United Nations Development Programme
Project Document

Project Title: Enabling China to Prepare Its Fourth National Communication, and Biennial Update Reports on Climate Change		
Country(ies): People's Republic of China	**Implementing Partner (GEF Executing Entity):** Ministry of Ecology and Environment (MEE)	**Execution Modality:** National Implementation Modality (NIM)
Contributing Outcome (UNDAF/CPD, RPD, GPD): Support China toward a low carbon development path		
UNDP Social and Environmental Screening Category: Low	**UNDP Gender Marker:** GEN 2	
Atlas Award ID: 00111998	**Atlas Project/Output ID: 00110698**	
UNDP-GEF PIMS ID number: 6399	**GEF Project ID number: 10707**	
LPAC meeting date: 2022.6.5		
Last possible date to submit to GEF: 2021.12.11		
Latest possible CEO endorsement date: 2022.6.11		
Project duration in months: 48		
Planned start date: 2022-7-1	**Planned end date: 2026-6-30**	
Expected date of Mid-Term Review: 2024.04.10	**Expected date of Terminal evaluation:** 2026.04.30	

Brief project description:
This project is to enable China to fulfill its commitments under the UNFCCC to prepare its fourth National Communication (4NC) Report, third Biennial Update Report (3BUR), fourth Biennial Update Report (4BUR). Based on the experience and lessons learned from the previous NCs and BURs, the project will broaden and consolidate the network of stakeholders, including those in the government, research and education institutions, associations, social groups, enterprises, individuals, enhance technical capacity of national experts, and strengthen the institutional frameworks. Furthermore, the project will place greater emphasis on relevant policies on mitigation of and adaptation to climate change and the results of their implementation, promote the establishment and improvement of the domestic systems for measurement, report and verification, so as to enable China to effectively address climate change in the process of pursuing national sustainable development. The project will develop comprehensive national GHG inventory of 2017, 2018 and 2020, with extended categories

and sources of GHG emissions and reduced uncertainties of the inventory. It will also introduce the activities of enhancing public awareness on climate change.	
FINANCING PLAN	
GEF Trust Fund grant	USD 4,566,210
(1) Total Budget administered by UNDP	**USD 4,566,210**
CO-FINANCIERS THAT WILL DELIVER PROJECT RESULTS INCLUDED IN THE PROJECT RESULTS FRAMEWORK (FUNDS NOT ADMINISTERED THROUGH UNDP ACCOUNTS)	
Ministry of Ecology and Environment (in-kind)	USD 1,366,000
UNDP (in-kind)	USD 100,000
(2) Total confirmed co-financing	**USD 1,466,000**
(3) Grand-Total Project Financing (1)+(2)	**USD** 6,032,210

SIGNATURES:

Signature:	**Agreed by Government Development Coordination Authority**	**Date/Month/Year:** 29/9/2022
Signature:	**Agreed by Implementing Partner**	**Date/Month/Year:**
Signature:	**Agreed by UNDP**	**Date/Month/Year:**

List of Abbreviations & Acronyms

BEF	Biomass expansion factor
BUR	Biennial Update Report
CSO	Civil Social Organization
CH_4	Methane
CMA	China Meteorological Administration
CO_2	Carbon dioxide
COD	Chemical Oxygen Demand
COP	Conference of Parties
CRAES	Chinese Research Academy of Environmental Sciences
EAs	Enabling Activities
EFs	Emission factors
FECO	Foreign Environmental Cooperation Office
FEEI	Forest Ecology & Environment Institute of Chinese Academy of Forestry
FF	forest land remaining forest land
FYP	Five-Year Plan
GDP	Gross domestic product
GEF	Global Environment Facility
GHG	Greenhouse gas
GWP	Global warming potentials
HFCs	Hydrofluorocarbons
IEDA	Institute of Environment and Sustainable Development in Agriculture, CAAS
IPCC	Intergovernmental Panel on Climate Change
LHV	Low heating value
LULUCF	Land use, land use change and forestry
MCF	Methane correction factor
MEE	Ministry of Ecology and Environment
MOF	Ministry of Finance
MOST	Ministry of Science and Technology
MOT	Ministry of Transport
MSW	Municipal solid waste
NAMAs	Nationally Appropriate Mitigation Actions
NBS	National Bureau of Statistics
NC	National Communication
NCSC	National Center for Climate Change Strategy and International Cooperation
NDC	National Determined Contributions
NDRC	National Development and Reform Commission
N_2O	Nitrogen monoxide
NGO	Non-governmental Organization
NLGCC	National Leading Group on Climate Change
NPC	National project coordinator
NPD	National project director
OECD	Organization for Economic Cooperation and Development
PDF	Project Development Fund of GEF
PFCs	Perfluorocarbons
PIR	Project Implementation Report
PMO	Project management office

PPM	Project planning matrix
PSC	Project steering committee
QA/QC	Quality assurance/quality control
R&D	Research and Development
SAR	Special Administrative Regions
SDGs	Sustainable Development Goals
SF_6	Sulfur hexafluoride
SOC	Soil organic carbon
ICA	International consultation and analysis
TOR	Terms of Reference
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change

I. TABLE OF CONTENTS

List of Abbreviations & Acronyms 3
I. Table of Contents 5
II. Development Challenge 6
III. Strategy 10
IV. Results and Partnerships 12
V. Project Results Framework 32
VI. Monitoring and Evaluation (M&E) Plan 37
VII. Governance and Management Arrangements 40
VIII. Financial Planning and Management 45
IX. Total Budget and Work Plan 49
X. Legal Context 53
XI. Risk Management 53
XII. Mandatory Annexes 57
Annex 1: GEF Budget Template 58
Annex 2: Project Map and Geospatial Coordinates of Project Sites 59
Annex 3: Multi Year Work Plan 60
Annex 5: UNDP Risk Register 72
Annex 6: Overview of Project Staff and Technical Consultancies 76
Annex 7: Stakeholder Engagement Plan 82
Annex 8: Gender Analysis and Gender Action Plan 88
Annex 10: Letters of financial commitments 94
Annex 11: Social and Environmental Screening Procedure (SESP) 96
Annex 12: Partner Capacity Assessment Tool (PCAT) 108
Annex 13: HACT Micro Assessment Report 108

II. DEVELOPMENT CHALLENGE

Global Climate Problems

According to the latest IPCC Assessment report, science has made great strides recently in determining which potential causes are actually responsible for the climate change that occurred during the twentieth century, providing strong evidence that greenhouse gas (GHGs) released to the atmosphere by human activities are the main cause of contemporary global warming.

Global warming has caused many adverse effects on the environment of human life, production and social activities. Global warming aggravates grassland soil erosion and desertification, and causes ocean thermal expansion and glacier melting, resulting in sea level rise. China's coastal provinces risk losing their territory and their people may become homeless and displaced. Global warming affects agriculture, one of the pillar industries for the low-income population of China, by increasing the instability of agricultural production that may threat their financial security. Some crop yields will be reduced, causing larger application of chemical fertilizers and pesticide, that may increase the potential of both the economic cost and hazardous chemical pollution. Global warming may bring frequent climate disasters, such as excessive rainfall, extensive drought and persistent high temperature. Indigenous people who are extremely dependent on local natural climate may be unable to adapt to abrupt climate change or be directly hit by severe meteorological disasters and suffer serious losses of the basic needs, like the homes and food. Global warming also has adverse effects on human health. The frequent heat wave may cause mortality and certain diseases, especially the incidence rate of heart and respiratory diseases. The range of sensitive infectious diseases such as malaria and dengue fever may increase. Extreme weather events, such as drought, flood and storm, increase the mortality, disability and infectious disease, and increase the social psychological pressure.

The least developed provinces and regions in China are often the most affected by climate change. In these areas both the government and the people need to increase the capacities to cope with the potential climate disasters. It is reasonably foreseeable to improve the ability of local people to adaptation, so to minimize the adverse effects of climate change.

To achieve the objective of the Convention and fulfill the obligation of the Parties, China needs to collect and report reliable, transparent and comprehensive information on GHG emissions, climate actions and support (Article 12). By communicating information on GHG emissions and actions to reduce them, as well as on adaptation and means of implementation such as finance, technology transfer and capacity-building, the transparency and reporting system allows to understand ambition and progress on climate actions and support by Parties and informs the COP deliberation and guidance on these matters. The reporting requires China to submit timely national reports , in accordance with the principle of common but differentiated responsibilities and respective capabilities.

Baseline Scenario

According to the requirements of Article 4.1 and 12 of the UNFCCC and Decisions 17/CP8, 1/CP.16 and 2/CP.17, China followed the relevant reporting guidelines and the IPCC guidelines to compile national GHG inventories to fulfill transparency-related obligations. So far, China has completed and submitted three NCs and two BURs, which contained GHG inventory data for 1994, 2005, 2010, 2012, and 2014. The guidelines and methodologies apply the *UNFCCC Guidelines for*

the Preparation of Biennial Update Reports from non-Annex I Parties, the *UNFCCC Guidelines for the Preparation of National Communications from non-Annex I Parties, Revised1996 IPCC Guidelines for National GHG Inventories, 2000 IPCC Good Practice Guidance and Uncertainty Management*, and *2003 IPCC Good Practice Guidance for Land-use, Land-use Change and Forestry*. In terms of review, China underwent in 2017 the technical analysis of its first BUR by a UNFCCC international expert team and participated at the end of 2018 in facilitative sharing of views (FSV). At COP 24, China shared the relevant content of its first BUR and answered questions on site. Currently, China is cooperating with international experts to complete the technical analysis of its second BUR. In order to strengthen the monitoring and analysis of progress towards targets proposed by the Nationally Appropriate Mitigation Actions (NAMAs), China has also conducted the accounting and monitoring of CO_2 emissions and carbon intensity reductions in energy activities, so that it can keep abreast of CO_2 emissions, assess the results of relevant policies, and at the same time, predict the short-term trend and target progress.

Challenges that need to be addressed

UNFCCC has set emission limits/targets/goals and monitor the progress in an open and transparent way. As actions to combat climate change continue to deepen, policy makers need more comprehensive and exhaustive information on climate change. In order to prepare the 4NC report, 3BUR, 4BUR in higher quality, China needs to address stricter reporting requirements to the developing countries, fill the gaps in the management capacity and inter-ministerial collaborations and deal with the technical obstacles for transition to 2006 IPCC Guidelines.

China is faced with great barriers in the transparency of the GHG data and information reporting according to the Katowice Climate Change Conference convened in Poland in 2018. China need to follow the new rules for implementing the Paris Agreement, including the adoption of Modalities, Procedures and Guidelines (MPGs) for the enhanced transparency framework, with clarification of reporting obligations of Parties under the Paris Agreement and related arrangements for follow-up technical expert review and facilitative multilateral consideration of progress. Compared with the transparency requirements under the UNFCCC, the reporting obligations under the Paris Agreement have been strengthened for China, with comprehensiveness, completeness, and accuracy of reporting largely improved. This mainly involves using methodologies in full accordance with the 2006 IPCC (Intergovernmental Panel on Climate Change) Guidelines; preparing GHG inventories, annually instead of biennially, providing GHG inventory reports with more detailed information in tabular format; promoting the transparency of information on nationally determined contributions (NDCs); improving the guidelines of reporting on support received; and encouraging the reporting of support to other developing countries in addressing climate change. In terms of technical review, developing country Parties will be subject to formal technical expert review, which is more rigorous than the technical analysis of BURs. If any significant and persistent issue found during the technical expert review, the Compliance Committee of the Paris Agreement will intervene to propose an action plan together with the Party. Regarding reporting format, developing country Parties will also need to present relevant information in a more standardized manner based on the CRT negotiation results.

The ministerial capacities to deal with the climate change issues are lagging behind, compared to the strong ambitions of central government of China. In the first half of 2018, the functions related to combating climate change have been transferred from the National Development and Reform Commission (NDRC) to the Ministry of Ecology and Environment (MEE) in China's governmental institutional reform. The advantage and expertise of MEE gained from long-standing pollutant control should be further given play, in order to establish technical specifications for GHG data monitoring at

the enterprise level, and to explore data docking and sharing with the national unified database of stationary pollution sources and the environmental resource information center, so as to better support the formulation of GHG inventories and emission control action plans. Due to this institutional reform, local governments have also been adjusted accordingly. It is necessary to familiarize the staff of local governments and support agencies with the business of combating climate change as soon as possible, and to improve and strengthen the statistic and accounting mechanism at the local level, with a view to laying a sound foundation for supporting national response to climate change and promoting local low-carbon and climate-resilient transition.

Due to stricter data scope and additional emission sources are required, China is faced with technical challenges to compare and adjust based on the recalculation of historical data, to ensure data accuracy. Better data collection mechanism for GHG inventories, especially for non-Annex I parties under UNFCCC convention, is needed now more than ever. According to the Katowice Climate Package, all parties are required to use the 2006 IPCC Guidelines for National GHG Inventories (here-under referred to as "2006 IPCC Guidelines"). Therefore, China, as one of non-Annex I parties, needs to improve its domestic capacity on transition to use the 2006 IPCC Guidelines from the 1996 IPCC Guidelines for National GHG Inventories (here-under referred to as "1996 IPCC Guidelines"). Current obstacles for transition to 2006 IPCC Guidelines include data missing for new categories, data inconsistency among different agencies, parameter missing for higher tier methods, as well as investigation insufficient under current system. Data collection methods identified in this paper include not only primary data of specific investigation, but also secondary data collection from government agencies and research institutions.

Moreover, in accordance with decision 2/CP.17 and with the support of GEF, China will continue to develop the 3BUR and 4BUR, which is the last one. All of these will report China's basic circumstances, national GHG inventory, mitigation of GHG emission and the effects, constraints and gaps, related financial, technical and capacity needs, and other updated information for realizing the targets set forth in the UNFCCC. To develop the GHG inventory, China needs to conduct special survey on part of activity data and on emission factors as well. However, the relevant capacity building to the executive stakeholders, including the ministries in the national leading group, local authorities, and key industrial associations are still lacking.

Consistency with National Priorities

As non-Annex I Party, China, in accordance with the provisions of the Convention and Kyoto Protocol and in conjunction with its national sustainable development strategy, has adopted a series of policies and actions on economic restructuring, development mode shift, energy efficiency improvement, energy conservation, renewable and nuclear energy development, energy mix optimization, and afforestation with significant achievements. Since the 11th Five-Year Plan (hereinafter referred as the 11th FYP) period, the Government of China has attached great importance to industrial restructuring, economic transformation, reduction of resource and energy consumption, reinforcing the guiding role of industrial policies and special plans. On the one hand, China has vigorously accelerated the development of the tertiary industry and encouraged the development of emerging industries; on the other hand, it has attached importance to restructuring the secondary industry so as to facilitate its optimization.

Committed to multilateralism, China has been playing an active part in global governance on environment and climate change. Following President Xi Jinping's announcement in September that China aims to have carbon dioxide emissions peak before 2030 and achieve carbon neutrality before 2060, on Dec 12 he set out the nation's further climate commitments as the world celebrated the fifth

anniversary of the Paris Agreement. This has manifested China's resolute determination to proactively cope with climate change and stick to a green and low-carbon development path. Now, China is rolling out the road maps for peaking carbon emissions, aiming to achieve low-carbon transformation in a diversified and inclusive way.

The government of China is ambitious to reduce carbon emissions. The recent 14th Five-Year Plan (FYP), the government's highest authority national planning document, has combined advancing ecological civilization with a focus on reducing carbon emissions and promoted it to one of the most crucial issues in the next 5 years. According to 2021's government work report, China will reduce energy consumption and carbon dioxide emissions per unit of GDP by 13.5 and 18 percent, respectively, during the 2021-25. The report addresses measures should be taken to accelerate adjustments in the structure of industry, energy, transport and land use, while strictly controlling projects with high energy consumption and high pollution to promote the green development. The 14th FYP mentions over the next five years, China has set to implement the binding targets for reducing carbon intensity and offer Chinese wisdom for promoting a fair and equitable system of global environmental governance for win-win cooperation. China will also improve its measuring and monitoring of carbon sinks.

Following central government's work toward the carbon neutrality, Hong Kong SAR and Macao SAR governments also set to capitalize on the trend to enhance the environmental protection and green technology industry with the innovative ability of people and the research edge of its universities and supporting policies from the government.

The given project is consistent with several Sustainable Development Goals (SDGs) as set by the United Nations General Assembly. It is relevant primarily to Goal 13: "Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy", but also to Goal 7: "Ensure access to affordable, reliable, sustainable and modern energy for all".

China's comprehensive and complicated reporting system urgently needs a capacity building project to strengthen its institutional and technical capacities of reporting at the national level. These challenges could be overcome by building a data collection mechanism that fit to the new requirements and improving its domestic capacity building.

The development of the NC report, BURs is a continual process that entails continual improvement of the capacity for developing national communications. The framework presents new challenges for many developing countries, including more frequent reporting with more detailed information, as well as more stringent review. This calls for enhanced domestic transparency mechanisms, stable institutional arrangements, and strengthened capacities on the compilation of GHG inventory and biennial transparency report. Therefore, financial and technical support is needed to conduct training and international exchanges, and to continually improve the technical level and comprehensive capability of the staff that are involved in developing national communications; besides, China's GHG database needs to be improved in order to effectively manage China's GHG inventory information, provide support to inventory data analysis and quality control, and to lay a sound foundation for the continuous development of national GHG inventory.

III. STRATEGY

Project Rationale

According to the provisions of the UNFCCC and the requirements of the relevant COP decisions on national communications from non-Annex I Parties, China needs to prepare its NC Report in accordance with the revised *Guidelines for the Preparation of National Communications from non-Annex I Parties*, and develop national GHG inventory for national communications and biennial update reports in accordance with the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories. Guidelines for the Preparation of National Communications from non-Annex I Parties* encourages non-Annex I parties to make use of the *IPCC Good Practice Guidance and Uncertainty Management* and to take into account the improvement of transparency, consistency, comparability, integrity and accuracy of the inventory; to provide information on anthropogenic emission sources of hydrofluorocarbons (HFCs), perfluorocarbon (PFCs) and sulfur hexafluoride (SF_6) based on its capacity; and to provide information about the implemented or planned mitigation programs and measures, etc.

Policy Conformity

Moreover, in accordance with decision 2/CP.17 and with the support of GEF, China, as a non-Annex I Party to the UNFCCC, will continue to develop the 3BUR and 4BUR, which is the last one. These will report China's basic circumstances, national GHG inventory, mitigation of GHG emission and the effects, constraints and gaps, related financial, technical and capacity needs, and other updated information for realizing the targets set forth in the UNFCCC. To develop the GHG inventory, China needs to conduct special survey on part of activity data and on emission factors as well. Therefore, it is necessary to strengthen relevant capacity building.

The preparation of NC report and BUR is a continuous process that also entails the enhancement of the country's capacity for meeting its reporting obligations to the global convention on climate change. This is also partly in compliance with the enhanced transparency framework, as per the Article 13 of the Paris Agreement, requiring all Parties to regularly provide information on actions and support and undergo technical expert review and participate in facilitative multilateral consideration process, in order to better track the progress of Parties' efforts towards objectives and inform the global stock take. Such framework presents new challenges for many developing countries, including more frequent reporting with more detailed information, as well as more stringent review. This calls for enhanced domestic transparency mechanisms, stable institutional arrangements, and strengthened capacities on the compilation of GHG inventory and biennial transparency report. Therefore, financial and technical support is needed to conduct training and international exchanges, and to continually improve the technical level and comprehensive capability of the staff that are involved in developing national communications, In the case of China, technical and financial support are required in improving and updating its GHG database to effectively manage China's GHG inventory information, provide support to inventory data analysis and quality control, and to lay a sound foundation for the continuous development of the national GHG inventory.

The specific strategies for this proposed 4NC project are the following:

To the develop the national GHG inventory, firstly, more attention must be placed to the quality of activity data. In the development of the inventory, efforts will be made to verify the activity data of CO_2, the key emission source, and the data on coal consumption in particular. Secondly, compared to

previous inventories, the inventory to be prepared for the 4NC Report, and BURs (3rd & 4th) will be more comprehensive. Thirdly, the inventory to be submitted by this project will reflect to a largest extent the latest information about China's GHG emissions. Fourthly, the methodology of inventory preparation is improved. In this regard, the GHG inventory to be submitted by 2024 will make use of the IPCC 2006 guidelines. Changes will be made in regard the activity data of China's energy, industrial process, agriculture, LULUCF and waste compared to previous inventory. Hence, it is necessary to conduct massive surveys on and statistical analyses of activity data; to further reduce the uncertainties of the inventory, efforts have to be made to carry out research work such as field investigation relating to China's specific GHG emission factor data.

For the national GHG database management system, the data from the GHG inventories in the 4NC report and in the BURs will be inputted into the national GHG database. The daily maintenance and management of the GHG inventory database will continuously be done.

To address the need to combat adverse climate change impacts and improve adaptation, as in the previous NC projects, the 4NC Project includes the conduct the study on the impacts of climate change on agriculture, water resources and terrestrial ecosystems; assessment of the impacts of climate change on socio-economic development in coastal regions and human health; and analysis of the impact of extreme weather events on socio-economic development.

In the reporting of the progress of implementation of the UNFCCC, a systematic summary of the adopted policies and measures, especially relevant policies on mitigation and adaptation will be provided. The 4NC Report will also describe the linkages between the specific contents of policies and measures with relevant parts of the national communications (e.g. national circumstances, emission inventory, and technology transfer). In accordance with Decision 17 of COP 8, China will include a description of the planning and policies for the implementation of the UNFCCC, addressing: (1) policies and measures to facilitate adequate adaptation to climate change; (2) policy programs to mitigate climate change, including potential methodological issues. Therefore, it is expected that this project for preparing China's 4NC will enable the country to carry out systematic analysis on the effects of implementation of relevant policies and measures on mitigation of and adaptation to climate change and further explore how to better plan and coordinate the integration of policies and measures for mitigation of and adaptation to climate change into national economic and social development plan. Decision 17 of COP 8 also provides methodologies and guidelines for evaluation of adaptation strategies and measures and assessment of measures to mitigate climate change[1]. In line with Decision 2 of COP 17 (2/CP.17), it is also necessary to report to the United Nations biennial update reports, basic national circumstances of dealing with climate change, activities to mitigate GHG emission and the effects, as well as other relevant information for realizing the targets of the UNFCCC such as domestic measurement, reporting and verification system, etc.

