific sectors. The use of climate projections for assessing the impact on sectors at the national level is still limited</p>	<p><i>Institutional arrangements, consultations and coordination: national-sectoral, and sub-national. Improved capacity and training:</i></p> <p>? Development institutional arrangements for identifying the basis for cooperation and information exchange and strengthening the link between line ministries and local governments and with MoEF for reducing GHG emission, adaptation plans, and mitigation actions</p> <p>? The Project's interventions are particularly designed to improve the capacity of technical staff of the line ministries and local governments in the development of MRV, in close coordination with the CBIT project</p> <p><i>Improved assessment of vulnerability, extreme events and adaptation to climate change impacts</i></p> <p>? An integrated system for managing multi Multi-model ensemble climate change and extreme climate events projections at the national level will be developed and made accessible. The projections will be integrated with the existing system known as Vulnerability Index Data Information System (or SIDIK) which allows public</p>	<p>Outcome B.2-B.3</p> <p>Outcome B.1-B.2</p> <p>Outcome B.2-B.3</p>

Gap and implementation limitation	Project strategy elements	Corresponding project outcome
<p><i>Institutional and technical capacity restrictions; Limitations to the effective implementation of climate change policy and measures</i></p> <p>? There is a need to enhance the capacity of sectoral ministries and local government capacity in measuring the achievement of the implementation of mitigation policy and measures and establishing a clear connection between the mitigation and the GHG Inventory;</p> <p>? There is no clear understanding by local government entities (and sectoral ministries) on how emission reduction targets with respect to baseline values can be translated into mitigation policies and measures;</p> <p>? There is a need to increase the contribution of the non-Party stakeholders in meeting the NDC emission reduction targets that will be included in the next submission of NC and BUR.</p>	<p><i>Prioritization of policies and measures</i></p> <p>? The Project will support verification of emissions reduction achievements that have not been verified, and analyze macro-economic and socio-economic impacts and measure the contribution of non-Party stakeholders (NPS). The Project will assess the progress of the mitigation policies and mitigations achievement implemented between 2016 and 2020 by national and local governments to determine their contributions to the NDC target (including gender mainstreaming climate change mitigation);</p> <p>? The Project will focus on updating the GHG emission trajectory toward the NDC target and improvement of sectoral ministries and local government understanding on how emission reduction target in connection with the baseline is translated into mitigation actions;</p> <p>? The project will endeavor the achievement of mitigation actions under the NDC could be compared with the GHG emission reduction from the difference of GHG emission trajectory and the BAU baseline</p> <p>? The Project will assist (national and local)</p>	<p>Outcome C.1-C.2</p>

Gap and implementation limitation	Project strategy elements	Corresponding project outcome
<p><i>Gaps in information and awareness</i></p> <p>? Local communities (engaging men and women) and non-government organizations (including women's organizations) need to play increasingly important roles in implementing pilot climate actions and in data collection;</p> <p>? Encouraging participation and input from the public, including communities and academia, will enable a better holistic understanding of conditions;</p> <p>? The role of the private sector as Non-Party stakeholders (NPS) in contributing to the achievement of the NDC target needs to be strengthened;</p> <p>? ? .</p>	<p><i>Information dissemination and consultation; Updated information in and support to submission of NC 4 and BUR 4</i></p> <p>? Expert consultations and engagement will be carried out on a continuous basis with all the institutions involved in the preparation of the NC, including the local government and other, non-Party stakeholders;</p> <p>? The project's interventions are particularly designed to improve the capacity of technical staff of the line ministries, research institutions, and local governments in the development of GHG inventory, MRV, climate modeling and statistical climate downscaling, and vulnerability and climate impact assessments</p> <p>? The Project aims at improving the knowledge and awareness of the opportunities for Indonesia for reducing GHG emissions and adapt to climate change impacts.</p> <p>? Media campaign and communication strategy for public and youth-related to climate change mitigation and adaptation in the light NDC and Paris Target</p> <p>? Brief of NC 4 and BUR 4 for the general public (including gender focus); in particular, there will be dissemination of</p>	<p>All outcomes</p> <p>All outcomes</p> <p>Outcome D.1</p> <p>Outcome E.1</p> <p>Outcome D.1</p> <p>Outcome E.1</p>

