Terminal Evaluation Report

Basic Report Information	
Title of UNDP-supported GEF-financed project	ENABLING CHINA TO PREPARE ITS THIRD NATIONAL COMMUNICATION TO THE UNFCCC (TNC)
UNDP PIMS ID GEF ID	5032 4882
TE timeframe and date of final TE report	November 11, 2020-March 3, 2021
Region and countries included in the project	China
GEF Focal Area/Strategic Program	GEF-5 Climate Change Strategic Objective
Executing Agency, Implementing partner and other project partners	Ministry of Ecology and Environment (MEE); National Development and Reform Commission (NDRC)
TE Team members	Litong Xu (international consultant), Prof. Zhijie Wei, Jifeng Li (national consultant)

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The report is developed in compliance with the terms of reference for the assignment. The conclusions and recommendations set out in the following pages are solely those of the evaluators and are not binding on the project management and sponsors.

ACRONYMS AND ABBREVIATIONS

2NC	Second National Communication
3NC	Third National Communication
4NC `	Fourth National Communication
APR	Annual Project Report
AR4	The Fourth Assessment Report
BEF	Biomass expansion factor
BOD	Biological Oxygen Demand
BUR	Biennial Update Report
CAAS	Chinese Academy of Agricultural Sciences
CAF	Chinese Academy of Forest
CAS	Chinese Academy of Sciences
CASS	Chinese Academy of Social Sciences
CCA	Climate change adaptation
CCM	Climate change mitigation
CDM	Clean Development Mechanism
CH4	Methane
CICETE	China International Center for Economic And Technical Exchanges
CMA	China Meteorological Administration
CNCCP	China's National Climate Change Programme
CO2	Carbon dioxide
COD	Chemical Oxygen Demand
COP	Conference of Parties
CRAES	Chinese Research Academy of Environmental Sciences
DOC	Degradable organic composition
EA	Executing agency
ERI	Energy Research Institute
FEEI	Forest Ecology & Environment Institute of Chinese Academy of Forestry
FOD	First Order Draft
GDP	Gross domestic product
GEF	Global Environment Facility
GHG	Greenhouse gas
GOC	Government of China
GWP	Global warming potentials
HFCs	Hydrofluorocarbons
IAP	Institute of Atmospheric Physics (of Chinese Academy of Sciences)
ICA	international consultation and analysis
ICE	Information, Communication and Education
IEDA	Institute of Environment and Sustainable Development in Agriculture, CAAS
IFEEP	Institute of Forest Ecology, Environment and Protection (of Chinese Academy of Forestry)
INC	Initial National Communication

IPCC	Intergovernmental Panel on Climate Change
LFA	Logical framework analysis
LHV	Low Heating Value
LNG	Liquid natural gas
LUCF	Land use change and forestry
LULUCF	Land use, land use change and forestry
MCF	Methane correction factor
MDGs	Millennium Development Goals
MEE	Ministry of Ecology and Environment
MEP	Ministry of Environmental Protection
MERP	Methane emission of rice paddy field
MFA	Ministry of Foreign Affairs
MOF	Ministry of Finance
MOST	Ministry of Science and Technology
MOT	Ministry of Transport
MSW	Municipal solid waste
N2O	Nitrogen monoxide
NBS	National Bureau of Statistics
NC	National Communication
NCSC	National Center for Climate Change Strategy and International Cooperation
NDC	nationally determined contributions
NDRC	National Development and Reform Commission
NEX	National Execution
NGO	Non-governmental Organization
NLGCC	National Leading Group on Climate Change
NPC	National Project Coordinator
NPD	National Project Director
ODS	Ozone depleting substances
PC	Project Coordinator
PFCs	Perfluorocarbons
PIR	Project Implementation Report
PMO	Project Management Office
PRC	People's Republic of China
PSC	Project Steering Committee
PWLW	Paddies Water-Logged in Winter
SAR	Special Administrative Regions
SCCF	Special Climate Change Fund (under UNFCCC)
SEPA	State Environmental Protection Administration
SF6	Sulfur hexafluoride
SMART	Specific, measurable, attainable, relevant, and time-sensitive
SNC	Second National Communication
SOC	Soil organic carbon
TAP	Technical Advisory Panel
TNC	Third National Communication

TOR	Terms of Reference
TPR	Tripartite review
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
V&A	Vulnerability and Adaptation

TABLE OF CONTENTS

EXECUTIVE SUMMARY

PROJECT INFORMATION TABLE

Table 1PROJECT INFORMATION TABLE

Project Details		Project Milestones	
Project Title	Enabling China to Prepare Its Third National Communication to the UNFCCC (TNC)	PIF Approval Date:	October 1, 2012
UNDP Project ID (PIMS #):	5032	CEO Endorsement Date (FSP) / Approval date (MSP):	July 18, 2014
GEF Project ID:	4882	ProDoc Signature Date:	March 3, 2015
UNDP Atlas Business Unit, Award ID, Project ID:	88737	Date Project Manager hired:	October 17, 2014
Country/Countries:	CHINA, People's Republic	Inception Workshop Date:	March17 , 2015
Region:	Asia-Pacific	Mid-Term Review Completion Date:	June 17, 2018
Focal Area:	Climate Change	Terminal Evaluation Completion date:	March, 2021
GEF Operational Programme or Strategic Priorities/Objectives:	GEF-5 Climate Change Strategic Objective	Planned Operational Closure Date:	March 3, 2019 First Extension Closing Date June 31, 2020 Second Extension Closing Date December 3, 2020
Trust Fund:	GEF Trust Fund		
Implementing Partner (GEF Executing Entity):	National Development & Reform Commission (NDRC), Ministry of Ecology and Environment (MEE)		
NGOs/CBOs involvement:			
Private sector involvement:			
Geospatial coordinates of project sites:			
Financial Information			
PDF/PPG	at approval (US$M)		at PDF/PPG completion (US$M)
GEF PDF/PPG grants for project preparation			

Co-financing for project preparation		
Project	at CEO Endorsement (US$M)	at TE (US$M)
[1] UNDP contribution:	100,000	100,000
[2] Government:	800,000	1,143,219
[3] Other multi-/bi-laterals:		
[4] Private Sector:		
[5] NGOs:		
[6] Total co-financing [1 + 2 + 3 + 4 + 5]:	900,000	1,243,219
[7] Total GEF funding:	7,280,000	7,280,000
[8] Total Project Funding [6 + 7]	8,180,000	8,523,219

PROJECT DESCRIPTION

This project is to enable China to fulfill its commitments under the UNFCCC to prepare its Third National Communication (3NC) and Initial Biennial Update Report (BUR) and to gradually establish a supporting system of developing NCs and BUR in accordance with the Guidelines for the Preparation of National Communications from Non-Annex I Parties (17/CP.8) and Biennial Update Reporting Guidelines for Non-Annex I Parties (2/CP.17) adopted by the Conference of Parties (COP). Based on the experience and lessons learned from the previous two 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, enhance technical capacity of national experts, and strengthen the institutional framework for the preparation of NCs and BURs. 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 Greenhouse Gas (GHG) inventory of 2010 and 2012, with extended categories and sources of GHG emissions and reduced uncertainties of the inventory. It will further improve the national GHG inventory database management system, with a view to administering inventory data in a more scientific way and making the preparation of GHG inventories a continuing process. The project will further improve the approach for projecting GHG emissions in China and estimate China's CO2 emission from energy activities in 2025. It will also identify key impacts of climate change and corresponding adaptation measures, describe relevant policies and measures which China adopts to address climate change, and introduce the activities of enhancing public awareness on climate change. It will provide relevant information on addressing climate change by Hong Kong and Macao. The project will lead to the submission of the 3NC and BUR to the Conference of the Parties (COP) to the UNFCCC.

By the time of project termination, the project accomplished all its designed tasks, as indicated in Section 3.3.

EVALUATION RATINGS TABLE

Table 2EVALUATION RATING TABLE

1.Monitoring & Evaluation (M&E)	Rating
M&E design at entry	S
M&E Plan Implementation	S
Overall Quality of M&E	S
2.Implementing Agency (IA) Implementation & Executing Agency (EA) Execution	Rating
Quality of UNDP Implementation/Oversight	S
Quality of Implementing Partner Execution	S
Overall quality of Implementation/Execution	S
3.Assessment of Outcomes	Rating
Relevance	HS
Effectiveness	HS
Efficiency	MS
Overall Project Outcome Rating	S
4.Sustainability	Rating
Financial sustainability	MU
Socio-political sustainability	L
Institutional framework and governance sustainability	L
Environmental sustainability	L
Overall Likelihood of Sustainability	MU

THE CONCLUSIONS AND LESSONS LEARNED

The TNC Project is aligned with the development strategy and priority of GEF/UNDP, GOC, and the project is expected to be of significant help to achieve national and global environment benefits. The Chinese Government at the highest levels has expressed its support for its full compliance to its obligations to the UNFCCC. As such, the NC Projectshave been effectively used as platform on which to improve understanding of climate change in China and to inform CC policies across all important economic sectors.

The project design draw lessons learnt from previous implemented NC projects, the decision-making process in the project management and implementation involved all the major

stakeholders, and the implementation proved that the indicators used in the project log frame are SMART.

The project experienced 2 big, unexpected events that impacted its implementation. In mid-2019, the GOC initiated the national wide administrative restructuring, which moved the entire project management from NCRC to MEE. In late 2019, the Covid-19 pandemic affected the project implementation. The project implementation period was therefore extended twice. The TE found that both the project's GEF Implementing and Executing Agencies have adaptively managed the project, making refinements to planned project implementation mechanisms based on learning from this and other projects, and to adapt to the changing public health situation in the country. The PMO's performance in the whole progress towards the desired results is effective, exercising enough capacity and intelligence in adapting to changing situations and priorities. However, due to the inefficient financial planning and time-consuming approval procedure, the delivery rate of the project had been chronically low.