Similar to the practice in previous preparation of China's national communication to the UNFCCC, the central government will include relevant information on climate change in the Hong Kong SAR and Macao SAR in China's 4NC Report and its 3BUR, 4BUR. The Government of China will assist in enhancing the SAR governments' capacity building based on the existing effort and provide technical guidance as in the previous NC projects. The SAR's climate change reports and GHG inventories are to be included in

[1] Such as *Technologies, Policies and Measures for Mitigating Climate Change* (IPCC Technical Paper I); *Greenhouse Gas Mitigation Assessment: A Guidebook by the U.S. Country Studies Program; Climate Change 2001: Mitigation* (Contribution of Working Group III to the Third Assessment Report of the IPCC)

the China 4NC and BURs.

IV. RESULTS AND PARTNERSHIPS

Expected Results

The proposed project will enhance China's capability to prepare and deliver time-series consistent national GHG inventories every two years, applying 2006 IPCC guidelines with higher transparency, increased completeness and accuracy and stronger comparability. A normalization mechanism for GHG inventories and reporting will be established. It will enable China to strengthen and update the impacts and vulnerability assessments of climate change and combine with emissions scenario analysis of policies and actions for climate change mitigation. It will enable China to have a reliable NAMAs and NDCs tracking systems to fulfill the obligations of NCs and BURs. It will enhance the stakeholders' understanding of the appropriate policies to enable the proper planning and implementation of prioritized applicable and feasible climate change mitigation actions for China low GHG development.

The following paragraphs describe the activities that will be carried out to deliver the various outputs that will collectively bring about the expected outcomes from each component of the project. It should be noted that considering the current rather uncertain pandemic situation in China and worldwide, that if there will be restrictions in travel and public gathering that will be imposed by government authorities to protect public health during the implementation phase of the project, alternative ways and means will be identified, considered and effectively implemented to avoid protracted delays in the conduct of the activities, and to deliver the expected project outputs in a timely manner.

Component 1: National greenhouse gas (GHG) inventory

This component is to enhance relevant stakeholders' understanding on the application of the 2006 IPCC guidelines for national GHG inventories, considering the capacity-building needs identified in the International Consultation and Analysis (ICA) that was done during the BUR2 preparation process. The national GHG inventories for years 2017 and 2018 are to be prepared using 1996 IPCC guidelines, and the GHG inventory for year 2020 using 2006 IPCC guidelines. The national GHG inventories for years 2017 and 2018 are to be included in the 4NC Report and 3BUR, while that for year 2020 are to be included in the 4BUR . Also included in this component is the GHG inventory recalculations for the years 2005, 2010, 2012 and 2014. This is to provide time-series consistency inventories. The updating of the national GHG inventory database and the establishment of a working mechanism that meets the requirements for a time series inventory every two years are also included under this project component. The main outcome that is expected to be realized from the outputs that will be delivered under this project component is clearer understanding of the magnitude, trend and causes of the GHG emissions and removals from the different sectors, facilitated through an improved capacity to prepare time-series consistent inventories applying 2006 IPCC guidelines, and an improved national system for GHG inventory preparation.

Outcome 1.1 Clearer understanding of the magnitude, trend and causes of the GHG emissions and removals from the different sectors, facilitated through an improved capacity to prepare time-series consistent inventories applying 2006 IPCC guidelines, and an improved national system for GHG inventory preparation.

Output 1.1: National GHG inventories for 2017 and 2018 for the 4NC and BUR3 with recalculation of historic GHG inventories applying the IPCC 1996 guidelines.

The following activities are planned to deliver Output 1.1.1:

Activity 1.1.1.1: Preparation of the national GHG inventories for 2017 and 2018 by applying the 1996 IPCC Guidelines. The sectors covered are energy, industrial processes, agriculture, land-use, land-use change and forestry (LULUCF), and waste management. The coverage of gases will at least include CO2, CH4, and N2O. China will endeavor to try its best to report emissions of HFCs, PFCs SF6 and other F-gases to the UNFCCC, based on the principle of common but differentiated responsibilities.

a) For the energy sector, this involves summarizing the estimation results of GHG emission from fossil fuel combustion, biomass combustion, the mining and post-mining activities, oil and gas system, non-energy use of fossil fuel, and international bunkers.

b) For the industrial processes sector, this involves the consolidation of the estimated/calculated GHG emissions from the industrial processes in the production of mineral products, chemical products, and metal products, and in the production and use halocarbons and SF_6.

c) For the agriculture sector, this involves methane emission from paddy fields, nitrous oxide emission from croplands, methane and nitrous oxide emissions from residues field burning, methane emission from enteric fermentation and methane and nitrous oxide emissions from manure management systems. The estimation on the emissions from residues field burning would be based on the 2006 IPCC Guidelines.

d) For the LULUCF sector, this involves GHG emissions/removals in six land categories: forest land, cropland, grassland, wetlands, settlements, and other land. The estimation on the emissions/removals from the above-mentioned sources/sinks would be based on the 2006 IPCC Guidelines. In addition, carbon stock changes in other woody biomass (OWB) and harvested wood products (HWP) in the inventory year will also be reported.

e) Lastly, for the waste management sector, this involves methane emission from landfills; carbon dioxide, methane, and nitrous oxide emissions from waste incineration; methane and nitrous oxide emission from solid waste biological treatment; methane emissions from industrial wastewater treatment and from domestic wastewater treatment; and nitrous oxide emissions from wastewater treatment.

f) All of the above inventories involved the collection of the pertinent activity data, making sure that these are within the scope of the IPCC requirements; identification of main parameters (e.g., carbon content, low heat value, net calorific values); and the conduct of quantitative analyses of uncertainty of the inventories to increase the transparency of the reports.

Activity 1.1.1.2: Recalculation of the national GHG inventory for the year of 2005. Because the year 2005 is the base year for China's NDC targets, this activity involves the recalculation of the national inventory of 2005, to make it comparable with the new data of years 2017 and 2018. The scope and methodologies of the recalculated inventory data remains the same for the years 2017 and 2018.

Output 1.1.2: National GHG Inventory for 2020 for the BUR4 with recalculation of historic GHG inventories applying 2006 IPCC guidelines.

The following activities are planned to deliver Output 1.1.2:

Activity 1.1.2.1: Preparation of the national GHG inventory for 2020 by applying the 2006 IPCC Guidelines. This activity involves the collection of pertinent activity data, making sure these are in within the scope of IPCC requirements; identification of main parameters (e.g., carbon content, low heat value, net calorific values); and conduct of quantitative analyses of uncertainty of the inventories to increase the transparency of the reports. The sectors covered are energy, industrial processes, agriculture, land-use, land-use change and forestry (LULUCF), and waste management. The coverage of gases will at least include CO_2, CH_4, and N_2O. China will endeavor to try its best to report emissions of HFCs, PFCs SF_6 and other F-gases to the UNFCCC, based on the principle of common but differentiated responsibilities.

For the energy sector, carbon transportation and storage would be added, to cover all GHG source and sink categories in the 2006 IPCC Guidelines; COPERT[2] model will be used to obtain the average emission coefficient of fuels for methane and nitrous oxide emissions from road transportation while Tier 2 method will be applied to estimate the emissions; the boundary between combustion and non-energy use of fossil fuels and the boundary between emissions from fossil fuel combustion and industrial processes in key sectors would be further identified to fit with the scope of 2006 IPCC Guidelines.

For the industrial process sector, the activity data about industrial process of cement, lime, ferroalloy, aluminum, ammonia synthesis and titanium dioxide production, etc., would be further investigated.

For the agriculture sector, CH4MOD model would be used as before; annual animal population in stock and out stock with different management (intensive, household, pasture), including animal population distribution by the animal species, feed type and ages in accordance with the requirement of 2006 IPCC Guidelines would be further investigated.

For the LULUCF sector, it should include GHG emission from sources and removal by sinks in (1) forest land, (2) cropland, (3) grassland, (4) wetland, (5) settlement and other lands. In addition, (6) carbon stock changes in other woody biomass (OWB) and harvested wood products (HWP) in the inventory year will also be reported based on 2006 IPCC Guidelines.

For the waste management sector, this involves develop a model for calculating municipal solid waste (MSW) generation amount and landfill capacity. The 2006 IPCC methodology (FOD model) requires long term history activity data (Using disposal data for at least 50 years). This activity involves the collection of data to evaluate China's socio-economic factors (e.g., GDP, urban population etc.), which are the main factors influencing the amount of waste generation. Through scientific analysis of the collected historical data, combined with advanced international technology and method, and the use of statistical analysis tools, to establish and improve the calculation model for waste generation amount, this model will be used to estimate the historical data for periods with no records.

[2] COPERT methodology is the official road transport emission inventory preparation in European Economic Area (EEA) member countries. It is part of the EMEP/EEA air pollutant emission inventory guidebook for the calculation of air pollutant emissions and is consistent with the 2006 IPCC Guidelines for the calculation of GHG emissions.

Activity 1.1.2.2: Recalculation of the national inventories of the years 2005, 2010, 2012, and 2014. The recalculation of the national inventories for these years is to make them comparable with the new data of the year 2020. All methodological improvements are applied back to the years 2005, 2010, 2012, and 2014. The scope and methodologies of the recalculated inventory data are based on 2006 IPCC Guidelines. This is meant to provide time-series consistency inventories to the UNFCCC.

Output 1.1.3: Improved national GHG inventory database system and updated inventory database.

Activity 1.1.3.1: Improvement of the functions of the GHG database and update the national GHG inventories. The current national GHG database is not capable of doing quality assurance (QA) and Quality Control (QC) and it was designed for methodologies applying the 1996 rather than 2005 IPCC Guidelines. The upgraded national GHG database is to be used for archiving the national inventories of years 2005, 2010, 2012, 2014, 2017, 2018 and 2020, managing all aspects of inventory QA and QC, including the QC of raw and processed data and data management tools; as well as documentation and archiving. Security procedures and measures are to be employed to minimize discrepancies and prevent errors and non-authorized changes.

Output 1.1.4: Improved national system and mechanism for a sustainable GHG data collection, preparation and archiving process with extensive stakeholder engagement, smooth and timely data collection and coordinated and effective organization.

Activity 1.1.4.1: Establishment of procedures for archiving, quality assurance/quality control, and improvement planning with key experts. This involves the conduct of research on improving the national system and mechanism for GHG data collection, preparation and archiving. This activity aims to ensure transparency, consistency, comparability, completeness and accuracy of the inventory and reduce its uncertainty. This involves the improvement of the internal management for preparing national GHG inventories to enhance the sustainability of inventory preparation. This also involves the development and establishment of a procedure for archiving, quality assurance/quality control, and improvement planning with key experts including QA/QC checklist and templet for improvement plan.

Output 1.1.5: Completed capacity building of relevant government departments in collecting required data and information for conducting and preparing GHG inventories.

Activity 1.1.5.1: Design, organization and conduct of capacity building program for training and consultation on the preparation and conduct of GHG inventories. This activity supports an extensive stakeholder engagement, smooth and timely data collection and coordinated and effective organization to collect activity data fit with the requirements of 2006 IPCC Guidelines. It involves the evaluation and revision of the statistical system on climate change based on the requirements of the 2006 IPCC Guidelines, as well as the design and conduct of a series of capacity building activities for improving GHG data collection of relevant stakeholders to fit with the requirements of 2006 IPCC guidelines. The focus of the capacity building is on adding or modifying the indicators, data quality and time requirement; and the review of data features and relevant stakeholders need to further improve data quality. This activity also serves to establish the process for clarifying and consulting with stakeholders via the National Leading Group for Climate Change, Energy Conservation and Emissions (NLGCCECE).

Activity 1.1.5.2: Evaluation of the capacity building program. Towards the end of the 4NC Project, a post-evaluation of the capacity building program will be carried out to determine its impacts and

effectiveness, as well as determine further improvements that can be made to it, for use in future NC and BUR projects.

Component 2: Impact of and vulnerability and adaptation to climate change

This component is comprised of activities for updating of the climate change assessment of China and the impact and vulnerability assessments of climate change in key areas, and identification of strategies for climate change adaption and measures in key areas, which is expected to enhance the understanding of China's vulnerability to the threats of climate change and improved accuracy of prediction of impacts in the vulnerable sectors of the country.

Outcome 2.1: Better understanding of China's vulnerability to the threats of climate change and improved accuracy of prediction of impacts in the vulnerable sectors of the country.

Output 2.1.1: Results of the updated analyses of climate change characteristics and future trends in China.

Activity 2.1.1.2: Data gathering on observed historical and current climate conditions and characteristics. This involves the gathering, processing and verification of the collected data/information on the actual observed climate characteristics in various region of the country that can be used for projecting trends in climate and weather. The data gathering includes collection of key government policies that were carried out to address climate issues.

Activity 2.1.1.2: Analysis of the climate characteristics and future trends at a country level. This involves the conduct of desk analysis using the collected and vetted data on climate characteristics for projecting future climate trends in the country, as well as to verify and review the results with key governmental decision-makers and the technical experts to make sure the results will increase stakeholders' understanding of the future weather and climate trends of China.

Output 2.1.2: Report on the climate change impact and vulnerability assessments in agriculture, water resources, coastal zones, terrestrial ecosystems, human health.

Activity 2.1.2.1: Compilation of information and conduct of impact and vulnerability assessments on China's ecosystems and human health. This involves the updating of the climate change impact and vulnerability assessments in key areas, covering the impacts and vulnerabilities, under the scenario of representative concentration pathways (RCPs). This also includes the analysis of climate impacts at a country level, with a focus on agriculture, water resources, coastal zones, terrestrial ecosystems, human health, as well as the evaluation of the challenges in such areas.

Activity 2.1.2.2: Review and verification of the results of the impact and vulnerability assessments (IVAs) on China's ecosystems and human health through consultations with key government decision makers and technical experts about the verified results of the IVAs; and collection of their feedbacks. This is to make sure the results will enhance the stakeholders' understanding on the observed impacts of climate change water resources, including runoff of China's major rivers, snow cover and glaciers, floods and droughts; the observed climate change impacts on forests, grasslands, wetlands, lakes, as well as biodiversity; the observed climate change impacts on sea level, extreme marine events, coastal terrestrial ecosystems; the observed climate change impacts on human chronic diseases and infectious diseases. The results of this activity will contribute to the finalization of the description of climate

change impact and vulnerability assessments in China's agriculture, water resources, coastal zones, terrestrial ecosystems, human health.

Output 2.1.3: Report on the impacts of the frequency and intensity of extreme climate events and climate change related disasters.

Activity 2.1.3.1: Compilation of information and conduct of impact analysis on China's climate disasters. This involves the gathering of pertinent data and information to increase the understanding about climate extremes events and drivers of regional drought and flooding. The results of the assessment will be used in developing the capability of applicable early warning systems, thereby reducing the impact of climate variability and extremes through effective forecasting and preparedness measures.

Activity 2.1.3.2: Review and verification of the impact analysis of the climate disasters through consultations with key governmental decision-makers and the technical experts; and collection of their feedbacks. This is to make sure the results will enhance the stakeholders' understanding on the frequency and intensity of extreme climate events and climate change related disasters. Upon completion of the draft report, the relevant government ministries are expected to provide comments and recommendations. The results of this activity will contribute to the finalization of the description of China's impacts from extreme climate events and related disasters.

Output 2.1.4: Report on the effectiveness analysis on implemented adaptation actions.

Activity 2.1.4.1: Evaluation of the effectiveness, impacts and risks of the improper implementation and non-implementation of CCA policies, as well as the potential social and environmental risks. Appropriate recommendations are to be formulated and recommended. This also includes the development of procedures for assessing the potential risks and impacts of extreme climate events in the implementation of CCA measures and initiatives. The assessment of the social and environmental risks of the implemented and non-implemented policies, and the formulation of recommendations to address such risks shall be based on the social and environmental screening procedures of the UNDP

Activity 2.1.4.2: Evaluation of the effectiveness of the implemented climate change adaptation (CCA) measures/actions. This activity involves gathering of reports on the results and impacts of CCA projects that have been implemented in the country as well as recent CCA actions to assess their effectiveness.

Activity 2.1.4.3: Identification of climate change adaptation opportunity areas, which can be fed into the evidence base and the strategic approach to deploying relevant climate-resilient CCA measures and policies. This involves the preparation of a report, based on the results of Activities 2.1.4.1 and 2.1.4.3 to be delivered to the key governmental decision-makers and the technical experts and improved based on their feedback to ensure both the quality of reports and results could be effectively used for decision-making.

Output 2.1.5: Completed capacity building for relevant government departments on collecting climate data/information and assessment of climate change impact and vulnerability.

Activity 2.1.5.1: Organization of a capacity building program that is comprised of training and consultation workshops on the impacts of, and vulnerability of the country to, climate change. The content of assessment of climate change impact and vulnerability involves many sectors such as agriculture, water, forest and other natural ecosystems, coastal zones and offshore resources and

environment, human health. This activity is expected to increase the information collection and sharing with various departments on the .climate change impact and vulnerability The methods, including seminars and training sessions based on requirements of the NC and BUR reporting, as well as inter-ministerial exchanges on adaptation methodologies to build capacity that are needed by different national government departments/agencies in the collection of climate data/information for use in the assessment of climate change impact and vulnerability. The targeted groups include officials from the MEE, Ministry of Science and Technology, Ministry of Natural Resources, Ministry of Agriculture and Rural Affairs, NBS, and China Meteorological Administration, etc.

Activity 2.1.5.2: Evaluation of the capacity building program. Towards the end of the 4NC Project, a post-evaluation of the capacity building program will be carried out to determine its impacts and effectiveness, as well as determine further improvements that can be made to it, for use in future NC and BUR projects.

Component 3: Policies and actions for climate change mitigation

This component is to enhance the understanding on how China addresses climate change, particularly on mitigation actions and their impacts. The successful delivery of the planned outputs from this project component are expected to (a) Enhance the understanding of the appropriate policies to enable the proper planning and implementation of prioritized applicable and feasible climate change mitigation (CCM) actions for China; and (b) Improve the accounting of the results and impacts of implemented CCM actions through an improved national MRV system.

Outcome 3.1: Enhanced understanding of the appropriate policies to enable the proper planning and implementation of prioritized applicable and feasible climate change mitigation (CCM) actions for China.

Output 3.1.1: Summary of national CCM policies and measures.

Activity 3.1.1.1: Compilation and review of documents on implemented national climate change mitigation policies and actions. The results of this activity are also intended to enhance stakeholders' understanding of these policies and actions and contribute to the identification of climate change mitigation opportunity areas, which can be fed into the evidence base and the strategic approach to deploying relevant green investment.

Activity 3.1.1.2: Conduct of stakeholder consultation to the relevant ministries on the CCM policy-making. Upon completion of the draft summary, the relevant government ministries are expected to provide comments and recommendations. The results of this activity are intended to contribute to the finalization of the description of China's national CCM policies and measures.

Outcome 3.2: Improved accounting of the results and impacts of implemented CCM actions through an improved national MRV system.

Output 3.2.1: Refined methodology and related assumptions for assessing the impact and estimated emission reduction of CCM actions.

Activity 3.2.1.1: Conduct of seminars on methodologies for estimating GHG emission reductions from CCM actions. This involves the organization and conduct of several seminar/meetings for discussions on

the needs identified in the ICAs of the 1BUR and 2BUR; and the development of improved GHG emission reduction estimation methodologies that are integrated and enable the determination of the specific contribution of each factor that bring about GHG emission reduction of CCM actions. This also involves actions to improve the reliability of the estimation process, and the calculation results.

Activity 3.2.1.2: Development of an improved methodology for the assessment of the mitigation effects of climate change policies and actions. This involves updating the projections of GHG emissions in each sector based on the impacts of the application of specific climate change policies and actions. This also takes into account the improvements made so far in the inventory process (e.g., improvements in the methodologies, emission factors and activity data, and systematically sort out the related hypotheses, as well as developing methods that capture long-run relationships between economic activity, energy consumption and emissions).

Output 3.2.2: Report on the completed improvements in, and the operational performance of, the country's measurement, reporting and verification (MRV) system.

Activity 3.3.2.1: Review of the status of the current MRV system in the country. This involves updating of the information on the domestic measurement, reporting and verification (MRV) system, which together with other updated data and information will help support the initial accounting of the country's carbon intensity.

Output 3.2.3: Completed capacity building for relevant government departments on assessment of the effectiveness of implemented CCM policies.

Activity 3.2.3.1: Conduct of capacity building workshops on the assessment of the impacts and effectiveness of implemented CCM policies. This involves the design, organization and conduct of capacity building events for the relevant government departments on the assessment of the effectiveness of implemented CCM policies. This activity is intended to help relevant government departments understand why, how and in what contexts mitigation policies are successful (or otherwise) in achieving their initial aims. This is to be carried out in such a way to ensure capacity is built and sustained in the longer-term by adequately addressing the capacity needs of different departments.

Activity 3.2.3.2: Evaluation of the capacity building program. Towards the end of the 4NC Project, a post-evaluation of the capacity building program will be carried out to determine its impacts and effectiveness, as well as determine further improvements that can be made to it, for use in future NC and BUR projects.

Output 3.2.4: Completed impact assessment and emission reduction estimation of implemented CCM actions.