<i>Outcome</i>	<i>Outputs</i>
A.1 Established national and local institutional system for developing GHG inventory	<p>A.1.1 Improved guidelines for organizing quality assurance and quality control (QA/QC) of sectoral activity data</p> <p>A.1.2 Protocols designed on the process for collecting, organizing, and validating activity data, selecting emission factors and methods, and estimating emission in the sectoral ministries and at the sub-category level</p> <p>A.1.3 Improved guidelines for GHG emission estimation and validation (QA/QC)</p> <p>A.1.4 Established institutional system for developing GHG Inventory in collecting data at sector and subnational level and integration with national-level SIGN</p>

QA/QC comprises of several interrelated activities, i.e. data collection and archiving procedures, manpower (for data collection and quality control, emission calculation, inventory quality assurance and archiving), institutional arrangement (who is doing what), and infrastructure (for national and sectoral GHG emission inventory systems). Data QC and validation started by MoEF as part of the previous NCs will be developed further in focus group discussions involving line ministries/institutions and other stakeholders (sub-national government, BPS, private sector, university/research institutions). The GHG inventory in NC 4 will cover national and sub-national inventory for several sectors/sub-sectors and even activity level. Therefore, it is necessary to establish institutional arrangements among parties that will be involved in the implementation of QA/QC systems and procedures.

The NC4 Project will strengthen the mechanism of data collection, control, verification, and archiving/reporting from line (sectoral) ministries/institutions to MoEF. Another activity will review the existing situation and recommend protocols on the process for collecting, organizing, and validating activity data, selecting emission factors and methods, and estimating emission in the sectoral ministries at more refined sub-categories.

A review of the existing system for estimating and validating GHG emissions will be carried out by MoEF, sectoral ministries/institutions, and sub-national government/institutions will be carried out (supported by experts made available by the Project). The results of the review will be used to improve GHG emission estimation and validation systems. Thus, the mechanism for data access, collection and control, and GHG emission estimates within related line ministries will be developed internally by line ministry/institution and sub-national government.

The Ministry of Environment and Forestry has established a national GHG inventory called *Sistem Inventarisasi GRK Nasional* or National GHG Inventory System (referred to as SIGN). Through this system, the Ministry of Environment and Forestry can monitor the flow of (a) data/information collection and analysis and (b) preliminary GHG calculation from sub-national level (local government), other ministries/ government agencies, and non-government (including private sector) to the central office (at Ministry of Environment and Forestry). Project activities include the establishment of an institutional arrangement at sectoral ministries for developing GHG Inventory and for collecting GHG inventory and CC mitigation data, for developing GHG Inventory at sub-national (district and provincial level) as well as for their integration with SIGN. The arrangement will also cover data collection, control, verification, and archiving/reporting from line ministries and sectoral institutions.

<i>Outcome</i>	<i>Outputs</i>
A.2 Improved accuracy of national GHG inventory for 2000-2022 using 2006 IPCC Guidelines	<p>A.2.1 Improved quality and level of detail of activity data</p> <p>A.2.2 Developed application program for integrating SIGN and sectoral mitigation measures for improving/up-dating the activity data to be used in inventory calculation</p> <p>A.2.3 Development of higher-tier emission factors and improvement of the database system of local emission factors</p> <p>A.2.4 Trained technical staff from local governments and relevant sectors on the development of the GHG inventory</p> <p>A.2.5 Published and updated national GHG inventory for sectors: energy, IPPU, AFOLU and waste for the period 2000-2022 with lower uncertainty</p>

Improvement of activity data quality and the use of local emission factors will eventually improve the accuracy of the GHG emission inventory. In the previous inventory reports, GHG emissions are presented at the sector level. In order to have more comprehensive information regarding GHG emissions, it is considered necessary to develop inventories at sub-sector, unit or plant categories. Also, there is a need to add sub-categories that had been covered in the previous National GHG Inventory.

The GHG Inventory will be also improved by connecting mitigations with the GHG Inventory system (SIGN) through an application program for integrating SIGN with mitigation measures from sectoral line ministries and local government and other non-Party stakeholders.