The project stakeholders were updated about the project financial planning and management. During the annual meetings, the annual financial plans were prepared by the PMO and reviewed by all PSC and TAP members. PSC members provided comments on annual workplan and approved it accordingly. based on information gathered during the TE interviews, the PMO kept close contact with the PSC and TAP and subcontractors regardingproject financial management. The feedbacks from these stakeholders were considered and incorporated in the follow-up financial planning process.

All targets of the indicators of each project outcomewere achieved. In terms of project goal and objective, the actual levels of achievement (i.e., realization of the indicator EOP targets) were significantlyhigher than the set targets.

The Project's partners and stakeholders have significantly always been manifesting their strong support and commitment to the success of the project. The project's experience and approach, including project management mechanism and key activities are replicable and sustainable in future similar GOC or GEF-UNDP enabling activity projects.

The overall TE rating of the project is shown in Table 2EVALUATION RATING TABLE.

The major lesson learnt from the TNC Project is the confirmation of the fact thata not clearly and adequately defined project implementation and institutional arrangements could considerably hinder the smooth and seamless execution of the project activities.As discussed in Section 4.2, the project management office was placed under the administrative unit of the MEE[1]. This resulted in complex and time-consuming budget planning and approval process, and the chronic low delivery rate of projects. The project management teammust be prepared for the unexpected so that it can make easy adjustments in the implementation strategy. In other words, adaptive management is critical to the success of a project.The major unexpected events that impacted the project

[1] In March 2019, as discussed in the MTR report, the GOC restructuring began, which was unanticipated by the project design, and later led the project management totally moved from NDRC to MEE.

implementation were the Covid-19 pandemic breakout and the GOC restructuring. These events resulted in a series of consequential adjustments to the project implementation and project results.

Another lesson learnt from the implementation of the TNC Project, in the PMO's perspective, is that sufficient management personnel and capacity is important in efficient project implementation.Due to the PMO being placed under the MEE, the project manager, who is also a division chief in MEE, is just doing project management part-time. The project also has no project level technical advisor. The project coordinator is the only person full-time engaged in the management of the project implementation.

On May 31, 2019, MEE requested the first extension of the project from its termination date extended from June 2019 to September 30, 2020. According to the MEE's request, apart from some otherreasons (e.g., preparation of the 4NC Project proposal and better knowledge sharing), the main reason is that local governments must restructure Department of Climate Change (DCC) from local Development and Reform Commission (DRC) to local Bureau of Ecology and Environment (BEE). Accordingly, As the institutional restructuring of the local governments was not completed until March 2019, some of the activities of the 3NC Project in 2018 were not yet carried out. The request was reviewed and agreed by UNDP, and later approved by the TPR meeting, which is also held in conjunction with the PSC meeting.

In late December 2019, the Covid-19 epidemic broke out in China nationwide. The implementation of the project wassuspended for several months. On August 25, 2020, MEE filed the second extension request with termination date putting forward to December 3, 2020. Given the obvious reason, the UNDP agreed with and PSC meeting approved the extension.

In response to the unprecedented big changes and inevitable extensions of the project duration as the consequence, the UNDP, MEE, and the PMO communicated closely and reacted actively. By close communication among MEE, UNDP, and PMO, and consultation with PSC and TAP, theannual work plan was revised, the activities and budget plan were adjusted accordingly and consistent with the formal GEF/UNDP procedure and rules. As a result, all the major designed deliverables of the project (namely the 2BUR, 2BUR, TNC Report) were completed and submitted to the UNFCCC on time. Besides the completion of all original planned activities, the project took advantage of the opportunities(the extensions of project implementation as well as the incorporation of the project into MEE administration), added several activities aiming for following extra achievements: 1) Technical guidance and support of the provincial level GHG inventory development, which resulted in the release of 62 inventory reports covering 32 provinces in both the year 2012 and 2014; 2) development of 4NC Project proposal, which resulted in the submission and GEF CEO approval of the 4NC PIF document; and 3) Research and proposal of mainstreaming the NC related activities into the MEE administration.

In conclusion, the TNC PMOaddressed the unexpected risks well with effective adaptive management skills. From the experiences in the implementation of the project, the key to coping with the risks is close cooperation among the management team, Implementing Agency, Executing Agency, and stakeholders.

RECOMMENDATIONS

Table 3RECOMMENDATIONS TABLE

Rec #	TE Recommendation	Entity Responsible	Time frame
A	Comprehensively incorporate the best practices and lessons learnt of TNC into 4NC preparation and implementation		
A.1	*–More specific plan on risk control and adaptive managementso as to identify and be prepared for such unexpected events as Covid-19 and GOC restructuring.*	*MEE, UNDP CO*	*Apply immediately for 4NC preparation.*
A.2	*–More inclusive stakeholder engagement plan* 1. More stakeholders could be involved in the future NC project, for instance, the industrial associations could be involved in 1) project design; 2) substantial inventory development. 2. *PSC members could be more inclusive, to involve more industrial partners (such as more industrial associations)* 3. The *PSC* members could play more active role, not only in annual project planning and meeting, but also more project daily management decision-making activities.	*MEE, UNDP CO*	*Apply immediately for 4NC preparation.*
A.3	*–Feasibility study to move the PMO to the outside of MEE*	*MEE, UNDP CO*	*Apply immediately for 4NC preparation.*
B	Information dissemination internationally		
B.1	*–Documentation, and Dissemination of Success Stories, as well as more knowledge sharing actions*	*MEE, UNDP CO*	*Apply immediately for 4NC preparation.*
B.2	*–Seek new South-South cooperation project under the coordination of UNDP* *During the TE process, in consultation with MEE and NPD, it was found that there were extensive South-South cooperation activities on climate change are being conducted by MEE with other countries under the framework of BRI, and MEE is very interested in seeking opportunities to develop NC related cooperation under its BRI program, so, is suggested by TE, during the preparation of 4NC, the preparation team could hold special consultative meetings with MEE and UNDP*	*MEE, UNDP CO*	*Apply immediately for 4NC preparation.*

	reginal office to discuss the feasibilities of these kind of cooperation under 4NC.		

1 INTRODUCTION

1.1 EVALUATION PURPOSE

The objective of the Terminal Evaluation (TE) is to carry out an independent analysis of the achievement of the 3NC Project results against what was expected to be achieved and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. It promotes accountability and transparency and assesses the extent of project accomplishments. It assessed the project design;validates/confirms findings regarding project design, implementation and management that were identified during the MTR;evaluates progress towards the achievement of the project outcomes and objective identifies and documents lessons learned (including lessons that might be helpful in the improved design and implementation of other ongoing and future UNDP-GEF projects), and makes recommendations regarding specific actions that should be takenin the design, implementation and management of new projects in the future. The TE will assess project success or failure and identify the necessary changes to be made. The project performance will be measured based on the achievement of the set targets for each indicatorin the project's logical framework.

1.2 SCOPE OF THE EVALUATION

The scope of the TE covers the entire UNDP/GEF-funded 3NC Project and its components as well as the co-financed components of the project.

The TE assessed the project implementation taking into account the current (as of end December 2020) of the project activities and outputs and the resource disbursements made from the start of the project implementation.

The evaluation involved analysis at two levels: component level and project level. On the component level, the following were assessed:

- Whether there is effective relationship and communication between/among components so that data, information, lessons learned, best practices and outputs are shared efficiently, including cross-cutting issues.

- Whether the performance measurement indicators and targets used in the project monitoring system are specific, measurable, achievable, reasonable, and time-bounded to achieve desired project outcomes.

- Whether the use of consultants has been successful in achieving component outputs.

The evaluation included such aspects as appropriateness and relevance of work plan, compliance with the work and financial plan with budget allocation, timeliness of disbursements, procurement, coordination among project team members and committees. The issues or factorsidentifiedas

impeding or accelerating the implementation of the project or any of its components, including actions taken and resolutions made have been highlighted.

On the project level, TE assessed the project performance in terms of: (a.) Progress towards achievement of results, (b.) Factors affecting successful implementation and achievement of results, (c.) Project Management framework, and (d.) Strategic partnerships.

1.3 METHODOLOGY

The TE process followed a collaborative and participatory approach ensuring close engagement with key participants including the Commissioning Unit, Country Office M&E Focal Points and Programme Officers, Government counterparts and other key stakeholders. A mixed methods approach was adopted in the TE process with a combination of qualitative and quantitative evaluation methods and instruments.

The TE Team became well versed as to the project objective and outcomes, historical developments, institutional and management mechanisms, activities, and status of accomplishments. Information were gathered through document review, group and individual interviews and site visits. Review relevant project documents and reports were based on the following sources of information: review of documents related to the project and structured interviews with knowledgeable parties.

The team reviewed all relevant sources of information, such as the project document, project reports – including Annual APR/PIR, project budget revisions, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based review. The list of documents that the TE Team received and reviewed is as follows:

- The Project Document and Project Brief
- Inception Report
- Annual Work and Financial Plans
- Annual Project Report/Project Implementation Review (APR/PIR)
- Executive summary of all quarterly reports
- Internal monitoring results
- Terms of Reference for past consultants' assignments and summary of the results
- Past audit reports

Interviews were held with the following organizations and individuals:

1. UNDP country office.
2. Executing agencies (including NPD andtask team/ component leaders: MEE, key experts, and consultants.
3. PSC members and TAP members.
4. Key subcontractors.
5. Other stakeholders, including academia, representatives from sectorscovered by TNC.

TE Team conducted the project review according to international criteria and professional norms and standards as adopted by the UN Evaluation Group.

By comparing the data from the reviewed documents and the information collected from the interviewees, the TE team analysis the accuracy, consistency, and completeness of the data of the project monitoring performance, financial performance, as well as the actual achievements of the project targets.

1.4 Data Collection and Analysis

In Section 1.3 the report elaborated how data were collected and analyzed.This includes the sources of information (documents, stakeholders, beneficiaries, etc.), the rationale for their selection and how the information obtained addressed the questionsin the Evaluation Criteria Matrix.Lists of documents reviewed and persons interviewed were annexed to the report.

In order to ensure maximum validityandreliability of data,theTE team usedtriangulation of the various data sourcesand describe in the TE report the methods used for triangulation.More specifically, in the TE process, the data from multiple sources of information in document review and stakeholder interview are compared, so as to overcome the bias that comes from single source of information.