Activity 3.2.4.1: Development of an improved procedure for the assessment of the effectiveness, impacts and risks (e.g., economic, environmental, social, etc.) of the CCM policies that the national and local governments implement – This involves the review and improvement of existing impact assessment procedures to come up with improved evaluations of the impacts and risks of the improper implementation and non-implementation of CCM policies, as well as the potential social and environmental risks, as well as in the formulation of recommendations to address the impacts and risks. This also includes the development of procedures for assessing the potential risks and impacts of extreme climate events in the implementation of CCM measures and initiatives. The assessment of the

social and environmental risks of the implemented and non-implemented policies, and the formulation of recommendations to address such risks shall be based on the social and environmental screening procedures of the UNDP.

Activity 3.2.4.2: Assessment of the impacts, and estimation of the corresponding the GHG emission reduction from the enforcement, of government policies on CCM actions. This activity involves the systematic review and analysis, using the procedure developed in Activity 3.2.4.1, of the resulting GHG emission reductions. It also includes the evaluation of the accurateness and reliability of the quantitative assessment methodologies for estimating the GHG emissions reduction from implemented CCM policies and actions. Stakeholders and technical experts are to be consulted on the GHG emission reduction estimation methodologies, assumptions and conclusions. Upon completion of the draft assessment report, the pertinent experts are expected to provide comments and recommendations.

Component 4: National circumstances, related financial, technical, and capacity needs, and other relevant information

This component is comprised of interventions to identify and evaluate key natural resources and social and economic indicators, and also formulate an institutional arrangement for NC and BUR preparation. The successful delivery of the planned outputs from this project component are expected to bring about: (a) Enhanced capacity to determine, analyze, refer to, and articulate key national circumstances information in the NC reports and BURs; (b) Enhanced understanding and capacity to determine applicable, feasible and cost-effective CCM and CCA technologies, techniques and measures, and the most suitable financial resources and financing options that can be applied to implement action that address CCM and CCA issues; and (c) Further enhanced public awareness of climate change issues.

Outcome 4.1: Enhanced capacity to determine, analyze, refer to, and articulate key national circumstances information in the national communication (NC) reports and biennial update reports (BUR).

Output 4.1.1: Completed sets of vetted data/information on each pertinent indicator (e.g., natural resources, energy, environment, social and economic) that collectively characterize the country's national circumstances.

Activity 4.1.1.1: Conduct of a literature review and data gathering about China's national circumstances for use in the preparation of the 4NC Report and 3BUR & 4BUR. This involves conduct of research and data gathering on various issues/parameters as these relate to climate change. These include, among others, current socio-economic developments, developments of major industries like the energy sector, strategies, and objectives for future developments.

Activity 4.1.1.2: Conduct of stakeholder consultations on vetted data/information on each pertinent indicator. Upon completion of the draft chapters of China's 4NC, 3BUR and 4BUR relevant government ministries/departments are to provide comments to the MEE on it. This activity is also intended to contribute to the finalization of the description of China's national circumstances and how changes in national circumstances affect GHG emissions over time.

Outcome 4.2: Enhanced understanding and capacity to determine applicable, feasible and cost-effective CCM and climate change adaptation (CCA) technologies, techniques and measures, and the

most suitable financial resources and financing options that can be applied to implement action that address CCM and CCA issues.

Output 4.2.1: Report on capacity-building needs for the identification and determining applicable, feasible and cost-effective CCM&CCA technologies, techniques, and measures.

Activity 4.2.1.1: Evaluation and reporting on the current status of capacity-building in the areas of climate change adaptation (CCA) and mitigation (CCM). This activity focuses on the current status of the capacity-building in the country in CCM&CCA technology applications, NDC and mid-century long term GHG Emissions strategy implementation. In addition, this involves the valuation of the experiences gained, and lessons learned through the implementation of previous national communications preparation works. This activity is intended for greater understanding of three issues: (1) Current technical and institutional capacities and framework; (2) Adequacy of the available expertise (in terms of quantity and quality level of training and experience); and (3) Extent by which the current and previous capacity-building initiatives have addressed the needs of the country and how effective have they been.

Activity 4.2.1.2: Development of a comprehensive analytical framework for assessing the capacity building needs of the pertinent government ministries/departments. Based on Activity 4.2.1.1, the comprehensive analytical framework for assessing the capacity building needs of the pertinent government ministries/departments is to be established, with a focus on identifying and prioritizing the key specific capacity-building needs and gaps in the area of climate change mitigation and adaptation, China's New Nationally Determined Contribution and Mid-century Long Term GHG Low Emissions Strategy.

Output 4.2.2: Report on capacity needs for determining financial resources and financial options for the implementation of appropriate CCM&CCA technologies, techniques, and measures.

Activity 4.2.2.1: Conduct of gap analysis in achieving CCM and CCA objectives. This involves the conduct of an analysis of the current gaps and barriers that are preventing the country in implementing actions to address climate change mitigation and adaptation issues. It also includes the identification of the actions and resources needed to address the gaps and barriers to achieving the country's objectives on climate change mitigation and adaptation.

Activity 4.2.2.2: Evaluation of the financial requirements and the capacity building needs on accessing financial resources to support CCM and CCA actions. This involves the identification of the gaps, barriers, and challenges in the financing of CCM and CCA actions, as well as the assessment of the current needs of China for finance, and capacity-building on the financing of climate change actions. The scope of financial, and financial capacity-building support for addressing climate change are to be described in the 4NC Report and BURs. The evaluation of the support already received from both the government and the Annex 1 countries of the UNFCCC will be presented to enhance understanding and update relevant information.

Outcome 4.3: Further enhanced public awareness of climate change issues.

Output 4.3.1: Completed document on the results, conclusions, and recommendations of the implemented activities for enhancing public awareness about climate change issues.

Activity 4.3.1.1: Assessment of the implemented activities for enhancing public awareness about climate change issues. Despite the extensive body of collaborative research undertaken by Chinese scientists, it is recognized that barriers continue to exist in the dissemination of data and research results. This activity involves the compilation of all reports on the implemented activities for enhancing public awareness about climate change issues. This also includes the preparation of the summary of the results, conclusions, and recommendations of the implemented activities for enhancing public awareness about climate change issues.

Activity 4.3.1.2: Evaluation of the summary of public awareness enhancement activities. This involves the assessment of the results, conclusions and recommendations of these activities that were and are still supported by the Chinese government, devolved administrations and local governments. The results of this activity are intended to contribute to enhancing transparency, scientific integrity and rigor, stimulating innovation, promoting public engagement, and improving efficiency in research.

Output 4.3.2: Completed report on GHG concentration, climate observation and monitoring in China.

Activity 4.3.2.1: Review of the progress on GHG concentration observation and monitoring in China and the world. This involves evaluation of the good practice on modeling GHG emissions and concentration with application to GHG emissions verification, as well conduct of research on comparison of methane emission estimates with atmospheric concentration in the atmosphere as third party verification based on China real circumstance. The research is expected to summarize China's capability for GHG observation and monitoring.

Activity 4.3.2.2: Conduct of an assessment on the progress made by the country in the area of systematic climate/weather observations. This involved identification and evaluation of: (a) gaps as well as recommended improvements; (b) proposed requirements for enhancing systematic climate observation based on the proposed policies on climate change mitigation and adaptation; (c) information on the latest developments in climate system observations (e.g., ground observation and remote sensing); (d) approaches for problem detection and instruments to use to improve systematic observation; and (e) the potential collaboration with global observation systems. The gaps and recommendations and the follow-up plans will be included in the 4NC report and the 3BUR & 4BUR.

Output 4.3.3: Completed capacity building for relevant government departments on collecting information and in assessing technologies, financing of technology applications.

Activity 4.1.6.1: Organization of a capacity building program that is comprised of training and consultation workshops on the assessment of the feasibility and applicability of CCM&CCA technologies, and the financing of such technologies. This activity is expected to increase the information collection and sharing with various departments on the gathering, processing, evaluation and data banking of information about CCM & CCA technology needs and various specifications and parameters characterizing each applicable technology, as well as data on the financial viability and financing of such technologies. The methods, including seminars and training sessions based on requirements of the NC and BUR reporting, as well as inter-ministerial exchanges technology data to build capacity that are needed by different national government departments/agencies in the collection of technical and financial data/information for use in the assessment of the technical and economic feasibilities of different technologies. The targeted groups include officials from the MEE, Ministry of Science and Technology, Ministry of Natural Resources, Ministry of Agriculture and Rural Affairs, NBS, and China Meteorological Administration, etc.

Activity 4.1.6.2: Evaluation of the capacity building program. Towards the end of the 4NC Project, a post-evaluation of the capacity building program will be carried out to determine its impacts and effectiveness, as well as determine further improvements that can be made to it, for use in future NC and BUR projects.

Component 5: Communication of the GHG inventories, NCs and BURs of Hong Kong and Macao Special Administrative Regions (SARs)

This component is to deliver the completed GHG inventories, and the relevant NC reports and BURs of the Hong Kong and Macao SARs. These activities will produce all relevant information that are mainly covered in the reports, such as circumstances, inventory data, mitigation actions and their effects, adaptation policies and other information. With the successful delivery of such outputs will being about better understanding of GHG emissions and sinks in the Hong Kong SAR and Macao SAR, and their improved capacities for NC, and BUR.

Outcome 5.1: Better understanding of GHG emissions and sinks in the Hong Kong and Macao SARs, and improved capacities for NC, and BUR.

Output 5.1.1: Completed workshops on coverage and implementation of Hong Kong and Macao SARs' GHG inventories for the year 2017, 2018 using the IPCC 1996 guidelines, and 2020 utilizing the IPCC 2006 guidelines.

Activity 5.1.1.1: Organization and conduct of meetings, teleconferences between mainland, and Hong Kong SAR and Macao SAR. This involves the holding of consultation and coordination meetings regarding the planning and implementation of the NC and BUR activities of Hong Kong and Macao SARs. This includes the provision of guidance from, and feedback to, the 4NC Team in the implementation of the SAR governments' GHG inventory plans.

Activity 5.1.1.2: Organization and conduct of capacity building training and workshop. This activity is to share methods, experiences and potential data sources across the three teams and to provide recommendations on how to improve each of the inventories for the 5 sectors that are covered in the national GHG inventory, as well as to exchange best practice of applying the IPCC 2006 Guidelines on calculation, QA/QC and review implementation for identifying any areas of ambiguity and/or difference in the approach to QA implementation.

Output 5.1.2: Completed workshops on assessment methodologies for Hong Kong and Macao's mitigation actions.

Activity 5.1.2.1 Organization and conduct workshops on assessment methodologies for Hong Kong and Macao's mitigation actions. This involves the holding of workshops to discuss methodologies to estimate emission reductions of mitigation actions. The findings, conclusions and recommendations of the workshops will feed into plans for improvements for the 2017, 2018 and 2020 submission.

Output 5.1.3. Completed chapters of Hong Kong and Macao NC and BUR in the 4NC Report, 3BUR and 4BUR.

Activity 5.1.3.1: Conduct of a literature review and data gathering about Hong Kong SAR's circumstances for use in the preparation of the 4NC Report and 3BUR & 4BUR. This involves conduct of research and data gathering on various issues/parameters as these relate to climate change. These include, among others, current socio-economic developments, developments of major industries like the energy sector, strategies, and objectives for future developments.

Activity 5.1.3.2: Conduct of a literature review and data gathering about Macao SAR's circumstances for use in the preparation of the 4NC Report and 3BUR & 4BUR. This involves conduct of research and data gathering on various issues/parameters as these relate to climate change. These include, among others, current socio-economic developments, developments of major industries like the energy sector, strategies, and objectives for future developments.

Activity 5.1.3.3 Reporting checks. Revisions would be made based on recommendations from consultants from the perspective of technical, length, accuracy and code of language.

Output 5.1.4: Updated GHG inventories in the Hong Kong and Macao SARs for years 2017, 2018, and 2020.

Activity 5.1.4.1: Preparation of the Hong Kong SAR's GHG Inventories for years 2017, 2018, and 2020. This activity includes collection of activity data, making sure that these are within the scope of IPCC; identification of main parameters (e.g., carbon content, low heat value, net calorific values), and the preparation of quantitative analysis of uncertainty of the inventories to increase the transparency of the reports. The vetting of the work done on the GHG inventories would be done by Hong Kong SAR's local team. The local stakeholders and SAR government departments are to be consulted and coordinated with by the Hong Kong SAR's NC project team in all aspects of the data gathering and GHG inventory work.

Activity 5.1.4.2: Preparation of the Macao SAR's GHG Inventories for years 2017, 2018, and 2020. This activity includes collection of activity data, making sure that these are within the scope of IPCC; identification of main parameters (e.g., carbon content, low heat value, net calorific values); and the preparation of quantitative analysis of uncertainty of the inventories to increase the transparency of the reports. The vetting of the work done on the GHG inventories would be done by Macao SAR's local team. The local stakeholders and SAR government departments are to be consulted and coordinated with by the Macau SAR's NC project team in all aspects of the data gathering and GHG inventory work.

Activity 5.1.4.3: Review of the Hong Kong SAR's GHG Inventories for years 2017, 2018, and 2020. This involves the organization and conduct of workshops (at least 2) to discuss and review the data, assumptions and procedures used in the preparation of the draft GHG inventories. It involves the review of the reporting issues of transparency, completeness, consistency, comparability, or accuracy that need to be resolved by the Hong Kong SAR's local team. Adjustments/revisions of the data and information used may have to be done by the Hong Kong SARs local NC project team based on the results of the review.

Activity 5.1.4.4: Review Macao SAR's GHG Inventories for years 2017, 2018, and 2020. This involves the organization and conduct of workshops (at least 2) to discuss and review the data, assumptions and procedures used in the preparation of the draft GHG inventories. It involves the review of the reporting issues of transparency, completeness, consistency, comparability, or accuracy that need to be resolved

by the Macau SAR's local team. Adjustments/revisions of the data and information used may have to be done by the Hong Kong SARs local NC project team based on the results of the review.

Output 5.1.5: Updated supplementary information on climate change in the Hong Kong and Macao SAR's.

Activity 5.1.5.1: Conduct of knowledge sharing events. This entails the organization and conduct of knowledge sharing events is to finalize the description of Hong Kong SAR's and Macao SAR's circumstances and how changes in relevant circumstances affect GHG emissions over time.

Component 6: UNFCCC reporting obligations, e.g., NC and BUR

This component is to produce and submit China's 4NC and 3BUR, and 4BUR. The 3BUR is a summary of parts of the fourth national communication (4NC) of China and submitted together with 4NC to the UNFCCC. The 4BUR and 1BTR will be prepared and submitted separately. The submission of the 4NC, 3BUR and 4BUR manifests China's compliance to the reporting obligations to the UNFCCC. The 3BUR and 4BUR are subject to International Consultation Analysis (ICA) process, relevant responding procedures would be followed.

Outcome 6.1: China's compliance to the reporting obligations to the UNFCCC.

Output 6.1.1: Improved working mechanisms for the preparation of the required reports in UNFCCC (4NC, 3BUR, 4BUR) reporting.

Activity 6.1.1.1: Development a UNFCCC reporting improvement program. This activity involves the conduct of research on improving information collection needed in the preparation of the NC and BURs, focusing on prioritizing improvement needs and contracting the improvement work via a framework contract with key stakeholders. This also includes the design of an improvement program that aims to ensure transparency, consistency, comparability, completeness and accuracy of the reports.

Activity 6.1.1.2: Conduct of coordination and discussion meetings. This involves the organization and holding of meetings between the 4NC team and stakeholders on the procedures, protocols and working arrangements for the preparation of the required reports in complying with UNFCCC reporting.

Output 6.1.2: Completed capacity building of relevant departments participating in the report preparation

Activity 6.1.2.1: Assessment of the compliance of the current capacity building activities to the UNFCCC obligations. This involves the review of current research and related capacity building on all aspects of complying with obligations to the UNFCCC particularly in all requirements in the preparation of national communication and biennial update reports.

Activity 6.1.2.2 Organization and conduct of capacity building events. This involves the holding of training on national communications and biennial update reporting for the relevant government agencies. It includes the sharing good practice of other countries regarding the preparation of the required reports that will adequately meet the country's reporting obligations to the UNFCCC. The training includes the improved working mechanisms (Output 6.1.1), which support extensive stakeholder engagement, smooth and timely data collection and coordinated and effective organization.

Activity 6.1.2.3: Organization and conduct of seminars/exchanges with other countries. This involves discussions in line with the process of ICA of BURs from developing country Parties under the Subsidiary Body for Implementation (SBI), a process that aims to increase the transparency of mitigation actions and their effects, in a manner that is non-intrusive, non-punitive and respectful of the national sovereignty.

Output 6.1.3: Finalized and submitted 4NC, 3BUR, 4BUR (Chinese & English) to the UNFCCC

Activity 6.1.3.1: Preparation of the draft 4NC, 3BUR, 4BUR. This entails drafting of the reports and utilizing the lessons learned from the previous NC projects; good practices from other countries and knowledge and skills gained from relevant capacity building activities; and compilation of the results from the other components of the 4NC Project. The preparation of the 3BUR and 4BUR will consider the enhanced transparency recommendations identified in the international consultation and analysis (ICA) of the 1BUR and 2BUR.

Activity 6.1.3.2: Organization and conduct of stakeholder consultation and review meetings. This involves the holding of technical review meetings to evaluate the draft reports, checking of relevant information, as well as inventory input data for scope, completeness, consistency with data for recent years and (where available) verification against other independent datasets. All of these are to confirm compliance with the requirements of UNFCCC.

Activity 6.1.3.3: Conduct of reporting checks. This involves the performance of a range of common checks before the finalization and submission of the 4NC Report, 3BUR, 4BUR (Chinese & English). Compilers check whether the information are complete and consistent; GHG emission totals at national and sub-category level are checked against the national GHG dataset, to minimize risks of data transcription errors into reporting templates.

Activity 6.1.4: Finalization and submission of the 4NC Report, 3BUR, 4BUR. This involves the completion of the 4NC report, 3BUR, 4BUR after the stakeholder consultations and vetting, and the performance of the checks. The 4NC Report and 3BUR are expected to be submitted by the end of 2022; and the 4BUR is expected to be submitted by the end of 2024.

Partnerships

As the project outcomes meant to deliver a full picture of China's climate change related situation, actions, achievements, and needs, 4NC would advocate the engagement of eligible partners at all levels during the implementation. The target partners include not only relevant domestic ministries, research institutions and universities, but also other international entities and agencies that would benefit China in improving its capacity on climate MRV. After President Xi Jinping's announcement that China aims to have CO2 emissions peak before 2030 and achieve carbon neutrality before 2060 in 2020, a leading group for CO2 emissions peak and carbon neutrality has been established. The Working Group on Carbon Emission Statistics and Accounting was set up under the above newly leading group and MEE is the member of the leading group for CO2 emissions peak and carbon neutrality and the working group on Carbon Emission Statistics and Accounting. MEE, as the national authority for GHG inventory and UNFCCC compliance, will coordinate relevant partners and ensure the timely delivery of project outputs. The key partners of the project are the members of National Leading Group for Climate Change, Energy Conservation and Emissions (NLGCCECE) and the newly leading group for CO2 emissions peak and

carbon neutrality. Before finalizing, the outputs of the project would be reviewed by all members of NLGCCECE.

Two aspects will be taken into consideration while shaping the partnership strategy for this project. The first is to enhance the coordination and implementation capacity, and the second is to take full advantage of the technical support capacity and services of each partner.

In addition, the private sector will be engaged in the design and implementation of the main activities of the project. For example, a private printing company provides the reproduction services of the prepared national communications and biennial update reports. Like in the previous national communications project, the private sector will be engaged in the implementation of specific activities of this 4NC Project. In the preparation of national GHG inventory, capable and qualified private sector entities will be engaged in conducting the planned investigations and data gathering about activity data and emission factors. In the conduct of the planned studies on climate change mitigation and adaptation, selected private sector entities will be engaged to provide services.

China has also applied for funding for its Capacity Building Initiative for Transparency (CBIT). While the CBIT project will focus on building and improving the working mechanism and technical capacity of the country in compiling inventory and biennial transparent report according to modalities, procedures, and guidelines of the enhanced transparency framework under the Paris Agreement, capacity building is a common thread between the CBIT project and the 4NC Project. Actually such partnership is reciprocal since the CBIT Project will also build capacity in preparing the BUR4 in line with the MPGs. The objective of the CBIT is to perform transparency-related obligations under the Paris Agreement in accordance with the relevant outcome of the Katowice Conference. The two projects will be coordinated in four ways. Firstly, during the development of annual work plans and specific activities since the project team members are from the same departments, the methodology developed in CBIT (such as mitigation policy, adaptation, FTC support) can also be potentially used in the preparation of the 4NC report, where necessary. Secondly, during the conduct of capacity building activities the two projects could be coordinated in the design, organization and conduct of these activities, to avoid duplicated work, the normalized reporting mechanism designed and established by CBIT will improve the efficiency of the 4NC Project team in terms of reporting. Thirdly, during the conduct of institutional capacity building activities. For example, in proposing the MRV system or data management plan for GHG inventories, all provisions on NCs, BURs and BTR will be considered, and the ultimate goal is to fulfill the obligation of BTR and NCs, since the preparation of BURs will end in 2024, the CBIT Project will support China' s GHG inventory team to adopt 2006 guidelines as much as possible in a voluntarily manner. Fourthly, the 4NC Project is the basis of the CBIT project. The 4NC Project provides status-quo for (1) understanding current timeline and management arrangements for inventory preparation, (2) investigating the framework and functions of national GHG inventory database, (3) analyzing the assessment indicators of emissions reduction policies and actions, and the data needs and assessment approach of different indicators; and (4) designing a scheme for transparency system on financial support, . All of these are necessary for implementing the CBIT Project.