The emission factors (EFs) used for the development of the inventory are mostly IPCC defaults (Tier 1 method). Good practices suggest that at least for some key categories higher-tier emission factors should be used for improving the accuracy and reliability of the inventory. Some sectors have developed local emission factors, for example, EFs for coal and for land-use change and forestry, which were included in the database on emission factors. However, these local emission factors have not been used yet as there is no SOP (Standard Operational Procedure) available for adopting new local EF by the inventory developers. Local emission factors will be developed for AFOLU and waste sectors so that higher-tier methodologies can be used (Tier 2 or 3) for the GHG inventory

It is important to strengthen the capacity of technical staff from relevant sectors in developing GHG inventories to sub-national level actors. This output will also include the development of tools and guidelines on data and emission factors to be used for training and coaching of key stakeholder to learn how to use these methodologies or understand the data so that they can utilize the information in their daily work to ensure that the capacity is developed and retained. The inventory training will cover methodologies to estimate the GHG emission (including the determination of Tier 1, 2, 3 approaches), determination of key categories of sources of GHG emissions (KCA, key category analysis), determination of accuracy level (uncertainty analysis), development (collecting and compiling) of activity data, conversion factor used in the preparation of activity data, selection of GHG emission factor, institutional arrangement for GHG emission inventory as well as QA/QC procedure, reporting format and mechanism, etc.

Finally, the outcome includes the elaboration of GHG inventory documents and presenting these to all the stakeholders, following the latest IPCC GHG Inventory Guidelines (2006) and Good Practice Guidance (GPG) recommended by the UNFCCC. The activities will incorporate the results of the other Outputs with a shift from Tier 1 (and Tier 2) GHG category analysis towards more Tier 2 (and Tier 3) analysis. The GHG emissions inventory 2000-2022 will be incorporated in the BUR 4 and NC 4 and officially published.

Component B Assessment of the impacts and vulnerability to climate change and evaluation of adaptation policies and measures to address climate change, variability, and extreme events

<i>Outcome</i>	<i>Outputs</i>

<p>B.1 Multi-model ensemble climate change and extreme climate events projections at the national level produced and accessible by public</p>	<p>B.1.1 Integrated system for managing historical climate and multi-model ensemble climate change projections over Indonesia in a grid-based system</p> <p>B.1.2 Improved Information system on Vulnerability Index Data (SIDIK) for defining adaptation actions</p> <p>B.1.3 Projections of extreme climate events at the national level with staff trained and methodology for projections developed</p> <p>B.1.4 Development of web-based information of multi-model ensemble climate change and extreme climate events projections at the national level</p>
---	---

This Component will have an integrated database system for managing the historical climate and climate change projection from the NC3 and other sources such as CORDEX, to be accessible for the public and integrated with SIDIK (Information System for Vulnerability Index Data). One output aims to improve the system for managing historical climate and multi-model ensemble climate change prediction (1961-2035) and climate change projections (2035 -2100) over Indonesia in a grid-based system with a finer resolution and made accessible in a web-based system to the public. Climate change scenarios will be used to provide updated climate change projections. Another output will be an improved Information system on Vulnerability Index Data (SIDIK) focused on a meso to local scale for defining adaptation actions with the inclusion of historical information on climate extreme events, impacts, and responses. Technical assistance will be provided to develop a methodology for the projection of extreme climate events in relation to climate change supported by geo-physical and socio-economic data and information

Climate model outputs will be promoted to be available for supporting climate change vulnerability studies in Indonesia. The results of this ensemble climate modeling will be promoted to be available for supporting the climate change vulnerability studies in Indonesia. It is expected to allow the assessment of climate change impacts, vulnerability, and adaptation at the district or provincial level on the basis of finer resolution. The climate data can also be used to refine climate thresholds for climate risk assessment.

<i>Outcome</i>	<i>Outputs</i>
----------------	----------------

<p>B.2 Enhanced local capacity for using climate projection, assessing vulnerability risk and climate change impact</p>	<p>B.2.1 Tools and methods for the assessment of vulnerability, risk, and climate change impact on vulnerable) and staff trained on V&A tools</p> <p>B.2.2 Case studies conducted on gender, climate change vulnerability, risk and impact assessment of vulnerable sectors</p> <p>B.2.3 Developed tools and methods and guidelines for monitoring and evaluation of CCA (climate change adaptation) in specific sectors</p>
---	--

The available systems, such as (SIDIK), has not been optimally used. The outcome aims to develop tools and methods for the assessment of vulnerability, risk, and climate change impact on vulnerable and to enhance the capacity of local scientists to use tools including conducting case studies on climate change vulnerability, risk and impact assessment on vulnerable sectors. The Project will help to further develop tools and methods for the assessment of vulnerability, risk, and climate change impact on vulnerable sectors (agriculture, fisheries, coastal, water resources, forest, health) using multi-model climate projections from B.1.1. Local scientists will be trained on the use of climate change vulnerability and impact assessment tools.