1.5 Ethics

The TE Team members followed the highest ethical standards. and signed a code of conduct upon acceptance of the assignment. Theevaluation wasconducted in accordance with the principles outlined in the United Nations Evaluation Group (UNEG) 'Ethical Guidelines for Evaluations'.

1.6 Structure of the TE report

The evaluation report is structured to consist of the following sections:

- The first section is the summary of the overall TE assignment.

- The second section of the report outlines the Purpose and Methodology of the Evaluation.
- The third section presents the Project Development Context and gives a background to the relevant activities in China, as well as the project profile.
- Section 4 of the report presents the following:

  A) the project formulation and progress by far towardsachieving the expected results. The section first presents a review of Project Concept and Design, and then the results achieved under each of the seven main component Outcomes, assessing relevance, effectiveness, and efficiency of project delivery to date.

  B) Project Implementation and the impact of processes that affected attainment of the intended results. This includes the analysis of stakeholder involvement, Implementing and Executing Agencies performance, financial management of the project, mechanisms used to monitor, evaluate, and adaptively manage the delivery and performance of the project,the assessment of the monitoring and evaluation plan and the implementation and effectiveness of monitoring and evaluation activities.

  C) Progress towards the achievement of the project objective and expected outcomes, and the likelihood of sustainable Impact.
- The final section of the report summarizes the lessons learned and draws together the evaluators' Recommendations to consolidate the results achieved and increase the likelihood of sustainable impact in future related actions. Evaluation Ratings are provided by the TE as an indication of the overall conclusions reached by the TE on the core aspects of Project Design, Implementation, Monitoring and Evaluation, Stakeholder Engagement, and the extent of achievement of each of the 7 Project Outcomes under the GEF evaluative criteria of Relevance, Effectiveness and Efficiency. The likelihood of Sustainable impact is also rated, looking specifically at financial, institutional, socio-economic, and environmental aspects of sustainability, following the GEF sustainability rating criteria.

2 PROJECT DESCRIPTION

2.1 PROJECT START AND DURATION

The detailed project timeline is presented in Table 1PROJECT INFORMATION TABLE in this report. PIF was approved on October 1, 2012. The Project Document (ProDoc) was officially signed on March 3, 2015 which marked the official commencement of the Project. The inception meeting was held on March 17, 2015. The original project duration was 4 years according to the approved ProDoc and was expected to be completed by March3,2019.

The implementation period of the project was extended twice, and the final approved termination date of the project was December 3, 2020. As one of the major significant changes that occurred in the project implementation, the causes and fallout of the extensions are discussed specifically in Section3.2.1of this report.

2.2 DEVELOPMENT CONTEXT

Climate is an important component of the natural environment that sustains human beings. A moderate and stable climate system is essential for the survival and evolution of all living creatures, and necessary for the sustainable development of human society. Scientific research concludes that the global climate is undergoing a significant change – climate system is warming, and extreme climate events have become more frequent. Global climate change will affect human society in all aspects. It will not only affect the stability of ecosystem, but also the development of human society.

Undoubtedly, climate change attaches great concern of the global community. The Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC) states that "most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations". In addition, the Fifth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC) has further strengthened the scientific conclusion that human activity accounts for climate change. As international consensus on addressing climate change continues to deepen and China's strength increases, China is faced with a new situation regarding the climate change issue.

There are many measures have been taken to address climate change effectively and efficiently, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted by the international community in June 1992 and came into force in March 1994, thanks to the joint efforts of all related parties. The UNFCCC stipulates clearly that the Parties to the Convention shall protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Additionally, the UNFCCC also requires all Parties to submit national inventories, which include anthropogenic emissions by sources and removals by sinks of all greenhouse gases (GHGs). It further provides that all Parties shall formulate, implement,

publish,and regularly update national programs to address climate change, promote the development and application of technologies that reduce or prevent anthropogenic emissions of GHGs. Moreover, it is urgent to improve the sinks of GHGs, develop adaptation plan and promote the exchange of information about climate change and response measures; promote education, training and public awareness related to climate change. According to the UNFCCC, each Party has the responsibility to exchange communication, including a national inventory of emissions by sources and removals by sinks of all GHGs, a general description of steps taken and envisaged to implement the UNFCCC as well as other information that the Party considers appropriate.

The Chinese government attaches great significance to its international obligations, and engaged officials and experts of relevant government departments, social groups, research institutes, universities, and enterprises to develop China's Initial National Communication (hereinafter referred to as INC) in accordance with the UNFCCC Guidelines for the preparation of national communications from non-Annex I Parties. The INC was completed after 3-year concerted efforts of more than 400 experts from about 100 organizations and submitted to the Secretariat of the UNFCCC in October 2004. In 2008, China launched the preparation of its Second National Communication (hereinafter referred to as 2NC). After four-year coordinated efforts of relevant government departments, scientific research institutions, universities, state-owned enterprises, and civil societies, with further elaboration by the National Leading Group on Climate Change (NLGCC), the 2NC was completed and approved by the State Council in 2012 and submitted to the UNFCCC on 8 November 2012. The compilation of 2NC was based on the guidelines for the preparation of the second national communications from non-Annex I Parties, which were adopted by the Conference of the Parties (COP) at its eighth session.

The 2NC is composed of 8 parts providing information on national circumstances, national GHG inventory, climate change impacts and adaptation, policies and actions for climate change mitigation, other relevant information on achieving the objective of the Convention, needs for financial support, technologies and capacity building, basic situation of the Hong Kong Special Administrative Region (SAR) and Macao SAR on addressing climate change. The 2NC has fully reflected China's national circumstances related to climate change. Overall, China will sincerely carry out all the tasks in the China's National Climate Change Programme, strive to build a resource conservative and environmentally friendly society, enhance national capacity to mitigate and adapt to climate change, and make further contribution to the protection of the global.

2.3 PROBLEMS THAT THE PROJECT SOUGHT TO ADDRESS

In this context, the Third National Communication of the People's Republic of China on Climate Change (hereinafter referred to as 3NC) project will be conducive for China to establish national systems, methodologies and further strengthen coordination and institutional arrangements for the preparation of national communications. It will further strengthen China's capacity to develop national GHG inventory, including the capacity to determine activity data, appropriate emission factors, collecting field measurement data and controlling inventory quality. The 3NC will enhance China's ability to project future GHG emissions, develop and maintain national GHG emission database. The 3NC will comprise 2012 national GHG inventory and emission projections, policies

and measures for climate change mitigation, analysis on mitigation actions, and institutional structure of Measurement, Reporting and Verification (MRV), promotions for public awareness related to climate change, GHG inventory and basic information of the Hong Kong SAR and Macao SAR on addressing climate change. It will also assess the impacts of and vulnerability to climate change to identify adaptation options in the short and long terms.

Decision 2/CP.17 adopted by the seventeenth session of the Conference of the Parties (COP) of the UNFCCC stipulates that "non-Annex I Parties, consistent with their capabilities and the level of support provided for reporting, should submit their first biennial update report by December 2014. In using the Guidelines, non-Annex I Parties should take into account their development priorities, objectives, capacities, and national circumstances. Non-Annex I Parties shall submit a biennial update report every two years, either as a summary of parts of their national communication in the year in which the national communication is submitted or as a stand-alone update report. The first biennial update report submitted by non-Annex I Parties shall cover, at a minimum, the inventory for the calendar year no more than four years prior to the date of the submission, or more recent years if information is available, and that subsequent biennial update reports shall cover a calendar year that does not precede the submission date by more than four years". Therefore, the preparation and submission of China's Initial Biennial Update Report (hereinafter referred to as BUR) will be important demonstration and guarantee to improve the consistency, transparency, integrity, accuracy, and timeliness of data contained in its national communications.

The 3NC and the BUR will enable China to better assess domestic climate change impacts, vulnerability, and adaptation measures, enhance China's capacity in measurement, statistics, and monitoring, and promote public awareness related to climate change. On the other hand, the preparation of the 3NC and the BUR will also demonstrate and strengthen China's efforts to address climate change. It will assist the international community to better comprehend China's climate change actions and enhance international cooperation and exchanges.

2.4 Immediate and Development Objectives of the Project

The project goal is to enable China to prepare and submit the 3NC and BUR to the UNFCCC in accordance with Article 12 of the Convention, Decision 17/COP 8, and Decision 2/COP 17.

The overall objective of the project is to strengthen capacity in integrating climate change concerns into national and sector development priorities while fulfilling obligations to the UNFCCC.

2.5 Expected Results

By implementing the designed activities of the different project, the TNC Project sought to achieve the following results by its completion date:

1. Completed and submitted TNC report to the UNFCCC and Completed enhanced GHG Emission Forecasting and Modeling Systems.

2. Completed assessment on Impacts of, Vulnerability and Adaptation to Climate Change.

3. completed Climate Change Mitigation, Measures, Options and Actions for 3NC.

4. Improved Public Awareness and Informing Policy Decision Making on Climate Change.

5. Completed and submitted Inventory of GHG Emissions and Other Relevant Information on Climate Change in Hong Kong and Macau SARs.

6. Completed Publication and Dissemination of the 3NC Report.

7. Completed and submitted China Biennial Update Report to the UNFCCC.

The major quantitative targets of these results are specified in the ProDoc PPM as follows; the detailed targets are listed in Table 8 of Section 3.3.

Table 4Achievement of the Targets of the Indicators for the Project Goal and Objective

Indicator	Incremental Target by EOP
No. of CCM and CCA measures formulated under the 3NC process and included in the completed 3NC Report that are planned for implementation by end-of-project (EOP)	4
Completed and submitted Third National Communications Report to the UNFCCC	1
No. of Biennial Update Reports completed by EOP	2
No. of GOC agencies/institutions that are actively involved in the inventory and analysis of sectoral GHG emissions by EOP	25
No. of center and local governments that integrate CCM and CCA concerns in their development planning by EOP	32
No. of national and local government agencies, and private sector entities that were involved in the 3NC process (inclusive of BURs) by EOP	45

2.6 Main Stakeholders

In general, the stakeholders of the Project encompass organizations and groups involved in climate change administration, research, and related industries and sectors. The mandates of these stakeholders are directly or indirectly linked to the outcomes of the TNC Project and enhancing national capacity of mitigating and adapting climate change.