Implementation Risks

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner
1	Project activities might not be	Social	Impact (I) =3 Likelihood (P)	The project could potentially offer a wide range of opportunities, for individuals and groups get	MEE

	implemented in a gender-sensitive manner		=1 Risk level: Low	trained in capacity development program activities, to be hired as a consultant or contractor for the project implementation. If care is not taken, any existing discrimination in the country towards woman could continue to come to play through the project. Special measures to ensure that any potential discrimination against women in the implementation of the project is countered have been identified and included in the project design. The results of such measures will be observed during project implementation, and if any corrective action is necessary, this will be addressed. Beyond that, the PMO will make special efforts to explore and facilitate the inclusion of interventions to enhance the role of women. Special activities have been designed to involve women, e.g., in the productive use of RE activities, to have strong representation of women in training courses and seminar-workshops, and to ensure a significant proportion of project consultants are women.	
2	Inadequate and possibly constrained coordination during the implementation of the project.	Political Strategic Regulatory	Impact=4 Likelihood=3 Risk Level: Medium	MEE and the project management unit shall maintain close working relations with relevant departments of the State Council and make necessary adjustments to the work in a timely manner according to the adjustment of national policies, which can ensure the implementation of the project and achieve optimal results. In case this happens, MEE will facilitate discussions with project stakeholders and relevant government authorities through the project steering committee (PSC) to come up with decisions on the coordinated implementation of the agreed barrier removal activities.	MEE
3	Difficult to submit the reports in a timely manner.	Operational	Impact (I) =4 Likelihood (P) =2 Risk level: Medium	China intends to submit the GHG inventory of the year 2017, 2018 and 2020. According to the requirements of UNFCCC, the chosen reporting year in NCs shall not be 4 years earlier than the submission year. Therefore, the preparation is under time pressure and involves heavy work.	MEE
4	Failure to promote the project affected by COVID-19	Social Health	Impact (I) =3 Likelihood (P) = 1 Risk level: Low	The project will always pay attention to the impact of the COVID-19 on the implementation of the project. When necessary, the project will carry out the socio-economic impact assessment of the impact of COVID-19 on the progress of the project, and promote the implementation of the project according to the plan through various means, such as online meeting, telephone, etc.	MEE

Stakeholder Engagement and South-south Cooperation

Based on the previous work experience through the implementation of three NCs, the project will broaden and consolidate the network of stakeholders, including those in the government, research and education institutions, associations, social groups, enterprises, individuals and NGOs. Through subcontracts and consultant contracts, this project would further enhance the quality of designed deliverable outputs and technical capacity of undertaking ICA (International Consultancy Analysis).

Highlight here specific actions on south-south and triangular cooperation to present opportunities for replication in other countries, and to facilitate dissemination through global ongoing South-South and global platforms, such as Africa Solutions Platform, the UN South-South Galaxy knowledge sharing platform and PANORAMA[3]. In addition, to bring the voice of [China] to global and regional fora, the project will explore opportunities for meaningful participation in specific events where UNDP could support engagement with the global development discourse on [Good Practices of Mitigation Action]. The project will furthermore provide opportunities for regional cooperation with countries that are implementing initiatives on [Adapting to Climate Change] in geopolitical, social and environmental contexts relevant to the proposed project in [China].

Gender Equality and Women's Empowerment

China has devoted itself to the promotion of gender equality and protection of women's rights and interests. We ensure that gender equality considerations are mainstreamed in the project and will enhance women's participation in every stage of the project. More female experts will be hired when recruiting the project team and female participants' number in important positions will be increased. The total number of female experts will account for more than 50% of the total number of project participants. At the same time, female experts will participate in the work of each sub-project.

The participation of women in the project will be further increased: more female experts will be involved in key tasks and the professional opinions of more female experts will be adopted. To ensure that women receive more professional support and assistance in the project, we will focus more on strengthening the training of female experts: women will have priority access to training and exchange opportunities.

China has always paid attention to equality between men and women in terms of remuneration and advocated equal pay for equal work. At present, women get the same salary and enjoy the same benefits as men in the same position.

On this basis, we will give more consideration to the contribution of women at work and are committed to providing more benefits for women in the project. Gender analysis and a gender action plan have been formulated and gender-sensitive indicators will be incorporated into the project's logical framework. In mid-term and final evaluation of the project, women's participation and benefits will be assessed.

Innovativeness, Sustainability and Potential for Scaling Up:

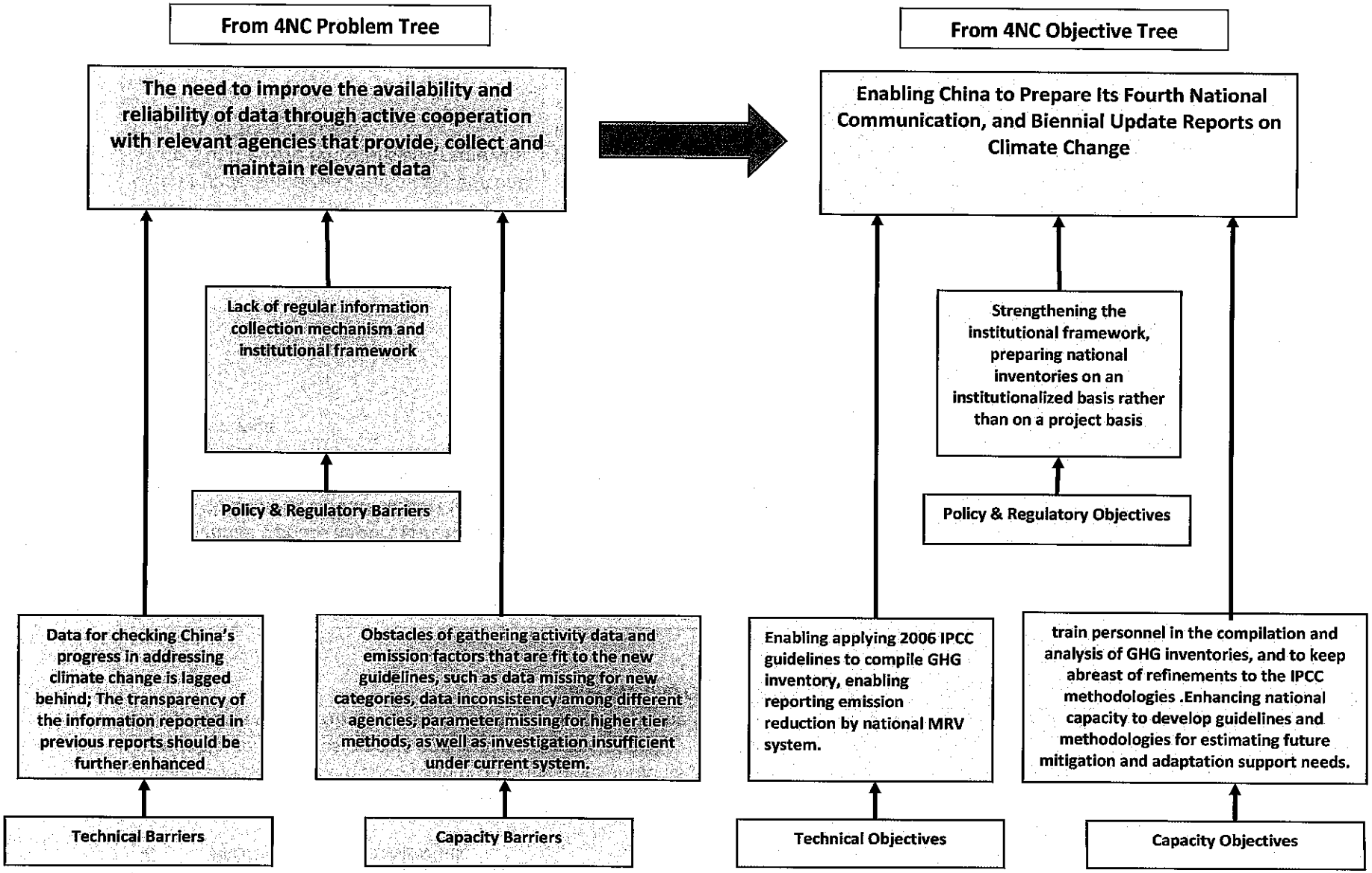
[3] https://panorama.solutions/en

Innovativeness: The project will promote mature transparency through institutional and institutional building. China has been facing challenges in regards the transparency of its GHG emission data and information reporting. This project is intended, among others, to help China in upgrading the national GHG inventory database and exploring the best practice in designing capacity building events for relevant domestic officials from the ministries. These are new attempts and could provide reference to other projects both in China and other developing countries.

Sustainability: China has gradually improved the GHG emission reporting system to ensure the sustainability of China's National Communication and Initial Biennial Update Report. The system will optimize the allocation of resources through work integration and ensure the implementation by updating the methodologies and data in the system. In the second stage, the system will be optimized and upgraded to add more functions. Capacity building will be carried out at the regional and enterprise levels to raise awareness of information reporting and promote sustainability. In addition, project activities will be continuously improved to maximize project sustainability based on lessons learned and knowledge gained during project implementation.

Potential for scaling up: The project strives for potential outreach through best practices of project implementation, and it will enhance replicability by identifying best practice activities. The methodologies and guideline developed at the national level from the project can be used to prepare GHG inventories, carbon intensity approaches at the local and enterprise levels. The results of the project can support local governments to formulate carbon intensity reduction targets and formulate GHG control strategies at the enterprise level on the base of science. From an international point of view, the project will have an immeasurable positive impact. Sharing China's new achievements and innovative experience in transparency with the international community will help other developing countries with similar situation to improve transparency related research and capacity-building. The project also plans to further share best practices and lessons learned through international and South-South cooperation platforms related to the GEF, further enhance the accessibility of project outputs to the public and enhance interaction during and after project implementation.

Theory of Change



V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): Goal 13: "Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy"; and to a lesser extent to Goal 7: "Ensure access to affordable, reliable, sustainable and modern energy for all".				
This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): Support China toward a low carbon development path				
	Objective and Outcome Indicators	**Baseline**	**Mid-term Target**	**End of Project Target**
Project Objective: **To enable China to prepare its fourth National Communication (4NC) and the third Biennial Update Report (3BUR) and the fourth Biennial Update Report (4BUR), in order to fulfill the obligations under the United Nations Framework Convention on Climate Change.**	**Mandatory** Indicator 1: No. of new additional individuals that are directly benefited from the implementation of the project. • Male: • Female:	 0 0	 50 60	 100 120
	Indicator 2: Progress towards completion, government-approval, and submission of reports to the UNFCCC, % completion. • 4NC • 3BUR • 4BUR	 0 0 0	 100% 100% 0%	 100% 100% 100%
Project Component 1:	**National Greenhouse Gas (GHG) inventory**			
Outcome[4] 1.1 Clearer understanding of the magnitude and sources of the GHG emissions and removals from the different sectors.	Indicator 3: No. of completed GHG inventories that are used in the preparation of the NC and BURs.	5	7	8
	Indicator 4: No. of updated yearly data sets uploaded to the National GHG Emissions Database and used in the preparation of the NC and BURs.	5	7	8

[4]*Outcomes are medium term results that the project makes a contribution towards, and that are designed to help achieve the longer-term objective. Achievement of outcomes will be influenced both by project outputs and additional factors that may be outside the direct control of the project.*

	Indicator 5: No. of governmental entities that are capable of producing acceptable and useful time series of sectoral GHG emissions applying 2006 IPCC guidelines.	0	0	5
	Indicator 6: No. of trained GOC agencies that regularly collect, update, analyze and report required data and analytical information used for conducting and preparing GHG inventories.	12	14	14
Outputs to achieve Outcome 1.1	1.1.1. National GHG Inventories 2017 and 2018 for the 4NC and 3BUR with recalculation of historic GHG inventories applying IPCC 1996 guidelines; 1.1.2. National GHG Inventory 2020 for the 4BUR with recalculation of historic GHG inventories applying 2006 IPCC guidelines; 1.1.3. Improved national GHG inventory database system and updated inventory database. 1.1.4. Improved national system and mechanism for a sustainable GHG data collection, preparation and archiving process with extensive stakeholder engagement, smooth and timely data collection and coordinated and effective organization. 1.1.5 Completed capacity building of relevant government departments in collecting required data and information for conducting and preparing GHG inventories.			
Project Component 2	**Impacts of vulnerability and adaptation to climate change**			
Outcome 2.1 Better understanding of China's vulnerability to the threats of climate change and improved accuracy of prediction of impacts in the vulnerable sectors of the country.	Indicator 7: No. of governmental entities that are capable of producing improved climate change vulnerability and adaptation assessments and improved formulations of climate change adaptation measures and plans.	1	2	4
Outputs to achieve Outcome 2.1	2.1. Results of the updated analyses of climate change characteristics and future trends in China. 2.2. Report on the climate change impact and vulnerability assessments in agriculture, water resources, coastal zones, terrestrial ecosystems, human health. 2.3. Report on the impacts of the frequency and intensity of extreme climate events and climate change related disasters. 2.4. Report on the effectiveness analysis on implemented adaptation actions. 2.5 Completed capacity building for relevant government departments on collecting climate data/information and assessment of climate change impact and vulnerability.			

Project Component 3	**Mitigation policies and actions for climate change**			
Outcome 3.1 Enhanced understanding of the appropriate policies to enable the proper planning and implementation of prioritized applicable and feasible climate change mitigation (CCM) actions for China.	Indicator 8: No. of formulated and recommended new or improved national CCM policies and feasible CCM actions plans.	0	2	3
Outputs to achieve Outcome 3.1	3.1.1. Summary of national CCM policies and measures.			
Outcome 3.2 Improved accounting of the results and impacts of implemented CCM actions through an improved national MRV system.	Indicator 9: No. of governmental entities that can capably report evidence-based GHG emission reduction data using the country's official MRV system.	7	34	65
Outputs to achieve Outcome 3.2	3.2.1. Refined methodology and related assumptions for assessing the impact and estimated emission reduction of CCM actions. 3.2.2.Report on the completed improvements in, and the operational performance of, the country's measurement, reporting and verification (MRV) system. 3.2.3. Completed capacity building for relevant government departments on assessment of the effectiveness of implemented CCM policies. 3.2.4. Completed impact assessment and emission reduction estimation of implemented CCM actions.			
Project Component 4	**National circumstances, related financial, technical, and capacity needs, and other relevant information**			
Outcome 4.1 Enhanced capacity to determine, analyze, refer to, and articulate key national circumstances information in the national communication (NC) reports and biennial update reports (BUR).	Indicator 10: No. of governmental entities that are substantially involved and/or contributing to the performance of analyses of the various in-country factors that affects and impacts on the climate and climate change situation in the country as articulated in the NC Reports and BURs	2	30	30
Outputs to achieve Outcome 4.1	4.1.1 Completed sets of vetted data/information on each pertinent indicator (e.g., natural resources, energy, environment, social and economic) that collectively characterize the country's national circumstances			

Outcome 4.2 Enhanced understanding and capacity to determine applicable, feasible and cost-effective CCM and climate change adaptation (CCA) technologies, techniques and measures, and the most suitable financial resources and financing options that can be applied to implement action that address CCM and CCA issues.	Indicator 11: No. of governmental government entities that are capable of: •Identifying, assessing, planning, designing, implementing: •Identifying and sourcing financing for the implementation of: •Gathering, processing, storing, managing: Feasible and applicable CCM & CCA technologies, techniques, and measures.	3	3	10
Outputs to achieve Outcome 4.2	4.2.1. Report on capacity-building needs for the identification and determining applicable, feasible and cost-effective CCM&CCA technologies, techniques, and measures. 4.2.2. Report on capacity needs for determining financial resources and financial options for the implementation of appropriate CCM&CCA technologies, techniques, and measures.			
Outcome 4.3 Further enhanced public awareness of climate change issues.	Indicator 12: No. of people that have improved understanding of the climate change issues of the country. climate and weather forecasts for China.	0	500	1000
Outputs to achieve Outcome 4.3	4.3.1. Completed document on the results, conclusions, and recommendations of the implemented activities for enhancing public awareness about climate change issues. 4.3.2 Completed report on GHG concentration, climate observation and monitoring in China. 4.3.3. Completed capacity building for relevant government departments on collecting information and in assessing technologies, and financing of technology applications.			
Project component 5	**Communication of the GHG inventories, NCs, and BURs of the Hong Kong and Macao Special Administrative Regions (SARs)**			
Outcome 5 Better understanding of GHG emissions and sinks in the Hong Kong and Macao SARs, and improved capacities for NC, and BUR.	Indicator 13: No. of SAR agencies that are capable of producing improved GHG inventories, vulnerability and adaptation assessments and improved formulations of CCM and CCA measures and plans. Indicator 14: Progress towards completion, SAR government-approval, and submission of reports to P.R. China,	0	2	3

	% completion. • 4NC • 3BUR • 4BUR •	 0 0 0	 100% 100% 0%	 100% 100% 100%
Outputs to achieve Outcome 5.1	5.1.1. Completed workshops on coverage and implementation of Hong Kong and Macao SARs' GHG inventories for the year 2017, 2018 using the IPCC 1996 guidelines, and 2020 utilizing the IPCC 2006 guidelines. 5.1.2. Completed workshops on assessment methodologies for Hong Kong and Macao SARs' mitigation actions. 5.1.3. Completed chapters of Hong Kong and Macao SARs' NC and BUR in the 4NC Report, 3BUR, 4BUR. 5.1.4. Updated GHG inventories in the Hong Kong and Macao SARs for years 2017, 2018, and 2020. 5.1.5. Updated supplementary information on climate change in the Hong Kong and Macao SAR's.			
Project Component 6	**UNFCCC reporting obligations, e.g., NC, BUR**			
Outcome 6 China's compliance to the reporting obligations to the UNFCCC.	Indicator 15: No. required reports prepared, translated and submitted to UNFCCC.	5	7	8
Outputs to achieve Outcome 6.1	6.1.1. Improved working mechanisms for the preparation of the required reports UNFCCC (4NC, 3BUR, 4BUR) reporting. 6.1.2. Completed capacity building of relevant departments participating in the report preparation. 6.1.3. Finalized and submitted 4NC, 3BUR, 4BUR (Chinese & English) to the UNFCCC.			

VI. MONITORING AND EVALUATION (M&E) PLAN

The project results, corresponding indicators and end-of-project targets in the project results framework will be monitored annually and evaluated periodically during project implementation. The Monitoring Plan included in Annex details the roles, responsibilities, and frequency of monitoring project results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. The UNDP Country Office is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements.

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF Monitoring Policy and the GEF Evaluation Policy and other relevant GEF policies[5]. The costed M&E plan included below, and the Monitoring plan in Annex 4, will guide the GEF-specific M&E activities to be undertaken by this project.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report.

Continuous monitoring and periodic review will be conducted for project execution, overall project management and related effectiveness evaluation, including schedule monitoring and financial compliance review. Project monitoring and evaluation will be performed by the project management office in accordance with established UNDP and GEF procedures. At the same time, project monitoring and evaluation can ensure the effective use of resources to enable Parties and other stakeholders benefit from or be positively affected by the project. This will also improve the performance in the project implementation process by providing a set of methods for project design, implementation and management, to ensure that all project outputs meet the requirements of project design and have good quality.

Inception Workshop and Report

A project inception workshop will be held within 60 days of project CEO endorsement, with the aim to:

a. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
b. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
c. Review the results framework and monitoring plan.
d. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
e. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework and other safeguard requirements;

[5] See https://www.thegef.org/gef/policies_guidelines

project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.

f. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
g. Plan and schedule Project Board meetings and finalize the first-year annual work plan.
h. Formally launch the Project.

GEF Project Implementation Report (PIR):

The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR. The PIR submitted to the GEF will be shared with the Project Board. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

Independent Mid-term Review (MTR):
The terms of reference, the review process and the final MTR report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC).

The evaluation will be 'independent, impartial and rigorous'. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

The final MTR report and MTR TOR will be publicly available in English and will be posted on the UNDP ERC by the date as indicated on cover page of this project document. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's completion.

End of Project

An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center.

The evaluation will be 'independent, impartial and rigorous'. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC by the date as indicated on cover page of this project document. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.

To ensure that project activities could be implemented in a consistent, coordinated and organized manner, project executors with main stakeholders will formulate reasonable operating mechanism, monitoring and evaluation program and implementation arrangements. Project monitoring and evaluation plan will be based on certain project evaluation indicators as well as validation methods related to project objectives, purposes, outputs and activities etc. Also, PSC will put forward opinions on the monitoring and evaluation plan and pass through this monitoring and evaluation plan.

Every target and activities of the projects during project execution will be monitored and evaluated. Part IV in this document presents the annual objectives and monitoring plan. Project indicators, assessment method and project supervision/assessment of responsibility proposed in project files, will be introduced and confirmed at the project start meeting and project monitoring and evaluation plan will also be provided and finalized in Inception Report of the project.

Final Report

The project's terminal GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information

To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[6] and the GEF policy on public involvement[7].

Monitoring and Evaluation Plan and Budget:		
GEF M&E requirements	**Indicative costs (US$)**	**Time frame**
Inception Workshop	10,000	Within 60 days of CEO endorsement of this project.
Inception Report	None	Within 90 days of CEO endorsement of this project.
Monitoring of Project Results Framework (Log Frame) indicators	2,500 per year	Annually typically between June-August
Project Board Meetings	5,000 per year	Annually
Supervision missions	None	Annually
Independent Mid-term Review (MTR)	30,000	Refer to the cover page

[6] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/
[7] See https://www.thegef.org/gef/policies_guidelines

Independent Terminal Evaluation (TE)	30,000	Refer to the cover page
TOTAL indicative COST	100,000	

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

General roles and responsibilities in the project's governance mechanism

This Project will be implemented in accordance with the UNDP's national implementation modality (NIM). In this implementation modality, the project is implemented by the government. UNDP identifies a suitable national entity as Implementing Partner (IP) to implement the project. Where necessary other national/local government entity/entities can be designated as responsible partner(s) to assist the IP. The IP directly assumes the responsibility for the delivery of the project outputs and carries out all activities towards the achievement of these outputs. UNDP has no role in the execution of the project activities. Its role is limited to overseeing the project implementation on behalf of the GEF. In NIM, the government regulations, rules and procedures shall apply to project implementation to the extent that they do not contravene the principles of the financial regulations and rules of UNDP and GEF, and unless requested by the IP, in which case UNDP rules shall apply.