Five case studies will be elaborated on climate change vulnerability, risk, and impact assessment on vulnerable sectors (agriculture, fisheries, coastal water resources) including socio-economics analysis and gender perspectives, based on local prioritization with the involvement of trained local scientists. Vulnerability maps will be developed for every case study. These studies will help to can support local governments to develop appropriate adaptation policies and actions and help their communities adapt to the effects of climate change.

<i>Outcome</i>	<i>Outputs</i>
<p>B.3 National and sectoral climate change impacts, vulnerability, risk, and adaptation assessment</p>	<p>B.3.1 Produced national assessment on the impact of climate change scenarios for at least three vulnerable sectors (agriculture, water resources, and health) and the national economy with associated capacity building</p> <p>B.3.2 Produced portfolio of prioritized adaptation options by sectors</p>

A national assessment will be carried out on the impact of climate change scenarios for at least three vulnerable sectors (agriculture, water resources, and health) using the climate change projections of Output B.1.1 integrated with the vulnerability indexes (such as SIDIK, output B1.2) for supporting adaptation policy-making process. A second activity will look at the impact on the national economy under different climate scenarios and implications for achieving the NDC targets. The Project will provide training of technical government staffs (including at least 30% women from sectoral and local level) in using SIDIK and climate change impact assessment for the development of climate change adaptation policies and measures. This will include training on tools and methods and guidelines (of Output B.2.3) for monitoring and evaluation of CCA (climate change adaptation) action undertaken in the vulnerable sectors (as mentioned in Output B.3.1) and on their mainstreaming. Based on the results of technical studies of Outcomes B2 and B3, and taking into a review of the information that has been generated in the previous NCs, the Outcome envisages the development of a pool of prioritized adaptation options by sectors that will include the costs, feasibility, barriers, and strategies for implementation.

Component C GHG mitigation policies and measures to address climate change

<i>Outcome</i>	<i>Outputs</i>
C.1 Updated GHG emissions scenarios under BAU from sources and sinks; and reviewed GHG mitigation policies and measures including their macro-economic impacts	<p>C.1.1 Refined integrated model for NDC in projecting GHG emission under BAU and mitigation scenarios and staff trained</p> <p>C.1.2 Adjusted trajectory of GHG emissions and mitigation scenarios with reviewed and adjusted mitigation policies and measures</p> <p>C.1.3 Portfolio of prioritized mitigation options and strengthened capacity of sectoral ministries for adjusting and monitoring actions</p>

In the previous NC, an integrated model (tool) for projecting GHG emissions under the BAU and mitigation scenarios, including the macroeconomic assessment of GHG mitigation policies and measures, was used. This integrated model will be refined in projecting GHG emission under BAU and mitigation scenarios including macroeconomic assessment of the impact of GHG mitigation measures. Staff will be trained in applying the refined integrated model for developing alternative emission trajectories under the BAU and mitigation scenarios as defined in the NDC.

The NC 4 Project will support a review of implemented sectoral mitigation policies and measures to have a complete picture of the achievement of the NDC target. Using the results of these reviews and Output C.1.1), the trajectory of GHG emission projections (from sources and sinks) will be adjusted

under business-as-usual (BaU) and mitigation scenarios covering the period 2010-2050 and in line with the 2050 Long Term Strategies for Low Carbon and Climate Resilience Development (LTS-LCCR) . Mitigation policy and measures will be assessed and prioritized by sector, taking into account best available technology (national and international); needs for capacity building, technology transfer, R&D activities; barriers and limitations of mitigation actions; and cost-benefit analysis of each mitigation option. The technical assistance includes capacity strengthening of line ministries and the establishment for monitoring the financial aspects (budget plan and realization) of mitigation actions. The NC 4 will explore alternate or additional mitigation opportunities, taking into account NDC and the NDC Road Map.

<i>Outcome</i>	<i>Outputs</i>
C.2 Strengthened sectoral and local capacity in measuring the achievement of the implementation of GHG mitigation actions	<p>C.2.1 Refined methodologies and protocol for defining baseline emissions including MRV of the specific GHG mitigation actions with staff trained</p> <p>C.2.2 Improved data management system at the sectoral level with capacity strengthening of officials and non-Party stakeholders and integration with the National GHG Inventory</p>

For GHG emission mitigation, measurement is commonly covered under the MRV (Measurement, Reporting, and Verification) system and such a MRV system was started under the Third NC and will be strengthened with support from the NC 4 Project. The monitoring, reporting, and verification (MRV) of mitigation actions face several constraints because many mitigation actions implemented by local government or other non-Party stakeholders, including the impact of mitigation policies on emission reduction, cannot be captured or measured well. Contribution of non-Party stakeholders (NPS) in meeting the NDC emission reduction targets will be included in the submission of the NC4 and BUR 4.