The project's main stakeholders and their respective roles are described in Annex VII.

3 FINDINGS

3.1 PROJECT DESIGN/FORMULATION

3.1.1 Analysis of Results Framework

The Project was conceptualized and designed by a project development team through a consultative and participative approach starting 2013 using a Logical Framework Analysis (LFA) under the guidance and supervision of the UNDP RTA. The project framework design was developed using the Outcome – Output -- activity linkage to address the identified barriers and concerns about the national and local capacity and capacity development in meeting the country's obligations to the UNFCCC.

Due to the experience and lessons learnt from previous NC projects, the designing process is objectiveoriented.Given the results of the implementation of the project activities, the original design of Logical Framework was proven to be realistic, and specific against the changing conditions and requirement. At the outcome and output levels, the set of indicators is relevant, achievable, and measurable. Although the original design did not develop the annual targets (other than the EOP ones), an Annual Targets table was prepared in 2016 for use in the PIR 2016 reporting of the 3NC Project. The Annual Targets is based on the project log frame, and specifically on the mid-term and EOP targets.

The TNC Project adopted an integrated intervention strategy in enhancing the national executing partner's capability of develop its nationwide GHG emission information compiling systems. Replication has been assimilated in the different components of the project, which include knowledge sharing, policy, capacity building and inventory compiling at local levels. In particular, such activities as the development of CC policies, as well as enhancing the local governments inventory compiling capacity, effectively mainstream the action into various GOC entities at the central, provincial, and local levels.

In conclusion, the evaluation team found the process of project formulation and the project design is clear, practical, and feasible within its time frame, the project designed to address country priorities and be country-driven, and the indicators for the project goal, objective and outcomes are SMART

3.1.2 Assumption and Risks

In the project design phase, the development team made intentional efforts to try to identify potential risks and deploy risk-control measures based upon previous projects experiences. In general, the project design is cognizant of the major potential risks associated with implementation of the 7 components, including the effectiveness of organizing and coordinating a large, complex project with key stakeholders: technical capacity of implementing partners, especially at provincial and city level. Accordingly, practical mitigation actions were listed for each of these risks, e.g., the establishment of a strong Project Steering Committee (PSC), and extensive stakeholder engagement plan, etc.

The design also stipulated for revision of these risks at the Inception Stage in accordance with the implementation realities during key stages. Similarly, to be responsive to the evolving needs, the design authorized the Project Steering Committee (PSC) to evaluate and approve any adjustments in the project approach during the implementation time frame.

Nonetheless, the project design failed to anticipate the upcoming of the Pandemic eruption, as well as the GOC restructuring which shifted the project from NDRC to MEE. In retrospective, the two events became the major causes of implementation delay, and the project had to extended twice subsequently.

3.1.3 Lessons fromOther Relevant Projects

The most distinguished feature of the TNC project is that the project is built upon the basis and lessons learnt of the SNC project. During the project formulation, the designing team sought to improve the scope covered by the GHG emission inventories and the methodologies. According to the TNC project design, the scope of inventories will be further expanded, and higher tier method will be adopted during the compiling of inventories in comparison with that in SNC.This was done in the preparation of the first biennial Update Report (BUR1) that was prepared under the TNC Project. Table 5below shows the summary of the major inventory scope and methodologies improvements.

Table 5TNC INVENTORY SCOPE AND METHODOLOGIES IMPROVEMENTS AGAINST SNC

Items	TNC Improvements
Key Category Analysis	The 2005 inventory had 51 key categories, including CO2 emissions from public electricity and heat production, CO2 emissions from road transport, N2O emissions from adipic acid production, HFC-23 emissions from HCFC-22 production, CH4 emissions from rice cultivation, annual amount of carbon uptake by forests, and CH4 emissions from solid waste disposal. Emissions from these key categories were calculated with higher-tier methods and country-specific emission factors in the 2012 National Greenhouse Gas Inventory as many as possible.
Energy	Compared with China's National Greenhouse Gas Inventory of 2005, the following items were newly added: CH4 emissions from energy industries, and CH4 and N2O emissions from manufacturing industries and construction, and other sectors.
Industrial Processes	Compared with the 2005 inventory, the 2012 inventory expands to cover CO_2 emissions from glass production in mineral products and that from soda production in chemical industry, CO_2 and CH_4 emissions from ferroalloy production, and CO_2 emissions from primary aluminum, magnesium, lead, and zinc production.

Agriculture	Compared with the 2005 inventory, the 2012 inventory made a few changes: non-dairy cattle was classified into beef cattle, yaks and other cattle in enteric fermentation and manure management, and N2O emissions from field burning of agricultural residues in agricultural fields were newly added.
Waste	Compared with the 2005 inventory, CH4 and N2O emissions from biological treatment of urban domestic waste and from waste incineration are newly included.

3.1.4 Planned Stakeholder Participation

The TE team found that the project was designed using a participative approach. Stakeholders with various backgrounds relevant to the planned project activities were extensively and consistently consulted since the beginning of project formulation, and stakeholders' financial commitments and buy-in was obtained at the design stage.

Several stakeholder consultation-workshops and a logical framework analysis (LFA) exercise were conducted, and which gave way to mobilizing interest and support from various stakeholders. Key stakeholders such as GOC agencies and institutes, industry associations, research bodies, and other relevant stakeholders, etc. were consulted. The experiences and recommendations of consulted stakeholders informed targets for key project activities and stakeholder feedback was integrated into the project design and logical framework. These pre-project activities therefore led the various stakeholders to participate actively and commit valuable resources and support to serve not only in their own programs but also in the achievement of the overall government goals on climate change. The stakeholders described the perceived barriers and offered means of addressing the barriers and overcoming the challenges.

3.1.5 Linkage withOther Interventions

As a non-Annex I Party to the UNFCCC and for the purpose of effective implementation of its commitments under the Convention, China officially submitted its INC during COP 10 of the UNFCCC in December 2004, and later submitted its 2NC to the Secretary of the UNFCCC in 2012. China faces a situation of resource shortage under such a large population. Moreover, since the country is highly vulnerable to the adverse impacts of climate change, the Chinese government takes coping with climate change as its strategic priority. As early as in 1990, the National Leading Group on Climate Change (NLGCC) was established under the NDRC, which was chaired by the Primer and consisted of 30 members from different ministries. In 2008, the Department of Climate Change was established within the NDRC to coordinate and deal with climate change issues. Respective institutions on climate change have also been established throughout all related ministries and provincial governments.The TNC project further promotes the effective implementation of China's sustainable development strategy, which will eventually contribute to global mitigation of and adaptation to climate change.

One of the major GOC action in coping with the climate change is to develop its nationwide carbon emission accounting system. The TNC project not only provided the solid database to the

system, but also provided technical guidance and capacity. In particular, during the GOC's development of provincial inventories, the TNC project provided direct technical assistance and guidance in methodology development, data quality control, and review of reports. Numerous training sessions were given by the experts through TNC project to the local technical teams.

3.2 PROJECT IMPLEMENTATION

3.2.1 Adaptive Management

The major changes during project implementation were the broke out of Covid-19 and GOC restructuring, consequently two extensions were made to the project implementation period, which resulted a series of consequential adjustments to the project implementation and results. In March 2019, as discussed in the MTR report, the GOC restructuring began, which was unanticipated by the project design, and later led the project management totally moved from NDRC to MEE. On May 31, 2019, MEE requested the first extension of the project implementation period from its termination date (June 30,2019) to September 30, 2020. According to the MEE's request, apart from otherreasons (e.g., preparation of the 4NC Project PIFand better knowledge sharing), the main reason is that local governments must restructure Department of Climate Change (DCC) from local Development and Reform Commission (DRC) to local Bureau of Ecology and Environment (BEE). Accordingly, As the institutional restructuring of the local governments has not yet been completed until March 2019, some of the activities of the 3NC Project in 2018 were yet to be carried out. The request was reviewed and agreed by UNDP, and later approved by the PSC meeting.

In late December 2019, the Covid-19 epidemic broke out in China. The project activities were suspended for several months. On August 25, 2020, MEE filed the second extension request with the termination date moved forward to December 3, 2020. Given the obvious reason, the UNDP agreed with and TPR meeting approved the extension.

In response to the unprecedented big changes, theUNDP, MEE, and the PMO communicated closely and reacted actively. By close communication among MEE, UNDP, and PMO, and consultation with PSC and TAP, the work plan was revised, the activities and budget plan were adjusted accordingly consistent with the formal GEF/UNDP procedure and rules. As a result, all the major project deliverables (namely the 2BUR, 2BUR, TNC) were completed and submitted to the UNFCCC on time.Besides of the completion of all the original planned activities, the project took advantage of the opportunities (e.g., the extensions of the implementation as well as the incorporation of the project into the MEE),for the inclusion and implementation of several additional activities aiming for the following extra achievements: 1) Technical guidance and support of the provincial level inventory development, which resulted in the release of 62 inventory reports covering 32 provinces in both the year 2012 and 2014; 2) Development of the 4NC Project PIF; and 3) Research on, and proposal for, mainstreaming the NC related activities into the MEE administration.

The detailed information on these additional activities are presented in Table 9ACHIEVEMENTS IN ADDITION TO PRODOC PLAN of Section 3.3.1.