UNDP (as the GEF Agency) oversees the implementation of the project. It will not be executing any project activity apart from the required GEF Agency project cycle management services. It will ensure compliance with the specific instructions that must be followed regarding the financial management requirements to be complied with the IP, as well as ensure that the GEF Minimum Fiduciary Standards Requirements are met by the IP and other designated responsible party/parties at all stages of project implementation.

Implementing Partner

The Implementing Partner for this project is the Ministry of Ecology and Environment.

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems;

- Risk management as outlined in this Project Document;

- Procurement of goods and services, including human resources;

- Financial management, including overseeing financial expenditures against project budgets;
- Approving and signing the multiyear work-plan;
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

Responsible Parties

During the 4-year implementation period of the Project, the Ministry of Ecology and Environment, as the implementing partner will require the cooperation and services of several responsible parties to implement or support the implementation of the project activities.

MOF will receive the GEF grant for the implementation of the FNC project on behalf of the Chinese Government. MOF will be a member of the Project Steering Committee, and it will have a key role in providing guidance, coordination and supervision on the disbursement and expense of GEF grant, performance evaluation, summary, and promotion of project results.
FECO will be responsible for the execution of the project on behalf of MEE under the technical guidance of the Department of Climate Change of MEE. The project management office, headed by a deputy director general, is set in FECO who will report to the MEE.

CMA will establish its climate prediction system combining statistical methods with dynamic climate models, making qualitative and quantitative assessment of climate impacts on agriculture, water resources, transportation, energy, ecological environment and human health.

NBS will would provide statistic data to inform the inventory compilers.

NCSC, MEE will be responsible for national inventory system management and planning. Activities include collecting and processing data from a wide range of sources; selecting appropriate emission factors and estimation methods according to IPCC guidance; compiling the inventory; managing inventory QA/QC including QC of raw and processed data and data management tools, documentation and archiving, prioritization of methodology and data improvements; carrying out uncertainty assessments and assisting with International Consultative Analysis (ICA) process.

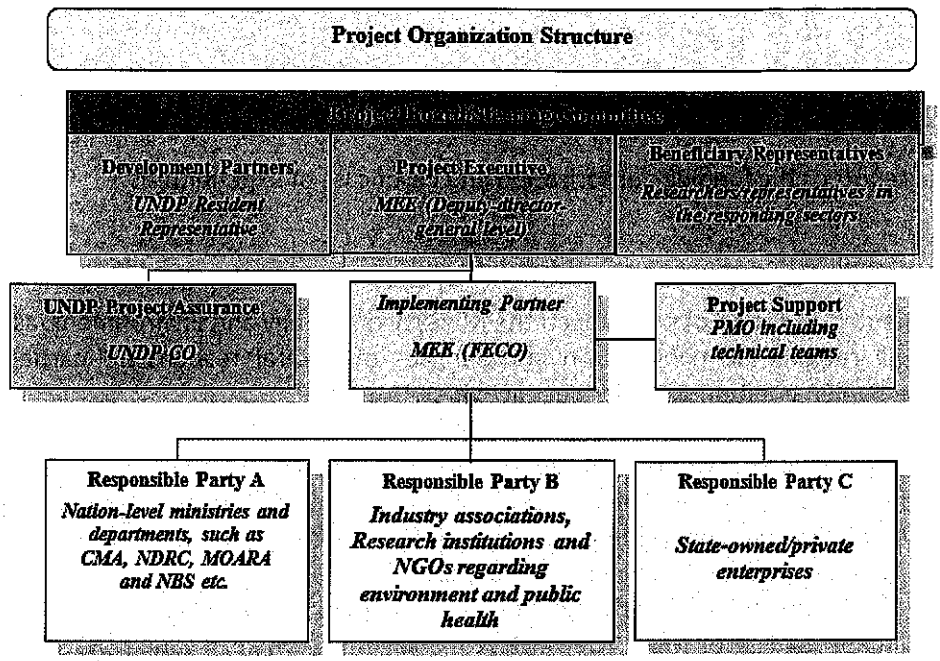
Project stakeholders and target groups

The effective implementation of this project requires full play of the roles of the NLGCC members, as well as the participation of local governments, civil societies, research institutes, universities, non-governmental organizations (NGOs). Designated and commissioned by the MEE, which is the project executing entity, FECO will be responsible for specific execution on behalf of MEE.

UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes overseeing project execution undertaken by the Implementing Partner to ensure that the project is being carried out in accordance with UNDP and GEF policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. **The UNDP GEF Executive Coordinator, in consultation with UNDP Bureaus and the Implementing Partner, retains the right to revoke the project DOA, suspend or cancel this GEF project.** UNDP is responsible for the Project

Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.

Project governance structure



Second line of defense

- Regional Bureau oversees RR and Country Office compliance at portfolio level.
- BPPS NCE RTA oversees technical quality assurance and GEF compliance. BPPS NCE PTA oversees RTA function.
- UNDP GEF Executive Coordinator and Regional Bureau Deputy Director can revoke DOA/cancel suspend project or provide enhanced oversight.

The UNDP Resident Representative assumes full responsibility and accountability for oversight and quality assurance of this Project and ensures its timely implementation in compliance with the GEF-specific requirements and UNDP's Programme and Operations Policies and Procedures (POPP), its Financial Regulations and Rules and Internal Control Framework. A representative of the UNDP Country Office will assume the assurance role and will present assurance findings to the Project Board, and therefore attends Project Board meetings as a non-voting member.

OFP, on behalf of the Ministry of Finance, conducts guidance over the implementation of the project. Major changes in the project, such as the adjustment of investment funds and policy coordination funds in the project by more than 15%, terminating the implementation of Project and some other important changes, should be reported to, seek advice of and agreed by the Ministry of Finance. OFP coordinates various departments in the ministry to express their opinions on major changes. For the adjusted plan, the Ministry of Finance, together with UNDP, is responsible for supervising the implementation of major changes.

The Project Board (also called Project Steering Committee) is responsible for taking corrective action as needed to ensure the project achieves the desired results. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.

The two main (mandatory) roles of the project board are as follows:

1) **High-level oversight of the execution of the project by the Implementing Partner** (as explained in the "Provide Oversight" section of the POPP). This is the primary function of the project board

and includes annual (and as-needed) assessments of any major risks to the project, and decisions/agreements on any management actions or remedial measures to address them effectively. The Project Board reviews evidence of project performance based on monitoring, evaluation and reporting, including progress reports, evaluations, risk logs and the combined delivery report. The Project Board is responsible for taking corrective action as needed to ensure the project achieves the desired results.

2) **Approval of strategic project execution decisions of the Implementing Partner** with a view to assess and manage risks, monitor and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution decisions of the Implementing Partner (as explained in the "Manage Change" section of the POPP).

Requirements to serve on the Project Board:

- ✓ Agree to the Terms of Reference of the Board and the rules on protocols, quorum and minuting.
- ✓ Meet annually; at least once.
- ✓ Disclose any conflict of interest in performing the functions of a Project Board member and take all measures to avoid any real or perceived conflicts of interest. This disclosure must be documented and kept on record by UNDP.
- ✓ Discharge the functions of the Project Board in accordance with UNDP policies and procedures.
- ✓ Ensure highest levels of transparency and ensure Project Board meeting minutes are recorded and shared with project stakeholders.

Responsibilities of the Project Board: *to be included in the TOR of the Project Board*

- ✓ Consensus decision making:
  - The project board provides overall overall guidance and direction to the project, ensuring it remains within any specified constraints, and providing overall oversight of the project implementation.
  - Review project performance based on monitoring, evaluation and reporting, including progress reports, risk logs and the combined delivery report;
  - The project board is responsible for making management decisions by consensus.
  - In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.
  - In case consensus cannot be reached within the Board, the UNDP representative on the board will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.
- ✓ Oversee project execution:
  - Agree on project manager's tolerances as required, within the parameters outlined in the project document, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded.
  - Appraise annual work plans prepared by the Implementing Partner for the Project; review combined delivery reports prior to certification by the implementing partner.
  - Address any high-level project issues as raised by the project manager and project assurance;
  - Advise on major and minor amendments to the project within the parameters set by UNDP and the donor and refer such proposed major and minor amendments to the UNDP BPPS Nature, Climate and Energy Executive Coordinator (and the GEF, as required by GEF policies);

- Provide high-level direction and recommendations to the project management unit to ensure that the agreed deliverables are produced satisfactorily and according to plans.
- Track and monitor co-financed activities and realisation of co-financing amounts of this project.
- Approve the Inception Report, GEF annual project implementation reports, mid-term review and terminal evaluation reports.
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project.

✓ Risk Management:
- Provide guidance on evolving or materialized project risks and agree on possible mitigation and management actions to address specific risks.
- Review and update the project risk register and associated management plans based on the information prepared by the Implementing Partner. This includes risks related that can be directly managed by this project, as well as contextual risks that may affect project delivery or continued UNDP compliance and reputation but are outside of the control of the project. For example, social and environmental risks associated with co-financed activities or activities taking place in the project's area of influence that have implications for the project.
- Address project-level grievances.

✓ Coordination:
- Ensure coordination between various donor and government-funded projects and programmes.
- Ensure coordination with various government agencies and their participation in project activities.

The composition of the Project Board must include the following roles:

a. Project Executive: Is an individual who represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implemented projects. The Project Executive is the Deputy Director General of MEE.

- Responsible for project administration;
- Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;
- Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
- Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
- Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;
- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;

- Capture lessons learned during project implementation;
- Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available.
- Prepare the GEF PIR and submit the final report to the Project Board;
- Based on the GEF PIR and the Project Board review, prepare the AWP for the following year.
- Identify follow-on actions and submit them for consideration to the Project Board;
- Ensure the terminal evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Board.

b. Beneficiary Representative(s): Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often civil society representative(s) can fulfil this role. The Beneficiary representatives are researchers/representatives from various interested sectors, including academia, NGOs, governmental offices, industries and private sectors.

c. Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project. The Development Partner(s) is/UNDP.

d. Project Assurance: UNDP performs the quality assurance and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed, and conflict of interest issues are monitored and addressed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. UNDP provides a three – tier oversight services involving the UNDP Country Offices and UNDP at regional and headquarters levels. Project assurance is totally independent of project execution.

Project Management Office (PMO)

MEE will establish a Project Management Office (PMO) in FECO and recruit its personnel for the day-to-day management of project activities. The PMO to be headed by a Project Manager (PM) will provide administrative, technical, management and coordination roles in collaboration, and other project partners (e.g., for demonstrations), provincial officers and provincial government institutions, and UNDP. The UNDP will provide induction and regular training to PMO staff on UNDP procedures and policies so that they may effectively execute their roles and responsibilities.

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is USD 6,032,210. This is financed through a GEF grant of USD 4,566,210 administered by UNDP, and USD 1,466,000 in-kind co-financing. UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to UNDP bank account only.

Confirmed Co-financing

The actual realization of project co-financing will be monitored during the terminal evaluation process and will be reported to the GEF. Note that all project activities included in the project results framework

that will be delivered by co-financing partners (even if the funds do not pass through UNDP accounts) must comply with UNDP's social and environmental standards. Co-financing will be used for the following project activities/outputs:

Co-financing source	Co-financing type	Co-financing amount	Planned Co-financing Activities/Outputs	Risks	Risk Mitigation Measures
Ministry of Ecology and Environment	In kind	1,366,000	(e.g., Project management, office space, training, community consultations, etc.)	MEE may allocate part of the recurring budget to other uses (this risk is extremely low, since this is part of a multi-year recurring budget)	Facilitate through government procurement system as national priority.
UNDP	In-kind	100,000	Technical support, consultation, office space, capacity building etc.	None.	N/A

Budget Revision and Tolerance: As per UNDP POPP, the project board may agree with the project manager on a tolerance level for each detailed plan under the overall multi-year workplan. The agreed tolerance should be written in the project document or approved project board meeting minutes. It should normally not exceed 10 percent of the agreed annual budget at the activity level, but within the overall approved multi-year workplan at the activity level. Within the agreed tolerances, the project manager can operate without intervention from the project board. Restrictions apply as follows:

Should the following deviations occur, the Project Manager/IP through UNDP Country Office will seek the approval of the BPPS/NCE-VF team to ensure accurate reporting to the GEF. It is **strongly encouraged** to maintain the expenditures within the approved budget at the budgetary account and at the component level:

a) Budget reallocations must prove that the suggested changes in the budget will not lead to material changes in the results to be achieved by the project. A strong justification is required and will be approved on an exceptional basis. Budget re-allocations among the components (including PMC) of the approved Total Budget and Work Plans (TBWP) that represent a value greater than 10% of the total GEF grant.
b) Introduction of new outputs/activities (i.e. budget items) that were not part of the agreed project document and TBWP that represent a value greater than 5% of the total GEF grant. The new budget items must be eligible as per the GEF and UNDP policies.
c) Project management cost (PMC): budget under PMC component is capped and cannot be increased.

Any over expenditure incurred beyond the available GEF grant amount must be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

Project extensions: The UNDP Resident Representative and the UNDP-GEF Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GEF project budget cannot be increased. A single extension may be granted on an exceptional basis and subject to the conditions and maximum durations set out in the UNDP POPP; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GEF resources; the additional UNDP oversight costs during the extension period must be covered by non-GEF resources, in accordance with UNDP's guidance set out in UNDP POPP.

Audit: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop. If the Implementing Partner is an UN Agency, the project will be audited according to that Agencies applicable audit policies. *The costs for audit cannot be included under M&E component and budget and must be included under PMC.*

Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. **Operational closure must happen at the end date calculated by the approved duration after the Project Document signature or at the revised operational closure date as approved in the project extension. Any expected activity after the operational date requires project extension approval.** The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the project should have completed the transfer or the disposal of any equipment that is still the property of UNDP.

Transfer or disposal of assets: In consultation with the Implementing Partner and other parties of the project, UNDP is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project (it is strongly encouraged to be done before the operational closure date). In all cases of transfer, a transfer document must be prepared and kept on file[8]. The transfer should be done before Project Management Unit complete their assignments.

Financial completion (closure): The project will be financially closed when the following conditions have been met: a) the project is operationally completed or has been cancelled; b) the Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

8 See https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

The project will be financially completed **within 6 months of operational closure or after the date of cancellation**. If Operational Closure is delayed for any justified and approved reason, the Country Office should do all efforts to Financially Close the project within 9 months after TE is completed. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the BPPS/NCE-VF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

Refund to GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/NCE-VF Directorate in New York. No action is required by the UNDP Country Office on the actual refund from UNDP project to the GEF Trustee.

IX. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Atlas Award ID:	00111998	Atlas Output Project ID:	00110698
Atlas Proposal or Award Title:	Fourth National Communications		
Atlas Business Unit	CHN10		
Atlas Primary Output Project Title	Fourth National Communications		
UNDP-GEF PIMS No.	6399		
Implementing Partner	Foreign Environmental Cooperation Center (FECO), Ministry of Ecology and Environment		

Atlas Activity (GEF Component)	Atlas Implementing Agent	Atlas Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Account Description	Amount Year 1 {2022} (USD)	Amount Year 2 {2023} USD)	Amount Year 3 {2024} (USD)	Amount Year 4 {2025} USD)	Total (USD)	Budget notes
COMPONENT 1 National greenhouse gas (GHG) inventory	MEE	62000	GEF	72100	Contractual services - Companies	860,000	860,000	430,000		2,150,000	1
				72100	Contractual services - Companies	0	300,000	300,000	95,000	695,000	2
				72100	Contractual services - Companies	160,000	160,000	80,000		400,000	3
				71300	Local Consultants	20,000	20,000	20,000	20,000	80,000	4
				75700	Training, Workshops and Conference	7,500		7,500		15,000	5
				71600	Travel	5,000	50,000	50,000	5,000	110,000	6
				Total Component 1		**1,052,500**	**1,390,000**	**887,500**	**120,000**	**3,450,000**	
COMPONENT 2: Impacts of vulnerability and adaptation to climate change	MEE	62000	GEF	72100	Contractual services - Companies	30,000	30,000	30,000		90,000	7
				75700	Training, Workshops and Confer	5,000		5,000		**10,000**	8
				Total Component 2		**35,000**	**30,000**	**35,000**	**0**	**100,000**	
COMPONENT 3: Mitigation policies and actions for climate change	MEE	62000	GEF	72100	Contractual services - Companies	75,000	75,000	35,000		185,000	9
				71600	Travel		3,000		2,000	5,000	10
				75700	Training, Workshops and Confer		5,000		5,000	10,000	11
				Total Component 3		**75,000**	**83,000**	**35,000**	**7,000**	**200,000**	
COMPONENT 4: National circumstances, related financial, technical, and capacity needs,	MEE	62000	GEF	72100	Contractual services - Companies	40,000	35,000	20,000		95,000	12
				71600	Travel		2,500	2,500		5,000	13

and other relevant information				**Total Component 4**		**40,000**	**37,500**	**22,500**	**0**	**100,000**	
COMPONENT 5: Communication of the GHG inventories, NCs, BURs of the Hong Kong and Macao Special Administrative Regions (SARs)	MEE	62000	GEF	71300	Local Consultants	10,000	10,000	10,000	10,000	40,000	14
				75700	Workshops and seminars	4,000	2,000	4,000		10,000	**15**
				Total Component 5		**14,000**	**12,000**	**14,000**	**10,000**	**50,000**	
COMPONENT 6: UNFCCC reporting obligations, e.g., NC, BUR	MEE	62000	GEF	72100	Contractual services - Companies	140,000	140,000	70,000		350,000	16
				Total Component 6		**140,000**	**140,000**	**70,000**	**0**	**350,000**	
Monitoring and Evaluation (M&E)	MEE	62000	GEF	71300	Local Consultants	2,500	2,500	2,500	2,500	10,000	17
				75700	Training, Workshops and Confer	10,000	5,000	5,000	10,000	30,000	18
	UNDP	62000	GEF	71300	Local consultants	0	10,000	0	10,000	20,000	19
				71200	International Consultants	0	20,000	0	20,000	40,000	20
				Total M&E		**12,500**	**37,500**	**7,500**	**42,500**	**100,000**	
PROJECT MANAGEMENT UNIT (PMU)	MEE	62000	GEF	71800	Contractual services – Implementing Partner	50,053	50,053	50,052	50,052	200,210	21
	UNDP			74100	Professional Services	4,000	4,000	4,000	4,000	16,000	22
				Total PMU		**54,053**	**54,053**	**54,052**	**54,052**	**216,210**	
PROJECT TOTAL						**1,423,053**	**1,784,053**	**1,125,552**	**233,552**	**4,566,210**	

Summary of Funds:[9]

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Total
GEF grant administered by UNDP	1,423,053	1,784,053	1,125,552	233,552	4,566,210
UNDP (in kind)	25,000	25,000	25,000	25,000	100,000
MEE (in kind)	341,500	341,500	341,500	341,500	1,366,000
TOTAL	1,789,553	2,150,553	1,492,052	600,052	6,032,210

[9] *Summary table should include all financing of all kinds: GEF financing, co-financing, cash, in-kind, etc...*

No.	Budget Note
1	One subcontract for developing National GHG inventory from energy activities, industries process, agriculture, LULUCF and Waste.
2	Subcontracts for capacity building of relevant government departments in collecting required data and information for conducting and preparing GHG inventories
3	One subcontract for improving and updating national inventory database system.
4	Local experts in GHG inventory, V&A, GHG projection, mitigation, etc. for review documents, provide suggestions, assess reports (daily rate $200/day ×10 days, 10 people per year, total $80,000)
5	Meetings and workshops for supporting National GHG inventory from energy activities, industries process, agriculture, LULUCF and Waste.
6	Travel costs for: (1) Domestic travel for National Technical Advisor at US $2,500/mission for 2 times, sub-total: $5,000; (2) Experts travel to Hong Kong SAR and Macao SAR to exchange progress and outcome with local government. US$ 25,000 /mission, sub-total: $50,000; (3) International exchange activities, including study tours, international workshops, etc. to learn experiences from other countries and discuss important issues with international experts, especially experiences in development of NCs, improvement of methodologies of GHG inventory. These international exchange activities will assure successful implementation of 4NC project. sub-total: $50,000; (4)For Policy Advisor at US $2,000/mission for 2 times, sub-total: $5,000;
7	Subcontracts for capacity building for relevant government departments on collecting climate data/information and assessment of climate change impact and vulnerability.
8	Meetings and workshops for the Impacts of vulnerability and adaptation to climate change
9	Subcontracts for capacity building for relevant government departments on assessment of the effectiveness of implemented CCM policies.
10	Travel costs for domestic travel for National Technical Advisor at US $1,000/mission for 5 times, sub-total: $5,000.
11	Meetings and workshops for Mitigation policies and actions for climate change. 4 times, $100/person for 25 people, sub-total: $ 10,000.
12	Subcontracts for capacity building for relevant government departments on collecting information and in assessing technologies, financing of technology applications, and capacity building needs for technologies.
13	Travel costs for international and domestic travel. Domestic travel for local consultants at US $2,500/mission for 2 times, sub-total: $5,000.
14	Local experts in GHG inventory, V&A, GHG projection, mitigation, etc., will be convened to assist Hong Kong and Macao SAR governments to finish the NC and BUR report, including review documents, provide suggestions, assess reports, etc. $200per day × 20 days, 10 persons for year 1 and year 3, total $40,000.
15	Meetings and workshops for supporting Hong Kong SAR and Macao SAR developing GHG inventories, BUR and NC report. 5 times, $100/person for 20 people, sub-total: $ 10,000.
16	One subcontract for supporting China's compliance to the reporting obligations to the UNFCCC, including improving working mechanisms for the preparation of the NC and BUR, capacity building of relevant departments participating in NC and BUR preparation, also including compiling, finalizing and submitting 3BUR, 4NC and 4BUR to UNFCCC, including drafting, translating, printing and etc. This subcontract also supports for the International Consultation and Analysis (ICA) on 3BUR and 4BUR.
17	Local consultant to provide technical support to Project Implementation Report, including translation and interpretation, etc. $2500/year, sub-total: $ 10,000
18	Project inception workshop: US$10,000 and Annual Project Board meeting US$5,000 x 4 = US$20,000, sub-total: $30,000

19	National consultants to conduct MTR and TE, including the meeting, travel, food and shelter, accommodation, sub-total: $20,000
20	International consultants to conduct MTR and TE, including the meeting, travel, food and shelter, accommodation, sub-total: $40,000
21	Project management personnel to include: (a) Project Assistant: $42,000/year; (c) Project Financial Assistant:(part of the salary) at $8,052.5/year
22	Annual audit costs, $4,000/year, sub-total: $ 16,000.

X. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of the People's Republic of China and UNDP, signed on 29 June 1979. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by the Ministry of Ecology and Environment (MEE) ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

XI. RISK MANAGEMENT

1. Consistent with the Article III of the Standard Basic Assistance Agreement (SBAA), the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:
   a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
   b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/ag_sanctions_list.shtml.

4. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project

implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

(a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").
(b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment.

5. a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:

   1) Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;
   2) Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;
   3) Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof;
   4) Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and
   5) Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

   b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in

paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

6. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

7. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

8. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

9. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

10. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

11. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programs in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

12. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality. Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

13. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.

    Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

    Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

14. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

15. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

16. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, mutatis mutandis, in all sub-contracts or sub-agreements entered into further to this Project Document.

XII. MANDATORY ANNEXES

1. GEF Budget Template (available from BPPS NCE-VF)
2. Project Map and geospatial coordinates of the project area
3. Multiyear Workplan
4. Monitoring Plan
5. UNDP Atlas Risk Register
6. Overview of technical consultancies/subcontracts
7. Stakeholder Engagement Plan
8. Gender Analysis and Gender Action Plan
9. Procurement Plan – for first year of implementation especially
10. Letters of financial commitments
11. Social and Environmental Screening Procedure

Annex 1: GEF Budget Template
Attached as a separated annex

Annex 2: Project Map and Geospatial Coordinates of Project Sites



审图号：GS(2019)1652号　　自然资源部 监制

Annex 3: Multi Year Work Plan

Outcomes	Outputs	Year1				Year2				Year3				Year4			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: National greenhouse gas (GHG) inventory																	
Clearer understanding of the magnitude, trend and causes of the GHG emissions and removals from the different sectors, facilitated through an improved capacity to prepare time-series consistent inventories applying 2006 IPCC guidelines, and an improved national system for GHG inventory preparation.	1.1. National GHG Inventories 2017 and 2018 for the 4NC and BUR3 with recalculation of historic GHG inventories applying IPCC 1996 guidelines																
	1.2. National GHG Inventory 2020 for the BUR4 with recalculation of historic GHG inventories applying 2006 IPCC guidelines																
	1.3. Improved national GHG inventory database system and updated inventory database.																
	1.4. Improved national system and mechanism for a sustainable GHG data collection, preparation and archiving process with extensive stakeholder engagement, smooth and timely data collection and coordinated and effective organization.																
	1.5 Completed capacity building of relevant government departments in collecting required data and information for conducting and preparing GHG inventories.																
Component 2: Impacts of vulnerability and adaptation to climate change																	

Better understanding of China's vulnerability to the threats of climate change and improved accuracy of prediction of impacts in the vulnerable sectors of the country.	2.1. Results of the updated analyses of climate change characteristics and future trends in China.	
	2.2. Report on the climate change impact and vulnerability assessments in agriculture, water resources, coastal zones, terrestrial ecosystems, human health.	
	2.3. Report on the impacts of the frequency and intensity of extreme climate events and climate change related disasters.	
	2.4. Report on the effectiveness analysis on implemented adaptation actions.	
	2.5 Completed capacity building for relevant government departments on collecting climate data/information and assessment of climate change impact and vulnerability.	
Component 3: Mitigation policies and actions for climate change		
• Enhanced understanding of the appropriate policies to enable the proper planning and implementation of prioritized applicable and feasible climate	3.1. Summary of national CCM policies and measures.	

change mitigation (CCM) actions for China.																	
Improved accounting of the results and impacts of implemented CCM actions through an improved national MRV system.	3.2. Refined methodology and related assumptions for assessing the impact and estimated emission reduction of CCM actions.																
	3.3. Report on the completed improvements in, and the operational performance of, the country's measurement, reporting and verification (MRV) system.																
	3.4. Completed capacity building for relevant government departments on assessment of the effectiveness of implemented CCM policies.																
	3.5 Completed impact assessment and emission reduction estimation of implemented CCM actions.																
Component 4: National circumstances, related financial, technical, and capacity needs, and other relevant information																	
•Enhanced capacity to determine, analyze, refer to, and articulate key national circumstances information in the national communicatio n (NC) reports and biennial	4.1 Completed sets of vetted data/information on each pertinent indicator (e.g., natural resources, energy, environment, social and economic) that collectively characterize the country's national circumstances.																

update reports (BUR).																	
Enhanced understanding and capacity to determine applicable, feasible and cost-effective CCM and climate change adaptation (CCA) technologies, techniques and measures, and the most suitable financial resources and financing options that can be applied to implement action that address CCM and CCA issues.	4.2 Report on capacity-building needs for the identification and determining applicable, feasible and cost-effective CCM&CCA technologies, techniques, and measures.																
	4.3. Report on capacity needs for determining financial resources and financial options for the implementation of appropriate CCM&CCA technologies, techniques, and measures.																
	4.4 Completed document on the results, conclusions, and recommendations of the implemented activities for enhancing public awareness about climate change issues.																
Further enhanced public awareness of climate change issues.	4.5 Completed report on GHG concentration, climate observation and monitoring in China.																
	4.6 Completed capacity building for relevant government departments on collecting information and in assessing technologies, financing of technology																

	applications, and capacity building needs for technologies.																		
Component 5: Communication of the GHG inventories, NCs, and BURs of the Hong Kong and Macao Special Administrative Regions (SARs)																			
Better understanding of GHG emissions and sinks in the Hong Kong and Macao SARs, and improved capacities for NC, and BUR.	5.1. Completed workshops on coverage and implementation of Hong Kong and Macao SAR's GHG inventories for the year 2017, 2018 using the IPCC 1996 guidelines, and 2020 utilizing the IPCC 2006 guidelines.																		
	5.2. Completed workshops on assessment methodologies for Hong Kong and Macao's mitigation actions.																		
	5.3. Completed chapters of Hong Kong and Macao NC and BUR in the 4NC Report, BUR3, BUR4.																		
	5.4. Updated GHG inventories in the Hong Kong and Macao SARs for years 2017, 2018, and 2020.																		
	5.5. Updated supplementary information on climate change in the Hong Kong and Macao SAR's.																		
Component 6: UNFCCC reporting obligations, e.g., NC, BUR																			
•China's compliance to the reporting obligations to the UNFCCC.	6.1. Improved working mechanisms for the preparation of the required reports UNFCCC (4NC, BUR3, BUR4) reporting.																		

	6.2. Completed capacity building of relevant departments participating in the report preparation.																
	6.3 Finalized and submitted 4NC, BUR3, BUR4 (Chinese & English) to the UNFCCC.																

Annex 4: Monitoring Plan

This Monitoring Plan and the M&E Plan and Budget in Section VI of this project document will both guide monitoring and evaluation at the project level for the duration of project implementation.

Monitoring	Indicators	Targets	Data source or Collection Methods[10]	Frequency	Responsible for data collection	Means of verification	Risks
Project Objective: To enable China to prepare its fourth National Communication (4NC) and the third Biennial Update Report (3BUR) and the fourth Biennial Update Report (4BUR) in order to fulfill the obligations under the United Nations Framework Convention on Climate Change.	**Indicator 1:** No. of new additional individuals that are directly benefited from the implementation of the project.	**Mid-term Target:** • Male: 50 • Female: 60 **End of Project Target:** • Male: 100 • Female: 120	Name-list of participants and work contracts.	Annually	MEE and subcontractors	Cumulative number of experts participating in the implementation of 4NC project.	NA
	Indicator 2: Progress towards completion, government-approval, and submission of reports to the UNFCCC, % completion. • 4NC • 3BUR • 4BUR	**Mid-term Target:** • 4NC: 100% • 3BUR: 100% • 4BUR: 0% • **End of Project Target:** • 4NC: 100% • 3BUR: 100% • 4BUR: 100%	4NC, 3BUR, 4BUR completed and approved by the government were submitted to the UNFCCC.	Annually	MEE and subcontractors	Directly download from the UNFCCC website	Failure or delay of the disbursement of the grant funding.
Project Outcome 1.1 Clearer understanding of the magnitude and sources of the GHG emissions and removals from the different sectors.	**Indicator 3:** No. of completed GHG inventories that are used in the preparation of the NC, BURs .	**Baseline :** 5 **Mid-term Target:** 7 **End of Project Target:** 8	Relevant chapters of 3NC, 3BUR, 4BUR	Annually	MEE and subcontractors	Directly download from the UNFCCC website	Failure or delay of the disbursement of the grant funding.
	Indicator 4: No. of updated yearly data sets uploaded to the National GHG Emissions Database and used in the preparation of	**Baseline :** 5 **Mid-term Target:** 7 **End of Project Target:** 8	website of https://data.ncsc.org.cn/inventory/	Annually	MEE and subcontractors	Screen copy of the National GHG Emissions Database	Failure or delay of the disbursement of the grant funding.

[10] Data collection methods should outline specific tools used to collect data and additional information as necessary to support monitoring. The PIR cannot be used as a source of verification.

Monitoring	Indicators	Targets	Data source or Collection Methods[10]	Frequency	Responsible for data collection	Means of verification	Risks
	the NC, BURs.						
	Indicator 5: No. of governmental entities that are capable of producing acceptable and useful time series of sectoral GHG emissions applying 2006 IPCC guidelines.	**Baseline :** 0 **Mid-term Target:** 0 **End of Project Target:** 5	Relevant chapters of 3NC, 3BUR, 4BUR	Annually	MEE	Directly download from the UNFCCC website	Failure to get required statistics and Instability of GHG inventory compiler team
	Indicator 6: No. of trained GOC agencies that regularly collect, update, analyze and report required data and analytical information used for conducting and preparing GHG inventories.	**Baseline :** 12 **Mid-term Target:** 14 **End of Project Target:** 14	Training plan, training notification and agenda	Annually	MEE	Relevant chapters of 4NC, 3BUR, 4BUR	Difficulty in coordination and collaboration between departments.
Project Outcome 2.1 Better understanding of China's vulnerability to the threats of climate change and improved accuracy of prediction of impacts in the vulnerable sectors of the country.	**Indicator 7:** No. of governmental entities that are capable of producing improved climate change vulnerability and adaptation assessments and improved formulations of climate change adaptation measures and plans.	**Baseline :** 1 **Mid-term Target:** 2 **End of Project Target:** 4	·Completed V&A assessments done by government (national and local/provincial) agencies ·Proposed climate change adaptation plans prepared by government (national and	Annually	MEE and subcontractors	Relevant chapters of 4NC, 3BUR, 4BUR	NA

Monitoring	Indicators	Targets	Data source or Collection Methods[10]	Frequency	Responsible for data collection	Means of verification	Risks
			local/provincial) agencies. ·National Adaptation Strategy document – which I assume will be based on the individual V&A assessments and CCA plans of government agencies.				
Project Outcome 3.1 Enhanced understanding of the appropriate policies to enable the proper planning and implementation of prioritized applicable and feasible climate change mitigation (CCM) actions for China.	**Indicator 8:** No. of formulated and recommended new or improved national CCM policies and feasible CCM actions plans.	**Baseline :** 0 **Mid-term Target:** 2 **End of Project Target:** 3	Report on the new or improved national CCM policies and measures. Report on the evaluation of the impacts and estimate GHG emission reductions from the new or improved CCM actions.	Annually	MEE and subcontractors	Report on the evaluation of the impacts and estimate GHG emission reductions from the new or improved CCM actions.	NA
Project Outcome 3.2 Improved accounting of the results and impacts of implemented	**Indicator 9:** No. of governmental entities that can capably report evidence-based GHG emission	**Baseline :** 7 **Mid-term Target:** 34	Training plan, training notification and agenda	Annually	MEE	Relevant chapters of 4NC, 3BUR, 4BUR	NA

Monitoring	Indicators	Targets	Data source or Collection Methods[10]	Frequency	Responsible for data collection	Means of verification	Risks
CCM actions through an improved national MRV system.	reduction data using the country's official MRV system.	**End of Project Target:** 65					
Project Outcome 4.1 Enhanced capacity to determine, analyze, refer to, and articulate key national circumstances information in the national communication (NC) reports and biennial update reports (BUR).	**Indicator 10:** No. of governmental entities that are substantially involved and/or contributing to the performance of analyses of the various in-country factors that affects and impacts on the climate and climate change situation in the country as articulated in the NC Reports, BURs .	**Baseline :** 2 **Mid-term Target:** 30 **End of Project Target:** 30	Relevant chapters of NC Report, BUR	Annually	MEE	Directly download from the UNFCCC website	NA
Project Outcome 4.2 Enhanced understanding and capacity to determine applicable, feasible and cost-effective CCM and climate change adaptation (CCA) technologies, techniques and measures, and the most suitable financial resources and financing options that can be applied to implement action	**Indicator 11 :** No. of governmental government entities that are capable of: •Identifying, assessing, planning, designing, implementing: •Identifying and sourcing financing for the implementation of: •Gathering, processing, storing, managing: Feasible and applicable CCM & CCA technologies,	**Baseline :** 3 **Mid-term Target:** 3 **End of Project Target:** 10	Relevant reports	Annually	MEE	Relevant reports	Difficulty in coordination and collaboration between departments.

Monitoring	Indicators	Targets	Data source or Collection Methods[10]	Frequency	Responsible for data collection	Means of verification	Risks
that address CCM and CCA issues.	techniques, and measures.						
Project Outcome 4.3 Further enhanced public awareness of climate change issues.	**Indicator 12:** No. of people that have improved understanding of the climate change issues of the country.	**Baseline :** 0 **Mid-term Target:** 500 **End of Project Target:** 1000	Report download hits on relevant websites	Annually	MEE and subcontractors	Screen copy	NA
Project Outcome 5 Better understanding of GHG emissions and sinks in the Hong Kong and Macao SARs, and improved capacities for NC, BUR.	**Indicator 13:** No. of SAR agencies that are capable of producing improved GHG inventories, vulnerability and adaptation assessments and improved formulations of CCM and CCA measures and plans.	**Baseline :** 0 **Mid-term Target:** 2 **End of Project Target:** 3	· Report on the new or improved national CCM policies and measures. · Report on the evaluation of the impacts and estimate GHG emission reductions from the new or improved CCM actions.	Annually	MEE	Report on the evaluation of the impacts and estimate GHG emission reductions from the new or improved CCM	NA
	Indicator 14 : Progress towards completion, SAR government-approval, and submission of reports to P.R. China, % completion. • 4NC	**Baseline :** • 4NC: 0 • 3BUR: 0 • 4BUR: 0 • **Mid-term Target:** • 4NC: 100% • 3BUR: 100% • 4BUR: 0%	4NC, 3BUR, 4BUR completed and approved by the government were submitted to the UNFCCC.	Annually	MEE and subcontractors	Directly download from the UNFCCC website	Failure or delay of the disbursement of the grant funding.

Monitoring	Indicators	Targets	Data source or Collection Methods[10]	Frequency	Responsible for data collection	Means of verification	Risks
	• 3BUR • 4BUR •	• **End of Project Target:** • 4NC: 100% • 3BUR: 100% • 4BUR: 100% •					
Project Outcome 6: China's compliance to the reporting obligations to the UNFCCC.	**Indicator 15:** No. required reports prepared, translated and submitted to UNFCCC.	**Baseline :** 5 **Mid-term Target:** 7 **End of Project Target:** 8	NC and BUR	Annually	MEE and subcontractors	Directly download from the UNFCCC website	The report can't be completed within the project timeframe due to the evaluation time allocated for ICA.

Annex 5: UNDP Risk Register

#	Description	Risk Category	Impact (I) & Likelihood (L)	Risk Treatment / Management Measures	Risk Owner
1	Project activities might not be implemented in a gender- sensitive manner	Social	I =3 L =1 Risk level: Low	The project could potentially offer a wide range of opportunities, for individuals and groups get trained in capacity development program activities, to be hired as a consultant or contractor for the project implementation. If care is not taken, any existing discrimination in the country towards woman could continue to come to play through the project. Special measures to ensure that any potential discrimination against women in the implementation of the project is countered have been identified and included in the project design. The results of such measures will be observed during project implementation, and if any corrective action is necessary, this will be addressed. Beyond that, the PMO will make special efforts to explore and facilitate the inclusion of interventions to enhance the role of women. Special activities have been designed to involve women, e.g., in the productive use of RE activities, to have strong representation of women in training courses and seminar-workshops, and to ensure a significant proportion of project consultants are women. Regarding the gender-equitable hiring process, the project proponent and implementing partner will carry out adequate and conscientious planning and implementation of project-related procurement activities. This involves the preparation and implementation of appropriate procurement plans for the employment of all qualified and capable people, while ensuring that proper government procurement and labor laws/regulations will be applied and complied with.	MEE
2	Inadequate and possibly	Political Strategic	I = 4 L = 3	MEE and the project management unit shall maintain close working relations	MEE

	constrained coordination during the implementation of the project.	Regulatory	Risk Level: Medium	with relevant departments of the State Council and make necessary adjustments to the work in a timely manner according to the adjustment of national policies, which can ensure the implementation of the project and achieve optimal results. In case this happens, MEE will facilitate discussions with project stakeholders and relevant government authorities through the project steering committee (PSC) to come up with decisions on the coordinated implementation of the agreed barrier removal activities.	
3	Difficult to submit the reports in a timely manner.	Operational	I = 4 L =2 Risk level: Medium	China intends to submit the GHG inventory of the year 2017, 2018 and 2020. According to the requirements of UNFCCC, the chosen reporting year in NCs shall not be 4 years earlier than the submission year. Therefore, the preparation is under time pressure and involves heavy work.	MEE
4	Failure to promote the project affected by COVID-19	Social Health	I = 3 L = 3 Risk level: Medium	The project will always pay attention to the impact of the COVID-19 on the implementation of the project. When necessary, the project will carry out the socio-economic impact assessment of the impact of COVID-19 on the progress of the project, and promote the implementation of the project according to the plan through various means, such as online meeting, telephone, etc.	MEE
5	The Project may exclude potentially affected stakeholders, in particular marginalized groups, from fully participating in the assessments that will be carried out under the project.	Social	I = 2 L = 2 Risk level: Low	The inventory of GHG emissions in the various sectors, and assessment of the CCM and CCA efforts will involve all pertinent stakeholders in the country. The risk will be fully addressed through the capacity building on, and development of the assessment procedures that will be used by national and local governments in preparing the national and provincial greenhouse gas emission inventories and assessments of CCM and CCA technology options, technology financing and the impacts of CCM and CCA initiatives and policies.	
6	Project personnel who will be hired and deployed to work on the project activities may be	Social	I = 3 L = 1 Risk level: Low	The procurement of human resource inputs for the project implementation will be based in a gender-equitable, and equal opportunity manner. The project implementing partner will carry out	

	exposed to discriminatory working conditions and/or lack of equal opportunity.			adequate and conscientious planning and implementation of project-related procurement activities. This involves the preparation and implementation of appropriate procurement plans for the employment of all qualified and capable people, while ensuring that proper government procurement and labor laws/regulations will be applied and complied with.	
7	Policies that are developed with support from the project may not be implemented properly and/or may lead to indirect/unintended environmental and/or social impacts.	Environmental Social	I = 3 L = 1 Risk level: Low	The project does not directly develop policies but provides an assessment of the impacts and risks (e.g., economic, environmental, social, etc.) of the climate change policies that the national and local governments implement. The project will evaluate the impacts and risks of the improper implementation and non-implementation of climate change policies, as well as the potential social and environmental risks. As noted in the ProDoc (Activity 2.1.4.1), appropriate recommendations are to be formulated and recommended. The assessment of the social and environmental risks of the implemented and non-implemented policies, and the formulation of recommendations to address such risks shall be based on the social and environmental screening procedures of the UNDP.	
8	The project team and/or project partners and stakeholders working on the project implementation do not follow strictly public health regulations and unintentionally further spread Covid.	Health Social	I = 3 L = 1 Risk level: Low	In the event the Covid epidemic will persist until the time the project is implemented, the common and basic measures that have been proven effective in facilitating the safe implementation of projects with fewer delays, will be adopted. It should be noted that considering the current rather uncertain pandemic situation in China and worldwide, that if there will be restrictions in travel and public gathering that will be imposed by government authorities to protect public health during the implementation phase of the project, alternative ways and means will be identified, considered and effectively implemented to avoid protracted delays in the conduct of the activities, and to deliver the expected project outputs in a timely manner.	