It is crucial to have clear guidelines and regulations on the process of reporting mitigation activities to the DGCC and how it links with the National GHG Inventory System (SIGN). It is important to develop an understanding of how mitigation policies and measures will impact directly or indirectly the activity data (AD) and emission factors (EF) and how the mitigation policies and measures can be defined and developed, taking into account the baseline and emission reduction target as well as the approaches and methods for measuring mitigation impacts.

The National Registry System (SRN) and the MRV systems which have been set up by the national government are designed to capture mitigation measures implemented by all stakeholders including the non-Party stakeholders. However, the use of the systems is still limited. The Project will help improve

data management systems at the sectoral level for handling data and information from various programs related to climate change mitigation, including those from non-Party stakeholders and the integration of sectoral data collection and management system with the National Greenhouse Gas Inventory (NGHGI) and mitigation actions.

<i>Outcome</i>	<i>Outputs</i>
C.3 Verified achievement of the implementation of mitigation policies and measures in the period 2017-2022	<p>C.3.1 Analyzed mitigation policies and measures implemented in the period 2017-2020 and implementation of NDC in 2020-2022 by national and local governments and other non-Party stakeholders to determine their contributions to the NDC target</p> <p>C.3.2 Analyzed financial scheme for the implementation of the mitigation policies and measures</p>

One output will aim at conducting an analysis of climate change mitigation documents to identify issues and existing gaps in meeting the targets of the policies during 2011-2022, and then use them to translate the issues into more detailed and useful guidance for stakeholders to consider, plan and implement policies. One activity will cover mitigation policies and measures adopted by the national and local governments with a particular focus on implementing NDC achievements in 2020-2022 (noting that pre-2020 will be reported in the BUR 3 to be published in 2021). The Output's report will present the responsibilities and roles of each sector in implementing the mitigation policies including constraints associated with the activities and programs. Another activity provides special attention to the development and updating of methodologies for assessing the impact of the implementation of mitigation measures by non-Party stakeholders (e.g. businesses) on the emission reduction.

The Output C.3.2 will analyze the potential technology transfer and financial support needs of the mitigation policies and measures analyzed in Output C.3.1. These will be documented by considering macroeconomic indicators and GHG mitigation potential. Based on these assessments, the options for setting up a financial scheme and its modalities for the implementation of the mitigation policies and measures will be reviewed. The purpose of such a scheme is to finance those mitigation actions that are important for achieving NDC goals but find difficulties in getting sufficient public or private finance.

Component D Description of national circumstances and other relevant information

<i>Outcome</i>	<i>Outputs</i>
-----------------------	-----------------------

D.1 Updated information on national circumstances and national and regional development priorities, as well as key additional information on the capacity, technology, and financial needs	D.1.1 Collected and updated information on national circumstances, development priorities, and research activities, and other additional information D.1.2 Knowledge increased and information disseminated on climate change mitigation and adaptation
--	--

The Component will produce reports on data and information on national circumstances and national and subnational development priorities in supporting efforts to meet the NDC target (including gender analysis), systematic observations and research activities on climate change adaptation; needs and constraints for capacity development, technology, and financial support by sector to implement the NDC; financial resources and technical support for the preparation of the National Communication; and climate change awareness-raising and education. Furthermore, the component will have activities on the design and implementation of a media campaign and communication strategy for public and youth-related to climate change mitigation and adaptation; sharing of knowledge among national and local stakeholders on lessons learned from the implementation of climate change adaptation and mitigations.

Component E Publication and dissemination of the Fourth National Communication and Fourth Biennial Update Report

<i>Outcome</i>	<i>Outputs</i>
E.1 Submitted Indonesian NC 4 and BUR 4 to UNFCCC	E.1.1 Presented NC 4 and BUR 4 to Government and relevant stakeholders E.1.2 Disseminated information contained in the NC 4 and BUR 4 E.1.3 Submitted documents of the NC 4 and BUR E.1.4 Communicated materials of the NC 4 and BUR 4 and a brief for the general public including gender focus