3.2.2 Actual Stakeholder Participation and Partnership Arrangements

Institutional arrangements for project management and implementation were executed in line with the structure established during design with some adjustment made during the project inception. A national Project Management Office (PMO) was established in Beijing within NDRC and a national Project Steering Committee (PSC) was established to guide the overall strategic direction of the project. PSC played a key role in facilitating overall project implementation and in disseminating project outputs and recommendations by providing access to high level policy makers and other relevant agencies. PSC is also critical in facilitating the coordination of project implementation across 31 provinces with multi-sectors collaboration. The national level PSC was established on March 17, 2015. NDRC chairs the PSC (and MEE took over the position after the project moved from NDRC to MEE in mid-2019) which is consisted of representatives from 9 departments and agencies including, MOF, MIIT, NDRC, MOEP, MOST, NFB, MOA, CMA, MFA. At the national level, the PSC performs an important multi-sector advisory role, helping to ensure that the project remains aligned with relevant national CC strategies, and to share project learning and impact across a range of relevant agencies. The central level PSC have actively supported project implementation through the annual combined PSC - TPR meetings. Several additional PSC meetings have also been called when PMO / UNDP CO felt it to be necessary to get additional guidance and support.

Apart from original design, in order to draw more effective technical supports, the Implementing Partner decided, and approved by PSC during the inception, to set up a Technical Advisory Panel (TAP). The major function of TAP is to provide high quality guidance to the NC activities, and provide needed expertise to NDRC and PMO in ensuring the quality control of the outputs from subcontracts. The role of TAP in providing expert advice to local management institutions has also been critical in ensuring that project activities and implementation strategies are based on sound knowledge. According to the interview with the PMO and expert, the national PMO sent experts to the SARs to provide technical assistance and particularly guidance on inventory development methodology and provide guidance on report review and revision.Due to the timely and effective supports from the TAP, the technical barriers in project implementation in both SARs have been effectively removed, and the completion and submission of the inventories are timely and with high quality.

Over the course of implementation, the project has partnered with various public and industrial stakeholders. These include central government agencies, local governments, industry associations, manufacturing enterprises, research institutes, etc. Major partnership activities included policy development and implementation, inventory compiling at national level and BUR development, local inventory development, and M&E of project activities.

The TE found that the cooperation and partnership is effective throughout the implementation of the project, and proved successful in supporting the project decision-making, and M&E of the implementation process.

Bulk of the project budget were spent for project activities that were carried out through subcontracting and individual consulting. The PMO held annual knowledge sharing workshops among the teams and subcontractor that responsible for the development of inventories of various sectors and industries to provide technical guidance in unifying the methodologies applied.These meetings facilitated the unification of methodology and enhanced the quality control of the outputs.

During the TE interviews with stakeholders involved in the project design and implementation, they consensually stated their support to the TNC project and future 4NC project. According to these interviewees, the participation in the TNC project not only agencies/institutions capacity in development international standard inventories, but also booster the national carbon accounting system and relevant development strategy. For instance, the representative from NDRC stated, the national statistical bureau is directly benefited from the data collected from TNC in developing its national carbon accounting system, and therefore contributed to the development of national 14th 5-year plan; the representative from two national industrial associations stated, the data collecting and calculating methodologies of TNC directly contributed to the industries' database development; the representative from national meteorological bureau stated, the TNC methodologies directly contributed to the bureau's data collecting process and improvement.

The detailed stakeholder list is presented in Annex VII.

3.2.3 Project Finance and Co-finance

China International Centre for Economic and Technical Exchanges (CICETE) was appointed to manage the GEF funds for the project. As an administratively autonomous agency which operates directly under the Ministry of Commerce, CICETE was established to provide professional financial management service for international aid programs. CICETE signed a financial management service agreement with NDRC/MEE to support the current UNDP /GEF/MEE project in 2015. The main financial management tool used by CICETE is the Project Management System (PMS). They use the quarterly work plan and annual work plan provided by PMO to manage project budgets, applying to UNDP for pre-payment in to the exclusive RMB and US$ accounts set up by CICETE for the payments of project activities or contracts that are supported by GEF Funds are managed by CICETE who review invoices and require a payment confirmation paper signed by the national project director (NPD). CICETE submits quarterly Funding Authorization and Certificate of Expenditure (FACE) reports to UNDP at the end of each quarter and a Combined Delivery Report (CDR) to PMO and UNDP at the end of each financial year.

The project was subject to the financial auditing of both within MEE management, and UNDP recruited independent auditing firm on yearly basis.TE team reviewed the complete financial data of the project, as well as the audit reports, to date, 100% of total GEF funds have been spent.The expenditure deviations from planned Outcome budgets as well as the approval process were reviewed by TE. According to GEF rules, the expenditure deviations from planned Outcome budgets in the project were Minor amendments involving amounts of less than 10% of the total project budget. These reallocations had been planned and approved by TPR and documented in APR/PIR.

Stakeholders actively involved in the project financial planning and management. First of all, during the annual meetings, the annual financial plans were reported by the PMO, and reviewed by all PSC and TAP members. Secondly, during the two project extensions, the revised financial plans were developed by the PMO, in consultation with the PSC and TAP. Thirdly, according to the TE interviews with PMO, PSC, and TAP, during the daily project management, the PMO kept closed contact with PSC, TAP and subcontractors in terms of project financial management, and the feedbacks from these stakeholders were incorporated in the follow-up financial planning process.

However, for a major part of the project implementation, management of GEF budgets has been chronically less satisfactory in terms of annual delivery rates. Besides the reasons mentioned in Section 3.2.1, the PMO acknowledged that one of the reasons for the low delivery rate is the insufficient planning skills and procrastinations in approval process within NDRC/MEE due to the more stringent financial management policy by GOC.Although the PMO managed to deliver the major planned outputs on schedule, which means those subcontractors have to implement their activities without pay for quite some time, because they trusted the creditability of PMO through their long-term partnership.

Overall actual co-financing expenditure accounts for 138% of the total committed co-finance budget until end of project. The source of co-finance was solely from GOC in the form of in-kind recurrent expenditure.

Table 6CO-FINANCING

Co-financing	UNDP financing (US$)		Government (US$)		Partner Agency (US$)		Total (US$)	
(type/source)	Planned	Actual	Planned	Actual	Planned Actual	Actual	Planned Actual	Actual
Grants								
Loans/Concessions								
In-kind support	100,000	100,000	800,000	1,143,219			900,000	1,243,219
Other								
Totals	100,000	100,000	800,000	1,143,219	-	-	900,000	1,243,219

Table 7CONFIRMED SOURCES OF CO-FINANCING AT TE STAGE

Sources of Co-Financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount (US$)
Donor Agency	UNDP	In-Kind	Recurrent expenditure	100,000

Recipient Country Gov't	NDRC, MEE	In-Kind	Recurrent expenditure	1,143,219
Total Co-Financing				1,243,219

3.2.4 Monitoring & Evaluation

M&E design at entry

The Project Document sets out the standard UNDP / GEF monitoring and evaluation procedures and an overall budget for key monitoring and evaluation activities. The Project Document specifies that further detail on monitoring responsibilities and events should be developed as part of the project's inception phase. The Inception Report provides some further detail on monitoring responsibilities. Output indicators were also identified as part of project inception. Key elements of project monitoring within the project design include: Annual Project Reports(APR) to be prepared by PMO as part of monitoring and reporting procedures for the UNDP CountryOffice and annual Performance Project Implementation Reviews (PIR) to be prepared by PMO andUNDP CO as the main monitoring tool required by the GEF. Project Steering Committee (PSC)meetings provide high level strategic review and advice and meet annually or more regularly ifrequired. In conjunction with the PSC meeting, ; an annual Tri-partite Review (TPR) meeting is also conducted. A TPR meeting is the highest policy level meeting of the partiesthat are directly involved in the project implementation.

In conclusion, according to the project design, UNDP China, MEE, PMO, and PSC have been assigned responsibilities of overall project M&E. In addition, the design provided a clear M&E plan and budget. The M&E plan was well-conceived, practical, and sufficient at the point of CEO Endorsement. The M&E plan included a baseline, SMART indicators, and data analysis systems. The baseline conditions, methodology, logistics, time frames, and roles and responsibilities were articulated. The M&E budget in the project document was realistic and sufficiently covered all the M&E activities. At the functional level, the TNC had a three-tiered,inclusive, innovative, and participatory monitoring systems with the following key components: 1) M&E of project activities and progress according to the established UNDP-GEF M&E Guidelines (Comprising of standard program and financial progress reports); 2) M&E of local activities(SARs and provincial inventory development activities); 3)M&E of NC and BUR at national level(proceeding and quality control of industrial and sector inventory development, as well as report development).

Through frequent multi-party meetings, specialists and persons in charge from all sides were gathered to discuss together, ensuring that all levels of stakeholders were familiar with UNDP M&E mechanism as well as relevant necessary works. Considering that the collection of measured and calculated data is the most important type of activity in this project, methodology and format were discussed and agreed by all implementation agencies, to ensure all the collected data make sense, and ensure the following up M&E works can also be conducted smoothly.

The designed system had been complete, and well covered all aspects of project implementation.

M&E implementation

During the project implementation, the designed M&E plan had been carried out in a consistent and effective manner. The M&E budget was appropriately planned and allocated, the data on indicators/tracking tools specifically gathered and documented, the progress and financial reporting were conducted timely and with solid quality, the M&E results were effectively circulated and discussed among the parties concerned (especially between MEE and UNDP CO), based on the circulation and discussion, the reactions were quick and focused, as a result, the information provided by the M&E system was used to improve and adapt project performance. Since the inception, the UNDP CO had led the training courses to guide the PMO, PSC, TAP, and other stakeholders to familiarize themselves with GEF/UNDP M&E rules and methodology, and later these kinds of training were taken over by PMO and further carried out among more and more project participants. UNDP as well as PMO recruited consultants to conduct field research, investigation, verification and evaluation to ensure that all results of activities are truthful, reliable and cost-effective

Key challenges associated with M&E included the large number of stakeholders and sectors involved in inventory data collection and compiling. As the local project management teams were based in different GOC agencies, at times it was difficult to consolidate project progress information that was outside the standardized reporting formats used for regular project M&E. Moreover, the M&E of NC and BUR was more complicated as compared to M&E of other EE projects. For instance, As mentioned above, one of the difficulties in inventory development is to keep the methodologies consistent, and the data consistent when it is pertaining to multi industries and sectors, the PMO held regular M&E meetings among different subcontractors to deal with the inconsistent issues and unify the methodologies and data throughout the process of inventory development. As a result, due to the solid M&E plan, institutional arrangement and implementation skills, the challenges have been soundly overcome.