9	Extreme climate events brought about or exacerbated by climate change may affect the implementation of the project.	Environmental	I = 2 L = 1 Risk level: Low	The project involves no field work, but traveling of project team members, for example to meeting and workshop venues, can be disrupted by climate. Power supply that can be disrupted by climate events can also be a potential risk but in the case of China's power infrastructure, this is considered low risk. The project will ensure the prevention of such risks by utilizing online tools for communications, backed up with adequate electric power supply, in cases of extreme climate events happen, following government safety and emergency procedures.	
10	Inappropriate project outputs (e.g., developed assessment procedures and recommended CCM and CCA measures) that are produced by the project and adopted and implemented by the country exacerbating the current vulnerabilities to the impacts of climate change and climate change related disasters.	Environmental	I = 2 L = 1 Risk level: Low	There are specific activities of the project that involve the development of procedures for assessing the potential risks and impacts of extreme climate events in the implementation of measures and initiatives on: Climate Change Adaptation – Activity 2.1.4.1; and Climate Change Mitigation – Activity 3.2.4.1; that will be critically and properly analyzed and vetted to ensure that the recommended procedures and measures are applicable and appropriate in the context of China.	
11	Lack of asset insurance	Operational	Impact (I)=1 Likelihood (P)=3 Risk level: low	The insurance of fixed asset will be included	MEE
12	Lack of tracking mechanism	Operational	Impact (I)= 2 Likelihood (P)=2 Risk level: Low	PMO will establish a tracking mechanism for tracking past performance of suppliers.	MEE

Annex 6: Overview of Project Staff and Technical Consultancies

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management		
Local / National contracting		
Project Manager Rate: $5,000/month	48 weeks / over 4 years	The Project Manager (PM), together with the National Technical Advisor will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. PM has the authority to implement the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The PM is responsible for the day-to-day management and decision-making for the project. The PM's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. <u>Duties and Responsibilities</u> • Provide direction and guidance to project team(s)/responsible party(ies); • Liaise with the Project Board to assure the overall direction and integrity of the project; • Identify and obtain any support and advice required for the management, planning and control of the project; • Responsible for project administration; • Plan the activities of the project and monitor progress against the project results framework and the approved annual work plan; • Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work; • Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required; • Manage requests for the provision of financial resources by UNDP through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures; • Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports; • Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis; • Manage and monitor the project risks initially identified and submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log; • Capture lessons learned during project implementation; • Prepare annual work plan for the following year; and update the Atlas Project Management module if external access is made available.

Consultant	Time Input	Tasks, Inputs and Outputs
		• Prepare the inception report no later than one month after the inception workshop. • Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR. • Prepare the GEF PIR and submit the final report to the Project Board; • Based on the GEF PIR and the Project Board review, prepare the AWP for the following year; • Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans; • Monitor and track progress against the project results framework (log frame) indicators; • Ensure the mid-term review process is undertaken as per the UNDP guidance, and submit the final MTR report to the Project Board; • Identify follow-on actions and submit them for consideration to the Project Board; Ensure the terminal evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Board.
Project Assistant Rate: $4,200/month	48 weeks / over 4 years	<u>Duties and Responsibilities</u> Under the guidance and supervision of the Project Manager, the Project Assistant will carry out the following tasks: • Assist the Project Manager in day-to-day management and oversight of project activities; • Assist the M&E officer in matters related to M&E and knowledge resources management; • Assist in the preparation of progress reports; • Ensure all project documentation (progress reports, consulting and other technical reports, minutes of meetings, etc.) are properly maintained in hard and electronic copies in an efficient and readily accessible filing system, for when required by PB, TAC, UNDP, project consultants and other PMU staff; • Provide PMU-related administrative and logistical assistance.
Project Finance Assistant Rate: $4,200/month	48 months / over 4 years	<u>Duties and Responsibilities</u> • Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager; • Review project expenditures and ensure that project funds are used in compliance with the Project Document and GoC financial rules and procedures; • Validate and certify FACE forms before submission to UNDP; • Provide necessary financial information as and when required for project management decisions; • Provide necessary financial information during project audit(s); • Review annual budgets and project expenditure reports, and notify the Project Manager if there are any discrepancies or issues;

Consultant	Time Input	Tasks, Inputs and Outputs
		• Consolidate financial progress reports submitted by the responsible parties for implementation of project activities; • Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports.
International / Regional and global contracting		
For Technical Assistance		
Outcome 1		
Local / National contracting		
Protected Area Capacity Development National Specialist Rate: $300/week	48 months / over 4 years	Under close supervision of Lead Technical Advisor and Project Manager (PM) the Protected Area Capacity Development Specialist (PACDS) will work closely with the Protected Area Capacity Development Advisor (PACDA) to conduct protected area capacity building related to the project under Outputs 1.2 and 1.3 and support a working group for improved protected area capacity building and work with that group to: • Contribute to the development of a capacity development strategy and action plan for increasing the management effectiveness of the PA system. • Coordinate the establishment of PA management standards and a PA and individual performance monitoring system for different categories of PAs. • Contribute to the development of a program of training to raise focal competencies of senior and mid-level protected area managers and practitioners. • Contribute to the identification of incentive mechanisms for increasing the motivation of field staff. • Contribute to the development and institutionalization of modernized reporting structure and methods. • Contribute to the development of law enforcement and habitat/biodiversity monitoring protocols. • Coordinate the development and institutionalization of a PA information and knowledge management system enabling learning from, and upscaling of, pilot/individual project activities. • Coordinate the development of official guidelines for community engagement and co-management.
Outcome 4: KM and M&E		
Project Gender Officer		Duties and Responsibilities • Monitor progress in implementation of the project Gender Action Plan ensuring that targets are fully met, and the reporting requirements are fulfilled; • Oversee/develop/coordinate implementation of all gender-related work;

Consultant	Time Input	Tasks, Inputs and Outputs
		• Review the Gender Action Plan annually, and update and revise corresponding management plans as necessary; • Work with the M&E officer and Safeguards Officer to ensure reporting, monitoring and evaluation fully address the gender issues of the project;
Project Monitoring and Evaluation Officer	48 months / over 4 years	Duties and Responsibilities • Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards; • Ensure project's M&E meets the requirements of the Government, the UNDP Country Office, and UNDP-GEF; develop project-specific M&E tools as necessary; • Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results; • Oversee/develop/coordinate the implementation of the stakeholder engagement plan; • Oversee and guide the design of surveys/ assessments commissioned for monitoring and evaluating project results; • Facilitate mid-term and terminal evaluations of the project; including management responses; • Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products; • Support project site M&E and learning missions; • Visit project sites as and when required to appraise project progress on the ground and validate written progress reports.
Outcome		
Project Safeguards Officer	48 months / over 4 years	Duties and Responsibilities • Monitor progress in development/implementation of the project ESMP/ESMF ensuring that UNDPs SES policy is fully met, and the reporting requirements are fulfilled; • Oversee/develop/coordinate implementation of all safeguard related plans; • Ensure social and environmental grievances are managed effectively and transparently; • Review the SESP annually, and update and revise corresponding risk log; mitigation/management plans as necessary; • Ensure full disclosure with concerned stakeholders; • Ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation; • Work with the M&E officer to ensure reporting, monitoring and evaluation fully address the safeguard issues of the project.

Consultant	Time Input	Tasks, Inputs and Outputs
International / Regional and global contracting		
Lead Technical Advisor Rate: $2,000/week	20 weeks	The Lead Technical Adviser will be responsible for providing overall technical backstopping and management support to the Project.
International PA & Biodiversity Strategy Advisor Rate: $ 2,000/week	25 weeks	In close coordination with the Project Manager (PM), the international Protected Areas and Biodiversity Advisor (PABA) will provide international perspective, strategic guidance and technical inputs to the implementation of activities under Outputs 1.1 to 1.6, including the following: • For Output 1.1, the PABA will coordinate and provide technical advice to the international and national policy specialists, participate in the policy review process and provide inputs to policy recommendations for strengthening the national PA system • For Output 1.2, the PABA will coordinate and provide technical advice to the international and national capacity building specialists regarding the capacity development strategy and action plan for increasing the management effectiveness of the PA system; development of PA management standards and performance monitoring system; the development and institutionalization of a modernized PA reporting system; the development of law enforcement and habitat/biodiversity monitoring protocols; and the development and institutionalization of a PA information and knowledge management system • For Output 1.3, the PABA will provide technical advice to the international and national capacity building specialists and provide guidance and inputs to the development and delivery of a program of training to raise focal competencies of senior and mid-level protected area managers and practitioners. • For Output 1.4, the PABA will coordinate and provide technical advice to the international and national sustainable financing experts regarding development of a sustainable financing strategy for the PA system, capacity building for implementation of the strategy, the development of a series of studies to inform sustainable financing policies and plans, and integrating PA system concerns into REDD+ programme development.

Consultant	Time Input	Tasks, Inputs and Outputs
		• For Output 1.5, the PABA will coordinate and provide technical advice to the international and national landscape conservation regarding awareness and knowledge building for State, Region and local government units in Kachin State and Sagaing Region on the value of PAs; and implementation of a social marketing campaign linked to co-financed WCS national communications strategy work. • For Output 1.6, the PABA will provide technical advice and support to the national PABS, NWCD and other stakeholders for implementation of PA gap analysis recommendations; coordinate plans for biological and social ground-truthing surveys for areas of conservation value; and facilitate a cooperative process to identify potential areas for PA creation.

Annex 7: Stakeholder Engagement Plan

Summary of Key Stakeholder Analysis

Key Stakeholders	Mandate Relevant to the Project	Roles in the Project
National level administrative authorities		
Ministry of Finance (MoF)	MoF manages loans (grants) from multi- and bi-lateral development organizations and foreign governments.	GEF Operational Focal Point (OFP). Coordination and implementation of GEF projects in China. The MoF was briefed on project development and will endorse the final Project Document.
National Development and Reform Commission (NDRC)	NRRC is responsible for promotion of the strategy of sustainable development through its lead role in the five-year planning process. NDRC makes proposal on strategy, plan, and relevant policies on using foreign funds.	NDRC will be a key partner in project mainstreaming efforts related to its lead role in the adjustment of industrial structure
Ministry of Ecology and Environment (MEE), and its internal Department of Climate Change (MEEDCC)	Supervise and administer to ensure the attainment of national emission reduction targets; Preparation of 4NC RCCEA; conduct and coordination of consultation meetings and workshops; data gathering work Guide and coordinate educational campaigns over ecological environmental protection; Formulate and implement educational campaign outlines for ecological environmental protection; Promote societal and public participation in environmental protection efforts;	Overall responsibility for 4NC, 3BUR, 4BUR development, compilation, and reporting Ensure that China's 4NC, 3BUR, 4BUR conform to UN international standards and requirements Administer functions of Single National Entity to UNFCCC MEEDCC is the leading decision-making department inside MEE in the climate agenda and will provide necessary guidance to the project implementation.
Foreign Environmental Cooperation Center, Ministry of Ecology and Environment (FECO/MEE)	FECO carries out multilateral and bilateral international cooperation and exchange on environment under the Ministry of Ecology and Environment. FECO supports for Implementation of International Environmental Conventions and build a long-term mechanism, participate in global environmental	FECO/MEE will execute the project on behalf of MEE and under the technical guidance of the Department of Climate Change of MEE.

Key Stakeholders	Mandate Relevant to the Project	Roles in the Project
	governance, join in the formulation of international environmental governance rules, and promote the improvement of global environmental governance system.	
Ministry of Science and Technology	MOST formulates and facilitates the implementation of strategies and policies for innovation-driven development for carbon neutrality and plans and policies for S&T development. MOST takes the lead in formulating plans for carbon neutrality, policies and measures for the R&D and industrial application of the outcomes of the project.	Discussions on the work mechanism for GHG inventory and NC/BUR reporting inputs
Ministry of Agriculture and Rural Affairs	MARA leads in preparing and implementing strategies, mid- and long-term plans and major policies related to agriculture, rural areas and farmers: draft laws and regulations on agricultural and rural affairs, formulate related norms and rules, and direct related law enforcement; and participate in formulating policies on finance and taxation, pricing, purchase and storage, financial insurance, and import and export	Provide basic data and information in agriculture Agriculture Inventory compilation and development
China Meteorological Administration	CMA formulating policies, legal and regulatory frameworks, development strategies and long-term plans governing meteorological services; formulating and issuing rules and regulations, technical standards and practices governing meteorological services, and supervising their execution; undertaking relevant administrative reviews.	Assess vulnerability of climate change
National Bureau of Statistics	NBS is in charge of statistics and economic accounting in China. NBS sets up and improve the national economic accounting system and statistical country; to work out national statistical standards; to review and approve statistical standards by other government departments; to organize the administration of national statistical survey projects, to examine, approve and manage plans and schemes for statistical	Provide energy balance and statistical data

Key Stakeholders	Mandate Relevant to the Project	Roles in the Project
	surveys by other departments;	
National Center for Climate Change Strategy and International Cooperation, Ministry of Ecology and Environment, P. R. China	Organize and carry out research on climate change policies, regulations, strategies, planning, etc.; undertake technical support work in domestic compliance, statistical accounting and assessment, carbon emission trading management, international negotiations, foreign cooperation and exchanges, etc.; develop climate change think tanks Dialogue, publicity, capacity building and consulting services; undertaking clean development mechanism project management	Feed international emissions inventory expectations back to the GHG inventory team to ensure China complies and develops the inventory accordingly Provide information on future international developments and changes to expectations
Environmental Protection Department of Hong Kong SAR	Formulate policies and plans on environmental protection, energy, nature conservation and the promotion of sustainable development. raise community awareness of and promote public support for issues related to environmental protection, energy, nature conservation and sustainable development. Promote collaborative efforts through regional and international co-operation.	Coordination with the MEE Team on the design of the Hong Kong SAR NC and BUR preparations.
Macao Meteorological and Geophysical Bureau	Weather monitoring, analysis and forecast, SMG also issues different kinds of meteorological warnings. In addition. Responsible for the activities relating to aviation meteorology, climate as well as the activities against the climate change.	Coordination with the MEE Team on the design of the Macao SAR NC and BUR preparations.
United Nations Development Programme (UNDP)	UNDP works in about 170 countries and territories, helping to achieve the eradication of poverty, and the reduction of inequalities and exclusion. UNDP helps countries to develop policies, leadership skills, partnering abilities, institutional capabilities and build resilience in order to sustain development results.	UNDP is GEF Implementing Agency for the project and is therefore responsible for oversight and monitoring project implementation and ensuring adherence to UNDP and GEF policies and procedures.
Other Stakeholders		
Academic institutes, colleges, universities, and/or relevant individuals	Universities and research organizations focus on teaching, research and conservation knowledge development and policy recommendations	Provided technical expertise on data/analysis quality of the outcomes
Industrial	Within their own areas:	Coordinate and support

Key Stakeholders	Mandate Relevant to the Project	Roles in the Project
associations related to data reporting in sectors	Coordinate and support compliance actions within the sector; Facilitate information exchanges among members; Facilitate formulation of sector development strategies; Industrial strategy development of 4NC.	compliance reporting within the sector; Facilitate information exchanges among members; Help establish technical specifications for GHG data monitoring at the enterprise level
State-owned/private enterprises	Major emitter of the industrial GHG emissions	Participate in project activities and report the GHG emissions; Cooperate with the surveys and other activities on the governmental level
CSOs	Have their focuses and special interests on climate change and 4NC, 3BUR, 4BUR .	Potential to provide technical expertise and bring in international experience, networking and platform for communication. Possible co-implementers for some activities such as training, communication and public awareness under projects.

Stakeholder Engagement Activities

Consultation	Purpose	Participants	Lead/Chair	Reporting	Schedule
Public consultation	Secure relevant feedback to adjust policy formulation	MEE , policymakers from relevant ministries, industrial enterprises, industry association, universities, and research institutes, employees of participating industries	MEE	In-person presentations, seminars, meeting minutes, agendas, participant list	Year 1-4, once a year
Training of national level	Secure relevant feedback and levels of interest for recruitment of trainers, participants	MEE, industry association, universities, and research institutes, employees of participating industries	MEE	In-person presentations, seminars, meeting minutes, agendas, participant lists, training packs, toolkits, learning materials	Year 1-4, once a year
Public consultation & site visits to enterprises	Effectiveness of mitigation measures; Impactsand benefits of project implementation; Comments and suggestions	MEE, Industrial Enterprises, Industry Association, Universities, and Research Institutes, Employees of participating industries	MEE	In-person presentations, meetings agendas. News, reports, photos. Site visit report. Materials/information packs, checklists – hardcopies, PowerPoint slides, USB sticks where appropriate. Delivery of case studies/best	Year 1-4, twice a year

				practices, technical manual developed for sector.	
Expert workshop, conferences	Comments and suggestions on impacts; public opinions; interest in partnerships collaborations to recruit/fund further industries/sectors interest in training	MEE, Industrial Enterprises, Industry Association, Universities, and Research Institutes, Employees of participating industries	MEE	In-person presentations, meetings, agendas. Materials/information packs, Power Point slides, USB sticks where appropriate.	YEAR 1-4, twice a year

Annex 8: Gender Analysis and Gender Action Plan

Gender Analysis

The concept of gender mainstreaming is a globally agreed strategy for achieving gender equality and women empowerment and as defined by the United Nations Economic and Social Council in 1997, it is *"a strategy for making women's as well as men's concerns and experiences an integral dimension of policies and programmers in all political, economic and societal spheres ' so that women and men benefit equally and inequality is not perpetuated"*. Gender mainstreaming is helpful to identify gaps in gender equality. In 2015, Chinese Women and Children Statistics issued by Chinese State Statistics Bureau shows that female accounts for 42.6% of all the trained employees in 2014, which is greater than 38% in 2010, but it is still less than 50%. Thus, all capacity development interventions under the 4NC Project will consider this dimension, particularly those in the pertinent public institutions to influence future national policy.

By making sure that 1) women' s involvement in the projects enable them to access to resources and technologies that enhance their health and well-being; 2) there is no inadequate recognition of women' s role as key agents of environmental actions; 3) women' s engagement, leadership and decision-making are adequately promoted during the project implementation; 4) there is no uneven representation of women and men' s distinct needs and priorities in the process? Considerations for gender mainstreaming, gender equality, and women' s empowerment in this 4NC project are as follows:

- ensuring women' s access to resources and technologies that enhance their health and well-being;
- recognizing women' s role as key agents of environmental actions;
- promoting women' s engagement, leadership and decision-making; and,
- having a fair representation of women and men' s distinct needs and priorities in the process.

Since gender dimensions are prerequisites in the design, implementation, monitoring and evaluation of programs, projects and activities with tools and guidelines on mainstreaming gender in the whole gamut of project management, gender considerations have been taken into account in the design of the 4NC Project. Per the design, during the project implementation, the set targets for gender ratio and women participation will be closely monitored and evaluated.

The following is the designed Action Plan to promote and enhance gender equality in the implementation of the 4NC Project.

Strategic Plan Goal	Objective	Promotion of the role of women in Climate Change	Targets	indicator	Timeframe	Responsible Parties
Promote gender equality and women's empowerment --- Mainstream gender equality in the project	Integration of gender perspectives into projects and activities, including substantive consideration	Ensure women's participation	At least 60% of all participants are women	Number of women participants	2021-2024	MEE, PMO and other qualified organizations
		Hire more female experts for the project	Hire at least 20% more women experts than 3NC period	The increase in percentage of female employees	2021-2024	MEE, PMO and other qualified organizations
		Involve more female experts in key tasks	Women experts are involved in each key task	Number of key tasks that female experts involved	2021-2024	MEE, PMO and other qualified organizations
		Women will participate more in decision making	Professional opinions from women experts will be adopted by the project	Number of opinions proposed by female experts and adopted by the project	2021-2024	MEE, PMO and other qualified organizations
		Equality for training for men and women	Gender-responsive training system	Proportion of female employees who have participated in training	2021-2024	MEE, PMO and other qualified organizations

Annex 9: Procurement Plan

Comp.	Type of Supply	High Level Categorization	Description of goods, services or works	Unit	Qty	Est. Unit Price (USD)	Est. Total Price (USD)	Procurement (Est. start)	Procurement (Est. completion)	Est. Start of Contract	Est. Contract completion
1	Services	Contract. Services – Companies or Institutions	One subcontract for developing National GHG inventory from energy activities, industries process, agriculture, LULUCF and Waste.	Lump sum	1	2,150,000	2,150,000	Jan '22	Jan '22	Feb '22	Sep '25
1	Services	Contract. Services – Companies or Institutions	Subcontracts for capacity building of relevant government departments in collecting required data and information for conducting and preparing GHG inventories (*unit price rounded to nearest dollar)	Lump sum	6	115,834	695,000	Jan '22	Jan '22	Feb '22	Sep '25
1	Services	Contract. Services – Companies or Institutions	One subcontract for improving and updating national inventory database system.	Lump sum	1	400,000	400,000	Jan '22	Jan '22	Feb '22	Sep '25
1	services	Local Consultants	Local experts in GHG inventory, V&A, GHG projection, mitigation, etc. for review documents, provide suggestions, assess	day	400	200	80,000	Jan '22	Jan '22	Feb '22	Sep '25

Comp.	Type of Supply	High Level Categorization	Description of goods, services or works	Unit	Qty	Est. Unit Price (USD)	Est. Total Price (USD)	Procurement (Est. start)	Procurement (Est. completion)	Est. Start of Contract	Est. Contract completion
			reports								
2	Services	Contract. Services – Companies or Institutions	Subcontracts for capacity building for relevant government departments on collecting climate data/information and assessment of climate change impact and vulnerability.	Lump sum	6	15,000	90,000	Jan '22	Jan '22	Feb '22	Sep '25
3	Services	Contract. Services – Companies or Institutions	Subcontracts for capacity building for relevant government departments on assessment of the effectiveness of implemented CCM policies. (*unit price rounded to nearest dollar)	Lump sum	3	61,667	185,000	Jan '22	Jan '22	Feb '22	Sep '25
4	Services	Contract. Services – Companies or Institutions	Subcontracts for capacity building for relevant government departments on collecting information and in assessing technologies, financing of technology applications, and capacity building needs for technologies.	Lump sum	2	47,700	95,000	Jan '22	Jan '22	Feb '22	Sep '25

Comp.	Type of Supply	High Level Categorization	Description of goods, services or works	Unit	Qty	Est. Unit Price (USD)	Est. Total Price (USD)	Procurement (Est. start)	Procurement (Est. completion)	Est. Start of Contract	Est. Contract completion
5	services	Local Consultants	Local experts in GHG inventory, V&A, GHG projection, mitigation, etc., will be convened to assist Hong Kong and Macao SAR governments to finish the NC and BUR report, including review documents, provide suggestions, assess reports, etc. ($200per day × 20 days, 10 persons)	day	20	40,000	40,000	Jan '22	Jan '22	Feb '22	Sep '25
6	Services	Contract. Services – Companies or Institutions	One subcontract for improving and updating national inventory database system.	Lump sum	1	350,000	350,000	Jan '22	Jan '22	Feb '22	Sep '25
M&E	services	Local Consultants	Local consultant to provide technical support to Project Implementation Report ($2500/year)	Lump sum	1	10,000	10,000	Jan '22	Jan '22	Feb '22	Sep '25
M&E	services	International Consultants	International consultants to conduct MTR and TE	Lump sum	2	20,000	40,000	Jan '22	Jan '22	Feb '22	Sep '25
M&E	services	National Consultants	National consultants to conduct MTR and TE	Lump sum	2	10,000	20,000	Jan '22	Jan '22	Feb '22	Sep '25
PMU	services	Professional Services/con	Audit	Lump sum	4	4,000	16,000	Feb'23	Mar'23	Mar'23	Mar'26

Comp.	Type of Supply	High Level Categorization	Description of goods, services or works	Unit	Qty	Est. Unit Price (USD)	Est. Total Price (USD)	Procurement (Est. start)	Procurement (Est. completion)	Est. Start of Contract	Est. Contract completion
		sulting firm									

Annex 10: Letters of financial commitments

1. Ministry of Ecology and Environment

中华人民共和国生态环境部

Mr. Pradeep Kurukulasuriya
GEF Executive Coordinator
United Nations Development Programme
New York, NY 10017

20 September 2021

Dear Mr. Kurukulasuriya,

Subject: Confirmation of co-financing for the GEF-7 Project Enabling China to Prepare Its Fourth National Communication, and Biennial Update Reports on Climate Change

This letter is to confirm the co-financing support for the *Enabling China to Prepare Its Fourth National Communication, and Biennial Update Reports on Climate Change* project that will be implemented from 2022-2024. The project is designed to support China to fulfill its commitments under the UNFCCC to prepare its fourth National Communication (4NC) and the third Biennial Update Report (BUR3) and the fourth Biennial Update Report (BUR4). The project will place greater emphasis on relevant policies on mitigation of and adaptation to climate change and the results of their implementation, promote the establishment and improvement of the domestic systems for measurement, report and verification, so as to enable China to effectively address climate change in the process of pursuing national sustainable development.