The last component focuses on the publication and dissemination of the NC 4 and BUR 4 to local governments and other stakeholders in 2023. This will include dissemination of information contained in the NC 4 and BUR 4, development of communicated materials of NC4 and BUR 4, and briefs for the general public including gender focus, and submission of NC 4 and BUR 4 in English to the UNFCCC. The NC 4 and BUR 4 are proposed to be combined into *one* publication to be published by the end of 2023. As part of the Enhanced Transparency Framework (ETF) under the Paris Agreement, the first Biennial Transparency Report needs to be submitted no later than 31 December 2024. Compared to BUR reporting, BTR reporting has some differences and enhancements but also many similarities. Given the coincidence in timing between submitting BUR (under the existing MRV arrangements) and BTR (under the new ETF), the outputs of the Project will help to expand BUR into BTR reporting and provide a firm basis for the formulation of Indonesia's first BTR. The Project's outputs will also be helpful for formulation of Indonesia's Nationally Determined Contribution (NDC) in general.

Partnerships and cooperation

The NC 4 Project will focus on Indonesia's reporting (National Communications and BURs) and will provide synergies with several planned or ongoing climate change management and capacity-strengthening projects. The *CBIT (Capacity-Building Initiative for Transparency)* is a capacity-building project being proposed by the Directorate General Climate Change, MoEF, to be financed by the GEF. The activities proposed under the CBIT consist of four components, namely (i) national institutions strengthening for climate transparency, (ii) development and establishment of a robust system for GHG Inventory to MRV emissions in compliance with PA, (iii) strengthening NDC implementation, and tracking progress, and (iv) gender equality, knowledge sharing, regional network, monitoring, and public awareness.

Alignment of the project design with the original PIF

In aligning activities under CBIT component 1 and 2 with the activities under component A1 and A2 of the NC 4 Project, the focus of the implementation of the activities for the CBIT will be at the national level (sectoral ministries), while the NC 4 Project's focus will be at the local level (provincial and district governments) and non-Party Stakeholders (NPS). A similar approach is taken concerning Component 3 of the CBIT on the tracking progress and the Outcomes C.2 and C.3 of NC 4 on

measuring impact of mitigation policies and measures. The CBIT will focus on strengthening the capacity at sectoral ministries while NC 4 will be focused on the non-Party stakeholders.

Details per output on the links between CBIT and NC 4 are described per outcome in the UNDP Project Document in Section 4.1. To avoid possible overlap, the list of outputs of the GEF-approved PIF was reviewed and adjusted where needed. *Annex A to the CEO Endorsement Request document provides further details on changes in the alignment of the project design with the original PIF.*

Key stakeholders

(Identify also key stakeholders involved in the project including the private sector, civil society organizations, indigenous peoples and local communities, and their respective roles, as applicable)

Many governmental and other stakeholders involved in the preparation of the NC and BUR (i.e., line ministries, subnational governments, private sector, NGOs, CSOs) will benefit directly. How stakeholders will be engaged is indicated in the table below. UNDP will continue to engage with these stakeholders throughout the project period. A detailed Stakeholder Engagement Plan is provided in the Annex H of the UNDP Project Document.

Stakeholder	Role	Means of engagement
Sectoral Ministries and local governments	Sectoral ministries are responsible for making decisions and planning. They are directly involved in the development of GHG inventory and implementation of mitigation and adaptation policies and measures and monitor the progress and impact of the implementation of the measures.	Engagement in the implementation of mitigation, adaptation activities, and the development of GHG Inventory and data collection and management.

Stakeholder	Role	Means of engagement
Private Sector	The role of the private sector as ?non-Party stakeholders? (NPS) in contributing to the achievement of NDC target is crucial. Without the involvement of the NPS, it is very difficult for the government to meet the NDC target. Awareness activities and capacity development for the private sector will encompass integrating climate change issues into their business and CSR activities and also developing a monitoring system for evaluating the contributions on the privates in meeting the NDC target.	Engagement in capacity building activities and implementation of mitigation, adaptation activities through the social corporate responsibilities and their compliance with the regulations
Local communities and non-government organizations	Local communities and non-government organizations are ?non-Party stakeholders? that will play roles in implementing pilot activities and data collection. Because the NC 4 would entail conforming to a Tier 2-3 methodological approach, it is highly important to involve within the various technical working groups all stakeholders, including civil society actors (women?s groups, private sector, selected NGOs, local community representatives, etc.). The Project will include training activities to bring their understanding of the issues to a level where they can follow the discussions and provide valuable inputs to the work of the working groups	Engagement in capacity building and the implementation of pilot activities
Academic Institutions and universities	These agencies will play a significant role in the project implementation in designing and implementing capacity building activities for adaptation and mitigation and supporting the implementation of pilots as well as research for the development of local emission factors	Implementation of capacity building activities and the development of strategies and scenarios for low carbon and climate resilience development