The PMO with support from the provincial-level project management teams and subcontractors has been responsible for monitoring the progress and reporting to the UNDP. At the activity level, different stakeholders were responsible for M&E. For instance, TAP members were delegated to the unit undertaking the local activities, e.g., the NCSC, Tsinghua Univ., etc.

The evaluation team concluded that the TNC Project's M&E at both design and implementation met the expectations and were satisfactory. Through reviewing the quarterly and annual report submitted, consider combined with the results of financial audit, the overall goal and indicators of the project have been completed well, all activities are meaningful and all related data is accurate, with a relatively high cost performance. Therefore the overall M&E performance of the project was satisfactory.

3.2.5 Assessmentof UNDP Implementation/Oversightand MEE Execution

In TE interviews with all the representatives of various stakeholders, one of the major consensuses was that the Implementing and Executing Agencies were working closely together to plan, manage and review overall project implementation and had maintained a good working relationship with PSC members.

The UNDP China's designated Program Manager has effectively provided periodic oversight in implementation, including prompting timely reporting, providing guidance about reporting to ensure that the progress is implemented in line with UNDP-GEF guidelines, and providing feedback on project planning accordingly. For instance, UNDP CO representatives have been in regular attendance of the PSC meetings. Moreover, the UNDP CO has also arranged the project's MTR and TE.

Similarly, the MEE and PSC has effectively undertaken its M&E responsibilities, including the review and approval of AWPs and Budgets (for endorsement to UNDP-GEF for the latter's final approval), providing guidance on the effectiveness of project implementation, and overall M&E of project implementation. For instance, some PSC members triangulated the project results with the data generated by their respective organizations. According to the PMU, some of the PSC members used multiple sources of data or multiple approaches to analyze data to enhance the credibility of the M&E work. Similarly, inventory compiling methods and recommendations for activities were provided by members based on information received from their own organizations.

Based on the above elaboration, the TE concluded that the performance of both UNDP and MEE were satisfactory.

3.2.6 Risk Management

The TNC Project encountered some unique challenges in terms of risk management. As discussed in Section 3.2.1, in mid-2019, the GOC initiated its institutional restructuring, which resulted in the movement of the whole project from NDRC to MEE, and the fallout went further deep into the local branches. Later the same year, the project was hit again by the global pandemic. Although luckily the major deliverables of the project, i.e., 2 BURs and TNC Report had been narrowly completed before the events and the TNC Report had been submitted to the UNFCCC on time, some other activities were left behind the schedule. Hence, the overall implementation of the project was inevitably delayed.

In retrospect, the TE believed that such uncertainties are cannot be foreseen during the project design. The significant action to do is addressing the unexpected and dealing with it in the right and effective way.

According to the interviews conducted by the TE team with UNDP, MEE, PMO and other stakeholders and through reviewing the M&E documents, the following counter measures were taken: 1) the events were reported timely by the PMO to UNDP and PSC; 2) the discussions were initiated quickly; 3) the critical decision was made to extend the project implementation period; 4)

the annual work plan was revised based on collaborative discussions, more activities were added[2], and remaining budgets reallocated; 5) MEE and NPD organized a series meeting and coordination among the MEE national system to settle down the project management at central level and pushed the deployment of local project management people for the provincial GHG inventories as quickly as possible; 6) during the break-out of the Covid-19 epidemic, the staff complement of the PMO remained intact. At the same time, tele-conferencing was adopted to keep the communicationswith the relevant project participants working.

Because of these, the major deliverables(2 BURs and TNC Report) were delivered on time, the outputs especially related with the local GHG inventories were eventually delivered, yet behind the schedule. Overall all the targets set were achieved, and quite some of which were exceeded. The details of the results are presented in Section 3.3.1 of the report.

3.3 PROJECT RESULTS AND IMPACTS

3.3.1 Progress Towards Objective and Expected Outcomes

The TE individually assessed the achievement of outcomes against indicators by reporting on the level of progress(quantitative achievements against the targets set in ProDoc)for each objective and outcome indicator at the time of the TE with final achievements. The TE assessed the extent to which expected outcomes were achieved and also the extent to which outcome achievement was dependent on delivery of project outputs, and other factors that affected outcome achievement, e.g., project design, project's linkages with other activities, extent and materialization of co-financing, stakeholder engagement, etc. Regarding outputs, the TE assessed the extent to which the key expected outputs were delivered, and also identified and assessed the factors that affected their delivery.

The project goal is to enable China to prepare and submit the 3NC and BUR to the UNFCCC in accordance with Article 12 of the Convention, Decision 17/COP 8, and Decision 2/COP 17. The overall objective of the project is to strengthen capacity in integrating climate change concerns into national and sector development priorities while fulfilling obligations to the UNFCCC.

To achieve the goal and objective, activities were carried out under the 7 project components:Component 1) Updating of National GHG Emission Inventory and GHG Inventory Database, and Enhancement of GHG Emission Forecasting and Modeling Systems; Component 2) Assessment of impacts of vulnerability and adaptation to climate change; Component 3) Updating of climate change mitigation, measures, options and actions; Component 4) Improving Public Awareness and Informing Policy Decision Making on Climate Change; Component 5:) Inventory of GHG emissions and other relevant information on climate change in Hong Kong and Macao SARs; Component 6) Supplementary Support for Achieving Convention Objectives and Publication

[2] Some of the additional activities were incorporated into the project before the extension, e.g., provincial activities. Some were added after, and these were activities that are relevant to the MEE. According to the interviews with NPD, the PMO realized that financially they can manage to do more activities in Component 6 of the project than what were originally designed. Moreover, the transfer of the project to MEE made it administratively possible to add some national communications activities that are in accordance with the MEE mandate.

and Dissemination of the 3NC Report; Component; 7) Supporting China Biennial Update Report completed and submitting to the UNFCCC

The achievement of outcomes against end-of-project targets is presented in Table 8ACHIEVEMENT OF OUTCOMES AGAINST EOP TARGETS at the end of the Section. Details of accomplishments under each component are provided below.

3.3.1.1 Component 1 : Updating of National GHG Emission Inventory and GHG Inventory Database, and Enhancement of GHG Emission Forecasting and Modeling Systems

Under Outcome 1.1: Clearer understanding of the magnitude and causes of the GHG emissions from Energy Activities:

- GHG inventories in 2010, 2012 and 2014 of Fossil fuel combustion, Biomass combustion, CH4 emissions from coal mining and post-mining activities, CH4 fugitive emissions from oil and gas system, Non-energy uses of fossil fuel, International bunkers have been completed and documented.
- 31 research studies at national and provincial levels that were used to develop the GHG inventories.Have been completed

Outcome 1.2: Clearer understanding of the magnitude and causes of the GHG emissions from Industrial Processes:

- GHG inventories in 2010, 2012 and 2014 of Mineral products processing, Industrial chemical processes, Industrial metal production processes, Production of halocarbons and sulfur hexafluoride, Consumption of halocarbons and sulfur hexafluoride have been completed and documented.
- Completed and documented 32 research studies at national and provincial levels that were used to develop the GHG inventories.

Outcome 1.3: Clearer understanding of the magnitude and causes of the GHG emissions from Agriculture:

- Completed and documented 2010 and 2012 inventories of CH4 emissions from paddy fields, N2O emissions from croplands, CH4 emissions from animal enteric fermentation, CH4 and N2O emissions from manure management systems.
- Completed and documented 33 research studies at both national and provincial level for developing the GHG inventory of the agriculture sector.

Outcome 1.4: Clearer understanding of the magnitude and causes of GHG Emissions/Removal from Land Use, Land Use Change and Forestry sector

- Completed and documented 2010, 2012, and 2014 GHG inventories of forests and woodlands, change in soil organic content in croplands, grasslands, wetlands, lands converted to residential lands, and other lands.
- Completed and documented 27 research studies at both national and provincial levelto develop the GHG inventoryof the LULUCF sector.

Outcome 1.5: Clearer understanding of the magnitude and causes of the GHG emissions from Waste treatment:

- Completed and documented 2010, 2012, and 2014 inventories of CH4 emissions from waste landfills, waste incineration; CH4 and N2O emissions from biological treatment of solid waste; CH4 emissions from domestic and commercial wastewater treatment; CH4 emissions from industrial wastewater treatment; and N2O emissions from wastewater treatment.
- Completed and documented 32 research studies at both national and provincial levelto develop the GHG inventory of the waste sector.

Outcome 1.6: Updating China`s GHG Inventory Database

- 2 sectoral data sets have been updated and uploaded to the National GHG Emissions Database.
- 2 sets of CCM and CCA policies have been formulated and uploaded in the National GHG Emissions Database.
- 2 sets of CCM and CCA action plans have been formulated and uploaded to the National GHG Emissions Database.

Outcome 1.7: Better understanding of the appropriate climate change options for China, and enhanced action plan to implement prioritized mitigation actions.

- 1 study based on the GHG inventories on the characteristics and future trends of climate change in China has been completed.
- 2 comprehensive research/studies for use in the identification and evaluation of potential CC mitigation actions have been completed.
- 3 operational improved/modified simulation models for forecasting GHG emissions and emission trends using the updated GHG inventory data have been completed.
- 3 scenario analyses using the improved/modified simulation models and utilized in CCM and CCA policy-making and action planning have been completed.

All the reports mentioned above can be found from national website and were verified by TE team.

3.3.1.2 Component 2: Assessment of impacts of vulnerability and adaptation to climate change

- 1 developed and GOC-implemented national climate change adaptation program influenced by the 3NC process. In 2017, NDRC and MOHURD jointly issued the Pilot City Action Plan on Climate Change Adaptation.

The plan mentioned above can be found from national website and were verified by TE team.

3.3.1.3 Component 3: Updating of climate change mitigation, measures, options, and actions.

- 1 national climate change adaptation program influenced by the 3NC processhas been developed and implemented nationally.In 2017, NDRC initiated the Third Round Pilot on Low-carbon City.

Information mentioned above can be found from national website and were verified by TE team.