This letter is to confirm the Ministry of Ecology and Environment' co-financing in the amount of US$ 1,366,000 over the 4 years duration of the project to support the implementation.

In-kind: US$ 1,366,000
Total: US$ 1,366,000

We look forward to collaborating with UNDP and we avail the opportunity to assure you of our full support and commitment.

Mr. Li Gao
Director General
Department of Climate Change
Ministry of Ecology and Environment

2. United Nations Development Programme (UNDP)

United Nations Development Programme
联合国开发计划署

21 October 2021

Dear Pradeep,
Dear Mr. Kurukulasuriya,

Subject: Co-financing Commitment Letter for "Enabling China to Prepare Its Fourth National Communication, and Biennial Update Reports on Climate Change (FNC) Project"

This is to confirm the support of the UNDP China Country Office to the "Enabling China to Prepare Its Fourth National Communication, and Biennial Update Reports on Climate Change (FNC) " project. This project will combine the strengths of UNDP and the Ministry of Ecology and Environment of China. We confirm that the UNDP CO will contribute USD 100,000 in-kind co-financing over the expected project implementation period of 2022-2026.

We are looking forward to the commencement of this project.

Yours sincerely,

Bente Trankmann
Resident Representative

Mr. Pradeep Kurukulasuriya
Executive Coordinator & Director
Global Environmental Finance
UNDP BPPS

2 Liangmahe Nanlu, Beijing, China, 100600, Tel: 86-10-85320800 Fax: 86-10-85320900 www.undp.org.cn
中国北京亮马河南路二号 邮编：100600

Annex 11: Social and Environmental Screening Procedure (SESP)

Project Information

Project Information	
1. **Project Title**	Enabling China to Prepare Its Fourth National Communication, and Biennial Update Reports on Climate Change (4NC) Project
2. **Project Number (i.e. Atlas project ID, PIMS+)**	6399
3. **Location (Global/Region/Country)**	China
4. **Project stage (Design or Implementation)**	Design (ProDoc)
5. **Date**	4 November 2021

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?
Briefly describe in the space below how the project mainstreams the human rights-based approach
This is an enabling activity project to assist China to prepare its fourth National Communication (4NC) and the third Biennial Update Report (BUR3) and the fourth Biennial Update Report (BUR4) , in order to fulfill the obligations under the United Nations Framework Convention on Climate Change. Due to the nature of its activities, mainstreaming human rights based approach will not be specifically covered in the project. The 4NC Project has been designed according to the principles of human rights based approach, which will also be followed during the implementation phase of the project. As in previous NC projects, the implementing partner as well as the project partners acknowledge human rights practices under international law and the application of human rights-related standards in the design and implementation of the project. This enabling project is designed to hear and consider the climate change mitigation and adaptation concerns of all relevant target groups including those that are potentially marginalized individuals and groups.
Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment
Like in the previous NC projects of the country, women working in both management and technical departments of the government agencies/institutions who can play important roles in the design, development, and implementation will be involved. By doing so, the project recognizes the possible contributions of women in the management and implementation of climate change mitigation and adaptation efforts of the country.
Briefly describe in the space below how the project mainstreams sustainability and resilience
As in the previous NC projects, this project is designed to further broaden and consolidate the network of stakeholders (government, research and education institutions, associations, social groups, enterprises, individuals, and NGOs), enhance technical capacity of national experts, and strengthen the institutional framework for the preparation of NCs and BURs. The activities consist of research work (surveys, field measurements and investigations, assessments, laboratory investigations), data gathering, processing and analysis; capacity development activities; stakeholder coordination meetings, focused stakeholder consultations, report writing, project work documentation and presentations, etc. There are no pilots/demos under this project.
Briefly describe in the space below how the project strengthens accountability to stakeholders

The project will be designed and implemented guided by principles of accountability. This would naturally ensure constant engagement with stakeholders from design, implementation, and completion of the project. The Project Management Office (PMO) shall establish a project-level Grievance Redress Mechanism (GRM) during project inception. The full details of the GRM will be agreed upon during the project's inception phase. The Mechanism (SRM) that ensures stakeholders have access to appropriate grievance resolution procedures for hearing and jointly addressing complaints and disputes. Interested stakeholders may raise a grievance at any time to the PMO, the Executing Agency, the Implementing Agency (UNDP), or the GEF. A monitoring and evaluation procedure is also designed to ensure effective monitoring-and where appropriate, participatory monitoring with stakeholders.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Complete SESP Attachment 1 before responding to Question 2.*	QUESTION 3: What is the level of significance of the potential social and environmental risks? *Note: Respond to Questions 4 and 5below before proceeding to Question 5*			QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High
Risk Description (broken down by event, cause, impact)	***Impact and Likelihood (1-5)***	***Significance (Low, Moderate Substantial, High)***	***Comments (optional)***	***Description of assessment and management measures for risks rated as Moderate, Substantial or High***
Risk 1: The Project may exclude potentially affected stakeholders, in particular marginalized groups, from fully participating in the assessments that will be carried out under the project. Checklist Question P.13	I = 2; L = 2	**Low**	The inventory of GHG emissions in the various sectors, and assessment of the CCM and CCA efforts will involve all pertinent stakeholders in the country. The risk will be fully addressed through the capacity building on, and development of the assessment procedures that will be used by national and local governments in preparing the national and provincial greenhouse gas emission inventories and assessments of CCM and CCA technology options, technology financing and the impacts of CCM and CCA initiatives and policies. Specific project activities that will be carried out that will contribute to the mitigation of this risk are those that will deliver the following completed capacity building and development programs for the general and specific	As all risks are low, no further assessment and/or management measures are needed

			stakeholders in the country on: Output 1.1.5: Information/data gathering for use in GHG inventories Output 2.1.5: Information/data gathering for use in climate change impact and vulnerability analyses Output 4.2.1: Identification and analysis of CCA & CCM technologies, techniques and measures Output 4.2.2: Identification and analysis of financing resources and financial options for CCA and CCM applications Output 4.3.3: Information/data gathering for use in, and conduct of, assessments of technologies and financing of technologies Output 6.1.2: NC Report and BUR preparation	
Risk 2: Project activities might not be implemented in a gender- sensitive manner Checklist Question P.10	I = 3; L = 1	low	Steps have been taken during project design to ensure that the project team is sensitized to gender considerations. During the implementation, the project would follow the Gender Analysis and Action Plan (GAAP) that is included in the Project Document as Annex 8. The project could potentially offer a wide range of opportunities, for individuals and groups get trained in capacity development program activities, and whose services can be engaged (as consultant or contractor) for the project implementation. In this regard, qualified women working in both management and technical departments of pertinent GOC entities were consulted and involved in the project design and will be involved when the project activities are implemented. Per the GAAP, special measures to ensure that any potential discrimination against any women in the implementation of the project is countered have been identified and included in the project design. The results of such measures will be observed during project implementation, and if any corrective action is necessary, this will be addressed. Beyond that, the PMO will make special efforts to explore and facilitate the inclusion of interventions to enhance the role of women.	

			Special activities have been designed to involve women, e.g., in the productive use of RE activities, to have strong representation of women in training courses and seminar-workshops, and to ensure a significant proportion of project consultants are women.	
Risk 3: Project personnel who will be hired and deployed to work on the project activities may be exposed to discriminatory working conditions and/or lack of equal opportunity. Checklist Question 7.5 (Standard 7)	I = 3; L = 1	Low	The procurement of human resource inputs for the project implementation will be based in a gender-equitable, and equal opportunity manner. The project implementing partner will carry out adequate and conscientious planning and implementation of project-related procurement activities. This involves the preparation and implementation of appropriate procurement plans for the employment of all qualified and capable people, while ensuring that proper government procurement and labor laws/regulations will be applied and complied with.	
Risk 4: Policies that are developed with support from the project may not be implemented properly and/or may lead to indirect/unintended environmental and/or social impacts. Checklist Question P.4	I = 3; L = 1	Low	The project does not directly develop policies but provides an assessment of the impacts and risks (e.g., economic, environmental, social, etc.) of the climate change policies that the national and local governments implement. The project will evaluate the impacts and risks of the improper implementation and non-implementation of climate change policies, as well as the potential social and environmental risks. As noted in the ProDoc (Activity 2.1.4.1), appropriate recommendations are to be formulated and recommended. The assessment of the social and environmental risks of the implemented and non-implemented policies, and the formulation of recommendations to address such risks shall be based on the social and environmental screening procedures of the UNDP. The risk will be fully addressed through the capacity building on, and development of the assessment procedures that will be used by national and local governments in preparing the national and provincial greenhouse gas emission inventories and assessments of the impacts of CCM and CCA initiatives and policies. The	

			specific activities that will be carried out under the project are those that will deliver the following completed capacity building and development programs for the general and specific stakeholders in the country on: Output 2.1.5: Information/data gathering for use in climate change impact and vulnerability analyses Output 3.2.3: Assessment of the effectiveness of implemented CCM policies Output 3.2.4: Assessment of impacts and GHG emission reductions from the enforcement of government policies on CCM actions	
Risk 5: The project team and/or project partners and stakeholders working on the project implementation do not follow strictly public health regulations and unintentionally further spread Covid. Checklist Question 3.4 (Standard 3)	I = 3, L = 1	Low	In the event the Covid epidemic will persist until the time the project is implemented, the common and basic measures that have been proven effective in facilitating the safe implementation of projects with fewer delays, will be adopted. It should be noted that considering the current rather uncertain pandemic situation in China and worldwide, that if there will be restrictions in travel and public gathering that will be imposed by government authorities to protect public health during the implementation phase of the project, alternative ways and means will be identified, considered and effectively implemented to avoid protracted delays in the conduct of the activities, and to deliver the expected project outputs in a timely manner. After more than a year of living and working with the awareness of the dangers of the Covid-19 pandemic and the measures to be effectively taken to prevent its further spread, the project proponent (MEE), project partners and stakeholders are fully aware of the various options that effectively worked in the implementation of project activities during the pandemic. They have gained experiences and learned lessons on how the Chinese	

			government, the public and private sectors, and other sectors of the national economy reacted and addressed this public health issue. They also learned lessons about actions and measures taken by the national and local governments that were effective (e.g., applications of automated technologies in virtual communications and information sharing) and those with less success. With all of these knowledge, the project proponents, together with the UNDP and other project partners, are able to apply appropriate measures in the implementation of project activities while at same time complying with government measures in case the pandemic will persists. They are much better prepared in coming up with more appropriate and cost-effective risk mitigation measures. During the project implementation stage, where necessary, local public health officials in the project areas will also be consulted to get a wide perspective view of the risk issues and come up with the appropriate preventive and alleviative mitigation measures that will ensure avoidance of protracted delays in activities implementation and delivery of project outputs.	
Risk 6: Extreme climate events brought about or exacerbated by climate change may affect the implementation of the project. There is also the potential risk of inappropriate project outputs (e.g., developed assessment procedures and recommended CCM and CCA measures) that are produced by the project and adopted and implemented by the country exacerbating the current	I = 2; L = 1	Low	The project involves no field work, but traveling of project team members, for example to meeting and workshop venues, can be disrupted by climate. Power supply that can be disrupted by climate events can also be a potential risk but in the case of China's power infrastructure, this is considered low risk. The project will ensure the prevention of such risks by utilizing online tools for communications, backed up with adequate electric power supply, in cases of extreme climate events happen, following government safety and emergency procedures. This risk, which can also happen to any CCA and CCM initiatives that will be carried out in the country, will be addressed under the project. There are specific activities of the project that involve the development of	

vulnerabilities to the impacts of climate change and climate change related disasters. Checklist Questions 2.2 and 2.3 (Standard 2)			procedures for assessing the potential risks and impacts of extreme climate events in the implementation of measures and initiatives on: Climate Change Adaptation – Activity 2.1.4.1; and Climate Change Mitigation – Activity 3.2.4.1; That will be critically and properly analyzed and vetted to ensure that the recommended procedures and measures are applicable and appropriate in the context of China.	

	QUESTION 4: What is the overall project risk categorization?		
	Low Risk	√	All potential risks identified above are rated low.
	Moderate Risk	☐	
	Substantial Risk	☐	
	High Risk	☐	

	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply)				
	Question only required for Moderate, Substantial and High Risk projects				
	Is assessment required? (check if "yes")	☐			***Status? (completed, planned)***
	if yes, indicate overall type and status		☐	Targeted assessment(s)	
			☐	ESIA (Environmental and Social Impact Assessment)	
			☐	SESA (Strategic Environmental and Social Assessment)	
	Are management plans required? (check if "yes)	☐			
	If yes, indicate overall type		☐	Targeted management plans (e.g. Gender Action Plan, Emergency Response Plan, Waste Management Plan, others)	
			☐	ESMP (Environmental	

				and Social Management Plan which may include range of targeted plans)	
			☐	ESMF (Environmental and Social Management Framework)	
	Based on identified risks, which Principles/Project-level Standards triggered?		**Comments (not required)**		
	Overarching Principle: Leave No One Behind		None triggered as the project is Low.		
	Human Rights	☐			
	Gender Equality and Women's Empowerment	☐			
	Accountability	☐			
	1. Biodiversity Conservation and Sustainable Natural Resource Management	☐			
	2. Climate Change and Disaster Risks	☐			
	3. Community Health, Safety and Security	☐			
	4. Cultural Heritage	☐			
	5. Displacement and Resettlement	☐			
	6. Indigenous Peoples	☐			
	7. Labour and Working Conditions	☐			
	8. Pollution Prevention and Resource Efficiency	☐			

Final Sign Off

Final Screening at the design-stage is not complete until the following signatures are included

Signature	***Date***	***Description***
QA Assessor		UNDP staff member responsible for the project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks		
INSTRUCTIONS: The risk screening checklist will assist in answering Questions 2-6 of the Screening Template. Answers to the checklist questions help to (1) identify potential risks, (2) determine the overall risk categorization of the project, and (3) determine required level of assessment and management measures. Refer to the SES toolkit for further guidance on addressing screening questions.		
Overarching Principle: Leave No One Behind		**Answer (Yes/No)**
Human Rights		
P.1	Have local communities or individuals raised human rights concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	NO
P.2	Is there a risk that duty-bearers (e.g. government agencies) do not have the capacity to meet their obligations in the project?	NO
P.3	Is there a risk that rights-holders (e.g. project-affected persons) do not have the capacity to claim their rights?	NO
Would the project potentially involve or lead to:		
P.4	adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	YES
P.5	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups, including persons with disabilities? [11]	NO
P.6	restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalized individuals or groups, including persons with disabilities?	NO
P.7	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	NO
Gender Equality and Women's Empowerment		
P.8	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g. during the stakeholder engagement process, grievance processes, public statements)?	NO
Would the project potentially involve or lead to:		
P.9	adverse impacts on gender equality and/or the situation of women and girls?	NO
P.10	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	YES
P.11	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being*	NO
P.12	exacerbation of risks of gender-based violence? *For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.*	NO
Sustainability and Resilience: Screening questions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below		
Accountability		
Would the project potentially involve or lead to:		
P.13	exclusion of any potentially affected stakeholders, in particular marginalized groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them?	YES

[11] Prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender and transsexual people.

P.14	grievances or objections from potentially affected stakeholders?	NO
P.15	risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the project?	NO
Project-Level Standards		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
Would the project potentially involve or lead to:		NO
1.1	adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes*	NO
1.2	activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	NO
1.3	changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	NO
1.4	risks to endangered species (e.g. reduction, encroachment on habitat)?	NO
1.5	exacerbation of illegal wildlife trade?	NO
1.6	introduction of invasive alien species?	NO
1.7	adverse impacts on soils?	NO
1.8	harvesting of natural forests, plantation development, or reforestation?	NO
1.9	significant agricultural production?	NO
1.10	animal husbandry or harvesting of fish populations or other aquatic species?	NO
1.11	significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction*	NO
1.12	handling or utilization of genetically modified organisms/living modified organisms?[12]	NO
1.13	utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)[13]	NO
1.14	adverse transboundary or global environmental concerns?	NO
Standard 2: Climate Change and Disaster Risks		
Would the project potentially involve or lead to:		
2.1	areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunami or volcanic eruptions?	NO
2.2	outputs and outcomes sensitive or vulnerable to potential impacts of climate change or disasters? *For example, through increased precipitation, drought, temperature, salinity, extreme events, earthquakes*	YES
2.3	increases in vulnerability to climate change impacts or disaster risks now or in the future (also known as maladaptive or negative coping practices)? *For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding*	YES
2.4	increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	NO
Standard 3: Community Health, Safety and Security		

[12] See the Convention on Biological Diversity and its Cartagena Protocol on Biosafety.

[13] See the Convention on Biological Diversity and its Nagoya Protocol on access and benefit sharing from use of genetic resources.

Would the project potentially involve or lead to:		
3.1	construction and/or infrastructure development (e.g. roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams)	NO
3.2	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	NO
3.3	harm or losses due to failure of structural elements of the project (e.g. collapse of buildings or infrastructure)?	NO
3.4	risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	YES
3.5	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	NO
3.6	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)?	NO
3.7	influx of project workers to project areas?	NO
3.8	engagement of security personnel to protect facilities and property or to support project activities?	NO
Standard 4: Cultural Heritage		
Would the project potentially involve or lead to:		
4.1	activities adjacent to or within a Cultural Heritage site?	NO
4.2	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	NO
4.3	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: projects intended to protect, and conserve Cultural Heritage may also have inadvertent adverse impacts)	NO
4.4	alterations to landscapes and natural features with cultural significance?	NO
4.5	utilization of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	NO
Standard 5: Displacement and Resettlement		
Would the project potentially involve or lead to:		
5.1	temporary or permanent and full or partial physical displacement (including people without legally recognizable claims to land)?	NO
5.2	economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	NO
5.3	risk of forced evictions?[14]	NO
5.4	impacts on or changes to land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	NO
Standard 6: Indigenous Peoples		
Would the project potentially involve or lead to:		
6.1	areas where indigenous peoples are present (including project area of influence)?	NO
6.2	activities located on lands and territories claimed by indigenous peoples?	NO
6.3	impacts (positive or negative) to the human rights, lands, natural resources, territories, and	NO

[14] Forced eviction is defined here as the permanent or temporary removal against their will of individuals, families or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection. Forced evictions constitute gross violations of a range of internationally recognized human rights.

	traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? *If the answer to screening question 6.3 is "yes", then the potential risk impacts are considered significant and the project would be categorized as either Substantial Risk or High Risk*	
6.4	the absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	NO
6.5	the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	NO
6.6	forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? *Consider, and where appropriate ensure, consistency with the answers under Standard 5 above*	NO
6.7	adverse impacts on the development priorities of indigenous peoples as defined by them?	NO
6.8	risks to the physical and cultural survival of indigenous peoples?	NO
6.9	impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? *Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.*	NO
Standard 7: Labour and Working Conditions		
Would the project potentially involve or lead to: (note: applies to project and contractor workers)		NO
7.1	working conditions that do not meet national labour laws and international commitments?	NO
7.2	working conditions that may deny freedom of association and collective bargaining?	NO
7.3	use of child labour?	NO
7.4	use of forced labour?	NO
7.5	discriminatory working conditions and/or lack of equal opportunity?	YES
7.6	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	NO
Standard 8: Pollution Prevention and Resource Efficiency		
Would the project potentially involve or lead to:		NO
8.1	the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	NO
8.2	the generation of waste (both hazardous and non-hazardous)?	NO
8.3	the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	NO
8.4	the use of chemicals or materials subject to international bans or phase-outs? *For example, DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention*	NO
8.5	the application of pesticides that may have a negative effect on the environment or human health?	NO
8.6	significant consumption of raw materials, energy, and/or water?	NO

Annex 12: Partner Capacity Assessment Tool (PCAT)
Partner Capacity Assessment Tool (PCAT) can be accessed Here

Annex 13: HACT Micro Assessment Report
The report can be accessed Here