Gender

(Describe also how the gender equality and women?s empowerment are considered in project design and implementation)

The Project intends to mainstream gender into the NC formulation activities. The Project will follow GEF and UNFCCC guidance to advance gender equality in the projects and program. The project will carry out gender assessment to ensure that men and women participate in activities, address gaps in achieving gender equality, especially in the context of mitigation and adaptation planning, policymaking and the implementation. The project will ensure that women will gain equal opportunities to engage in the implementation of the project activities starting from the project preparation, implementation, and evaluation. At the end of the Project, it is expected that women will be more empowered with the knowledge, tools, and skills gained through training and capacity building activities under the NC 4 so that they will benefit themselves as individuals and as community members in addressing the climate change. For this reason, the Project will prepare actions to tackle gender barriers for women to participate in project activities. To address gender barriers, the strategies can be defined through the process of development Gender Action Plan (which is described in Annex G of the UNDP Project Document).

Gender analysis in the context of climate change impact will be carried out to describe the variations in gender conditions and socio-economic aspects by investigating women's education and literacy, livelihoods, access to and control over resources, health, mobility, status in female-headed households, and their roles in decision making. The update of the National Circumstances chapter of the NC 4/BUR 4 will consider gender-disaggregated data where possible in order to better understand how the different roles of men and women in social and economic circumstances may affect Indonesia's ability to deal with climate change.

Knowledge management

The project team will ensure extraction and dissemination of lessons learned and good practices to enable adaptive management and upscaling or replication at local and global scales. Results will be disseminated to targeted audiences through relevant information sharing fora and networks. The project will contribute to scientific, policy-based and/or any other networks as appropriate (e.g. by providing content, and/or enabling participation of stakeholders and beneficiaries).

As part of the knowledge management, the Project will communicate and disseminate a significant amount of information and knowledge related to climate change: GHG inventory; assessment of the impacts, vulnerability and adaptation policies and measures; GHG mitigation policies and measures; and national circumstances and other relevant information. This will be realized through workshops, training, focus group discussions, interviews. Also, the experience gained with using tools such as protocol for collecting activity data emission factor, QA/QC or impact and vulnerability assessment may become a contribution to knowledge management on global climate. The knowledge gained from this project will be key in informing future programming, beyond the life of this project. Component E Publications and dissemination of the NC 4 Project will specifically address knowledge management, presentation, publication, communication, and awareness-raising information contained in NC 4/BUR 4.

C. DESCRIBE THE ENABLING ACTIVITY AND INSTITUTIONAL FRAMEWORK FOR PROJECT IMPLEMENTATION

Discuss the work intended to be undertaken and the output expected from each activity as outlined in Table A

The Ministry of Environment and Forestry, MoEF (*KLHK, Kementerian Lingkungan Hidup dan Kehutanan*) as the National Focal Point for UNFCCC holds responsibility for the coordination of the BUR and NC with other line ministries and to ensure that all information in the NC 4/BUR 4 meets the UNFCCC requirements. Accordingly, MoEF will be the Implementing Partner for this project on behalf of the Government of Indonesia and be responsible for the technical implementation of the project as a whole. UNDP is the GEF Executing Agency, accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation.

The project will create a Project Board and several Technical Working Groups on a) National GHG inventory, b) GHG mitigation policies and measures to address climate change, c) Assessment of the impacts, vulnerability and adaptation policies, and d) National circumstances for the development of the NC 4 representing various sectors and local governments and NGOs. The Board will provide guidance and directions for the technical working groups in the implementation of the project activities and synchronizing and synergizing the NC 4 activities with other related projects. Coordination meetings between the NC 4 Project and CBIT and other projects will be conducted regularly to strengthen the synergy between the activities and evaluate the progress. This is to ensure that the project activities are carried out efficiently and effectively without overlap.

A full-time National Project Manager will be hired heading a small Project Management Unit, which will be based at the DGCC. For a detailed description of the project governance arrangements, the reader is referred to the UNDP Project Document, Section 7.

D. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT

Cost-effectiveness will be realized by aligning the project with other ongoing activities and benefit from synergies in collaborating with these initiatives. Other projects which are relevant to the NC 4/BUR 4 include the following:

1. CBIT (Capacity-Building Initiative for Transparency) is a capacity building project being proposed by the Directorate General Climate Change, Ministry of Environment and Forestry (to be financed by the GEF), of which the cooperation modality described in detail above (in section D);

2. The Market Transformation for Renewable Energy and Energy Efficiency (MTRE3) project aims to support the design and implementation of appropriate climate change mitigation actions in the energy generation and energy end-use sectors. The project is implemented during 2016-2022 UNDP and the Ministry of Energy and Mineral Resources.
3. The Strengthening Climate Governance for Implementing the Paris Agreement project is implemented by GIZ with MoEF during 2017-2021, providing support to GHG mitigation policies and strategies, adaptation, mobilization, the MRV System, and strengthening NDC in Indonesia.
4. The World Bank's Forest Carbon Partnership Facility (FCPF) and BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL) focus on sustainable forest and land use. These funds guide readiness and implementation of reducing emissions from deforestation and forest degradation (REDD+).

The Government has been working closely in the past with several international (multilateral and bilateral) organizations working at related issues through various perspectives (mitigation, adaptation, partnership, REDD+, etc.), i.e. German GIZ, the Government of Norway, Global Green Growth Institute (GGGI), the World Bank and USAID on capacity strengthening regarding climate change planning, mitigation, and adaptation. For more details on context and baseline activities, the reader is referred to the UNDP Project Document, section 2. The NC 4 Project will also build on the results of these previous projects. It is therefore expected to be able to continue the likely sustainability of results of the NC 4 Project and to help Indonesia report to the Convention and the Paris Agreement on a continuous basis.

Successful implementation of the NC 4 will ensure the sustainability of the production of national communications and BURs and also provide opportunity to accelerate the human resource development program for climate change. The NC 4 Project activities are accompanied by capacity strengthening activities, such as training, workshops, and seminars, that in the cycle of National Communication increasingly not only cover national but sub-national levels and grassroots levels too. The availability of more trained personnel in developing GHG inventory, mitigation and adaptation can accelerate the implementation of capacity building programs across line ministries, local governments and non-Party stakeholders. In addition, institutional innovation generated by the project from activities related to improvement of data collection process and management as well as data sharing across divisions in charge for the implementation of climate change programs, can be adopted by other institutions at national and local level. This accelerates the scaling up process.

The 4BUR will be the last report in this series. Under the Paris Agreement (PA), BURs will be superseded by the Biennial Transparency Report (BTR) as part of the PA's Enhanced Transparency Framework (ETF). According to the Decision 18/CMA. 1, para. 3, the first BTR must be submitted by

all Parties no later than 31 December 2024. The work under the 4NC/4BUR will be used as input for Indonesia's first BTR.

E. DESCRIBE, DESCRIBE THE BUDGETED M & E PLAN

Monitoring and Evaluation Plan and Budget:			
GEF M&E requirements	Responsible Parties	Indicative costs (USD)	Time frame
Inception Workshop	MoEF ? Ministry of Environment and Forestry National Project Manager (NPM)	16,000	Within 60 days of CEO endorsement of this project.
Inception Report	NPM	None	Within 90 days of CEO endorsement of this project.
Monitoring of indicators in the project results framework	NPM	None	Annually before GEF PIR. This will include GEF core indicators.
GEF Project Implementation Report (PIR)	UNDP RTA ?CO NPM	None	Annually typically between June-August
Monitoring all risks (UNDP risk register)	UNDP CO NPM	None	On-going.
Supervision and oversight missions	UNDP CO, RTA and BPPS/GEF	None	Annually, troubleshooting and oversight as needed
Final project workshop	MoEF	10,550	Project closure
Independent Mid-Term Review (MTR)	Independent evaluators	17,500	February 2023
Independent Terminal Evaluation (TE)	Independent evaluators	20,000	May 2024
TOTAL indicative COST		64,050	

F. EXPLAIN THE DEVIATIONS FROM TYPICAL COST RANGES (WHERE APPLICABLE)

N/A

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

A. Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Focal Point Name	Focal Point Title	Ministry	Signed Date
Laksmi Dhewanthi	Senior Advisor to the Minister for Industry and International Trade	Ministry of Environment and Forestry	10/9/2019

B. Convention Participation

Convention	Date of Ratification/Accession	National Focal Point
UNFCCC	8/23/1994	Mr. Ruandha Agung Sugardiman, Director General

ANNEX A: Project Budget Table

Please attach a project budget table.

Project budget table is submitted as supplementary annex (Annex J)