3.3.1.4 Component 4: Improving Public Awareness and Informing Policy Decision Making on Climate Change

- Completed and operationalized China Climate Change Info-Net. According to the on-line statistics, 332,684 visitors have browsed the web-page since 2015.
- 1 local climate change program as influenced by the advocacy and public awareness campaigns that were carried out under the 3NC process has been completed and implemented.In 2016, the Government of Zhejiang Province initiated its county level inventory compilation.

Information mentioned above can be found from national website and were verified by TE team.

3.3.1.5 Component 5: Inventory of GHG emissions and other relevant information on climate change in Hong Kong and Macao SARs

Outcome 5.1: Better understanding and enhanced capacity in GHG emission inventory and national communication compilation in the Hong Kong

- Completed and documented 2010, 2012, and 2014 Hong Kong SAR GHG inventories.
- 2 formulated CCM and CCA policies and actions by the Hong Kong SAR based on the GHG inventories and included in the completed 3NC Report, which are the Hong Kong Climate Action Blueprint 2030 Action Plan, and the Plan of Coping with Climate Disasters.

Outcome 5.2: Better understanding and enhanced capacity in GHG emission inventory and national communication compilation in Macau SARs

- Completed and documented 2010, 2012, and 2014 Macau SAR GHG inventories.
- 2 formulated CCM and CCA policies by the MAC SAR based on the GHG inventories and included in the completed 3NC Report, which are the Macao Five Year Plan on Climate Change, and the Green Automobile Standard.

3.3.1.6 Component 6: Supplementary Support for Achieving Convention Objectives and Publication and Dissemination of the 3NC Report.

Inventory mentioned above can be found from national website and were verified by TE team.

Outcome 6.1: Improved capacity and technical inputs in meeting obligations to the UNFCCC

- Completed 62 research studies carried out by local experts for the development of 2010 and 2012 provincial GHG inventories.
- The following are among the impacts of the capacity building activities of the 3NC Project:
  - 74 local experts were involved in the GHG inventories as well as in the analysis of the GHG inventory result.
  - 99 Climate Change mitigation policies and measures have been developed by local experts.

- 1 Climate Change adaptation policy developed by local experts.
- 1 completed research on systematic observation of climate by local experts.
- 190 people that were involved in the 3NC process received training on NC formulation.
- 190 people that received training on NC formulation were employed for NC-related activities on a regular basis.

Outcome 6.2: Improved and integrated climate change action planning both at the local and national levels

- 99 integrated CCM and CCA measures and action plans developed and formulated by the national government and local governments.
- 33 local GHG inventories and other NC process activities conducted by local governments.

Outcome 6.3: Publication, dissemination, and submission to the UNFCCC of the 3NC Report

- 20 national and local government agencies that made use of the 3NC for their development planning activities.

Implementation reports were verified by TE team.

3.3.1.7 Component 7: Supporting China Biennial Update Report completed and submitting to the UNFCCC.

- The 2completed BURs submitted to the UNFCCC.
- Revised CCM and CCA policies, measures and plans based on the findings and recommendations of the BUR. Regular updates of the accountability system on coal, oil, and gas emission supervision.
- Designed and developed measurement, reporting and verification (MRV) process adopted by 8 GOC agencies (NDRC, MOA, BOF, MOEP, NBS, MOT, BOE, and MOURHD).
- Completed and submitted Third National Communications Report to the UNFCCC.

All the reports mentioned above can be found from national and UNFCCC website and were verified by TE team.

Table 8ACHIEVEMENT OF OUTCOMES AGAINST EOP TARGETS

Strategy	Indicator	Baseline	Target	Incremental EOP Target	EOP
Goal: Support China toward a low carbon development path	· No. of CCM and CCA measures formulated under the 3NC process and included in the completed 3NC Report that are planned for implementation by end-of-project (EOP)	· 11	· 15	4	8
Objective: Strengthened capacity in integrating climate change concerns into national and sectoral	· Completed and submitted Third National Communications Report to the UNFCCC	· 0	· 1	1	1
	· No. of Biennial Update Reports completed by EOP	· 0	· 2	2	2

development priorities while fulfilling obligations to the UNFCCC	· No. of GOC agencies/institutions that are actively involved in the inventory and analysis of sectoral GHG emissions by EOP	· 75	· 100	25	25
	· No. of center and local governments that integrate CCM and CCA concerns in their development planning by EOP	· 33	· 65	32	32
	· No. of national and local government agencies, and private sector entities that were involved in the 3NC process (inclusive of BURs) by EOP	· 110	· 155	45	45
Outcome 1.1: Clearer understanding of the magnitude and causes of the GHG emissions from Energy Activities	· No. of completed GHG inventories in the energy sector:				
	· Fossil fuel combustion by EOP	· 2	· 4	2	3
	· Biomass combustion by EOP	· 2	· 4	2	3
	· CH_4 emissions from coal mining and post-mining activities by EOP	· 2	· 4	2	3
	· CH_4 fugitive emissions from oil and gas system by 2017	· 2	· 4	2	3
	· Non-energy uses of fossil fuel by 2017	· 2	· 4	2	3
	· International bunkers by Year 2017	· 2	· 4	2	3
	· No. of comprehensive research/studies conducted and completed for use in the compilation of GHG emissions inventory of the energy sector by EOP	· 2	· 33	31	31
Outcome 1.2: Clearer understanding of the magnitude and causes of the GHG emissions from Industrial Processes	· No. of completed GHG inventories from industrial processes:				
	· Mineral products processing by EOP	· 0	· 2	2	3
	· Industrial chemical processes by 2017	· 0	· 2	2	3
	· Industrial metal production processes by EOP	· 0	· 2	2	3
	· Production of halocarbons and sulfur hexafluoride by EOP	· 0	· 2	2	3
	· Consumption of halocarbons and sulfur hexafluoride by EOP	· 0	· 2	2	3
	· No. of comprehensive research/studies conducted and completed for use in the compilation of GHG emissions inventory of industrial processes by EOP	· 9	· 41	32	32
Outcome 1.3: Clearer understanding of the magnitude and causes of the GHG emissions from Agriculture	· No. of completed GHG inventories in the agriculture sector:				
	· CH_4 emissions from paddy fields by EOP	· 2	· 4	2	3
	· N_2O emissions from croplands by EOP	· 2	· 4	2	3
	· CH_4 emissions from animal enteric fermentation by EOP	· 2	· 4	2	3
	· CH_4 and N_2O emissions from manure management systems by EOP	· 2	· 4	2	3
	· No. of comprehensive research/studies conducted and completed for use in the compilation of GHG emissions inventory of the agriculture sector by EOP	· 4	· 37	33	33
Outcome 1.4: Clearer understanding of the magnitude and causes of GHG Emissions/Removal from Land Use, Land Use Change and Forestry sector	· No. of completed GHG inventories in the land use, land use change & forestry sector:				
	· Forests and woodlands by EOP	· 2	· 4	2	3
	· Change in soil organic content in croplands by EOP	· 0	· 2	2	3
	· Grasslands by EOP	· 0	· 2	2	3
	· Wetlands by EOP	· 0	· 2	2	3

	· Lands converted to residential lands and other lands by EOP	· 2	· 2	0	0
	· No. of comprehensive research/studies conducted and completed for use in the compilation of GHG emissions inventory of the land use, land use change and forestry sector by EOP	· 5	· 32	27	27
Outcome 1.5: Clearer understanding of the magnitude and causes of the GHG emissions from Waste treatment	· No. of completed GHG inventories in the waste sector:				
	· CH_4 emissions from waste landfills by EOP	· 2	· 4	2	3
	· Waste incineration by EOP	· 2	· 4	2	3
	· CH_4 and N_2O emissions from biological treatment of solid waste by EOP	· 0	· 2	2	3
	· CH_4 emissions from domestic and commercial wastewater treatment by EOP	· 2	· 4	2	3
	· CH_4 emissions from industrial wastewater treatment by EOP	· 2	· 4	2	3
	· N_2O emissions from wastewater treatment by EOP	· 2	· 4	2	3
	· No. of comprehensive research/studies conducted and completed for use in the compilation of GHG emissions inventory of the waste sector by EOP	· 5	· 37	32	32
Outcome 1.6: Updating China`s GHG Inventory Database	· No. of updated sectoral data sets uploaded to the National GHG Emissions Database by EOP	· 2	· 4	2	2
	· No. of formulated sets of CCM and CCA policies uploaded in the National GHG Emissions Database by EOP	· 2	· 4	2	2
	· No. of formulated sets of CCM and CCA action plans uploaded to the National GHG Emissions Database by EOP	· 2	· 4	2	2
Outcome 1.7: Better understanding of the appropriate climate change options for China, and enhanced action plan to implement prioritized mitigation actions	· No. of completed studies based on the GHG inventories on the characteristics and future trends of climate change in China by EOP	· 0	· 1	1	1
	· No. of comprehensive research/studies conducted and completed for use in the identification and evaluation of potential CC mitigation actions by EOP	· 2	· 4	2	2
	· No. of operational improved/modified simulation models for forecasting GHG emissions and emission trends using the updated GHG inventory data by EOP	· 1	· 2	1	3
	· No. of scenario analyses developed using the improved/modified simulation models, and utilized in CCM and CCA policy making and action planning by EOP	· 3	· 6	3	3
Outcome 2: better understanding of China's vulnerability to the threats of climate change and predicted impacts in five sectors	· No. of national and local climate change adaptation programs developed and implemented by the national and local governments as influenced by the 3NC process by EOP	· 1	· 2	1	1
Outcome 3: Better understanding of the appropriate climate change mitigation	· No. of national and local climate change mitigation programs developed and implemented by the national and local	· 2	· 3	1	1

options for China, and enhanced action plan to implement prioritized mitigation actions	governments as influenced by the 3NC process by EOP				
Outcome 4: Improving Public Awareness and Informing Policy Decision Making on Climate Change	· No. of users of the China Climate Change Info-Net each year starting 2015	· 150,000	· 160,000	10000	332684
	· No. of national and local climate change programs developed and implemented by the national and local governments as influenced by the advocacy and public awareness campaigns that were carried out under the 3NC process by EOP	· 2	· 3	1	1
Outcome 5.1: Better understanding and enhanced capacity in GHG emission inventory and national communication compilation in the Hong Kong	· No. of completed GHG inventory of the Hong Kong SAR	· 1	· 3	2	3
	· No. of CCM and CCA policies and actions formulated by the Hong Kong SAR based on the GHG inventories and included in the completed 3NC Report by EOP	· 3	· 5	2	2
Outcome 5.2: Better understanding and enhanced capacity in GHG emission inventory and national communication compilation in Macau SARs	· No of completed GHG inventory of the Macau SAR	· 1	· 3	2	3
	· No. of CCM and CCA policies formulated by the MAC SAR based on the GHG inventories and included in the completed 3NC Report by EOP	· 3	· 5	2	2
Outcome 6.1: Improved capacity and technical inputs in meeting obligations to the UNFCCC	· No. of research and studies conducted in the context of the 3NC that were carried out by local experts by EOP	· 9	· 11	2	62
	· No. of local experts that were involved in the GHG inventories as well as in the analysis of the GHG inventory results by EOP	· 7	· 31	24	74
	· No. of Climate Change mitigation policies and measures developed by local experts by EOP	· 11	· 110	99	99
	· No. of Climate Change adaptation policies and measures developed by local experts by EOP	· 0	· 1	1	1
	· No. of research and studies on systematic observation of climate conducted by local experts by EOP	· 0	· 1	1	1
	· No. of projects that contributed inputs on climate change technology transfer & cooperation by EOP	· 1	· 2	1	2
	· No of trained nationals on NC formulation that were involved in the 3NC process by EOP	· 20	· 30	10	190
	· No. of trained nationals on NC formulation that were employed for NC-related activities on a regular basis	· 7	· 11	4	190
Outcome 6.2: Improved and integrated climate change action planning both at the local and national levels	· No. of integrated CCM and CCA measures and action plans developed formulated by the national government and local governments by EOP	· 11	· 110	99	99
	· No. of local governments that have initiated GHG inventories and other NC process activities at the local level by EOP	· 0	· 33	33	33

Outcome 6.3: Publication, dissemination, and submission to the UNFCCC of the 3NC Report	· No. of national and local government agencies that made use of the 3NC for their development planning activities with climate change mainstreamed in it by EOP	· 0	· 10	20	20
Outcome 7: Submission of the Biennial Update Report to the UNFCCC	· No. of BUR submitted to the UNFCCC	· 0	· 2	2	2
	· No. of adjustments made on the CCM and CCA policies, measures and plans based on the findings and recommendations of the BUR by Year 2	· 0	· 1	1	1
	· No. of national government entities that are making use of the designed measurement, reporting and verification (MRV) process developed as part of the BUR by EOP	· 0	· 5	5	8

Overall, the objective of the project, strengthened capacity in integrating climate change concerns into national and sectoral development priorities while fulfilling obligations to the UNFCCC, have been achieved as follows:

- 1Third National Communications Report ·has been completed and submitted to the UNFCCC.
- 2 Biennial Update Reports have been completed by EOP
- 25 GOC agencies/institutions have been actively involved in the inventory and analysis of sectoral GHG emissions by EOP;
- 32center and local governments have integrated CCM and CCA concerns in their development planning by EOP.
- 45 national and local government agencies, and private sector entities have been involved in the 3NC process (inclusive of BURs) by EOP.

Table 9ACHIEVEMENTS IN ADDITION TO PRODOC PLAN

Strategy	Indicator	When Added to 3NC	Rationale for Inclusion in 3NC	Baseline	Target	Incremental EOP Target	EOP
Outcome 6	Evaluating provincial GHG inventory	• Before the first extension	• Create synergy with GOC on-going activities; • In long run, will promote the mainstreaming of GEF action into the GOC action.	0	0	0	64
Outcome 6	4NC PIF preparation	• after the first extension	• Prepare 4NC	0	0	0	1
Outcome 6	4NC PD preparation	• after the first extension	• Prepare 4NC	0	0	0	on-going
Outcome 6	Research on design of obligations fulfillment under UNFCCC in the 14th Five-year Plan	• after the first extension	• Mainstreaming NC activities into GOC, especially MEE mandate	0	0	0	1

Outcome 6	Study on basic environmental data and statistical data of climate change supporting developing national GHG inventories and GHG emission control and management plan	• after the first extension	• Mainstreaming NC activities into GOC, especially MEE mandate	0	0	0	1
Outcome 7	Study on basic environmental data and statistical data of climate change supporting developing national GHG inventories and GHG emission control and management plan	• after the first extension	• Mainstreaming NC activities into GOC, especially MEE mandate	0	0	0	1

3.3.2 Relevance

Alignment with national priorities

The Chinese government attaches great significance to its international obligations, and engaged officials and experts of relevant government departments, social groups, research institutes, universities, and enterprises to develop China's Initial National Communication (hereinafter referred to as INC) in accordance with the UNFCCC Guidelines for the preparation of national communications from non-Annex I Parties. The INC was completed after 3-year concerted efforts of more than 400 experts from about 100 organizations and submitted to the Secretariat of the UNFCCC in October 2004. In 2008, China launched the preparation of its Second National Communication (hereinafter referred to as 2NC). After four-year coordinated efforts of relevant government departments, scientific research institutions, universities, state-owned enterprises, and civil societies, with further elaboration by the National Leading Group on Climate Change (NLGCC), the 2NC was completed and approved by the State Council in 2012 and submitted to the UNFCCC on 8 November 2012

In this context, the Third National Communication of the People's Republic of China on Climate Change (hereinafter referred to as 3NC) project has been conducive for China to establish national systems, methodologies and further strengthen coordination and institutional arrangements for the preparation of national communications. It further strengthened China's capacity to develop national GHG inventory, including the capacity to determine activity data, appropriate emission factors, collecting field measurement data and controlling inventory quality. The 3NC enhanced China's ability to project future GHG emissions, develop and maintain national GHG emission database. The 3NC comprised 2012 national GHG inventory and emission projections, policies and measures for climate change mitigation, analysis on mitigation actions, and institutional structure of Measurement, Reporting and Verification (MRV), promotions for public awareness related to climate change, GHG inventory and basic information of the Hong Kong SAR and Macao SAR on addressing climate change. It also assessed the impacts of and vulnerability to climate change so as to identify adaptation options in the short and long terms.

Decision 2/CP.17 adopted by the seventeenth session of the Conference of the Parties (COP) of the UNFCCC stipulates that "non-Annex I Parties, consistent with their capabilities and the level of support provided for reporting, should submit their first biennial update report by December 2014. In using the Guidelines, non-Annex I Parties should consider their development priorities, objectives, capacities, and national circumstances. Non-Annex I Parties shall submit a biennial update report every two years, either as a summary of parts of their national communication in the year in which the national communication is submitted or as a stand-alone update report. The first biennial update report submitted by non-Annex I Parties shall cover, at a minimum, the inventory for the calendar year no more than four years prior to the date of the submission, or more recent years if information is available, and that subsequent biennial update reports shall cover a calendar year that does not precede the submission date by more than four years". Therefore, the preparation and submission of China's Initial Biennial Update Report (hereinafter referred to as BUR) will be important demonstration and guarantee to improve the consistency, transparency, integrity, accuracy, and timeliness of data contained in its national communications.

The 3NC and the BUR enabled China to better assess domestic climate change impacts, vulnerability, and adaptation measures, enhance China's capacity in measurement, statistics, and monitoring, and promote public awareness related to climate change. On the other hand, the completion and submission of the 3NC and the BURs also demonstrated and strengthened China's efforts to address climate change. It assisted the international community to better comprehend China's climate change actions and enhance international cooperation and exchanges.

•Alignment with UNDP and GEF strategic priorities:

Alignment with GEF Strategic Priorities

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 3NC 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.

The TNC project goal is to enable China to prepare and submit the 3NC and BUR to the UNFCCC in accordance with Article 12 of the Convention, Decision 17/COP 8, and Decision 2/COP 17. The overall objective of the project is to strengthen capacity in integrating climate change concerns into national and sector development priorities while fulfilling obligations to the UNFCCC. The goal and objective of the TNC project are fully aligned with the GEF goal, which is to support developing countries and economies in transition toward a low-carbon development. In particular, the project's goal and objective are fully aligned with GEF5 Objective 6 support enabling Activities And Capacity Building.

As an operating entity of the financial mechanism of the UNFCCC, the GEF has provided financial and technical support to more than 150 non-Annex I Parties to prepare their initial, second, and, in some cases, third national communications to the Convention. During GEF-5, the GEF will

continue to support as a first priority non-Annex I Parties to prepare their national communications to the UNFCCC.

Alignment with UNDP Strategic Priorities

The TNC project is also fully aligned with the UNDP SDG, in particular SDG13 Climate Action. According to SDG13 Goal Target 2, UNDP will support Integrating climate change measures into national policies, strategies, and planning. In comparison, according to the target set by TNC project goal, 4 CCM and CCA measures formulated under the 3NC are planned for implementation by end-of-project. Moreover, according to the TNC outcome 3 target, 1 national and local climate change mitigation program developed and implemented by the national and local governments as influenced by the 3NC process by EOP.

In conclusion, the TNC project is fully aligned with GEF and UNDP strategic priorities.

Stakeholder engagement and linkage with other interventions

Throughout the project development and implementation, the TNC draw extensive and inclusive stakeholders' participation. The stakeholders from various governmental agencies, industries, sectors, and academic institution were not only involved in the project activities, but also involved in the decision-making process, as well as M&E of the project[3]. In Addition, the TNC project continued and built upon the previous cooperation with GEF/UNDP in the preparation of the 2NC and 1NC reports, the lessonslearnt, and the best practices of the previous NC projects (e.g., stakeholder involvement and partnerships) were fully applied in the TNC project design and implementation.

In conclusion, the project's objective is highly relevant with beneficiaries' requirements, country needs, global priorities and partners' and donors' policies. The TE considered the rating of the project is highly satisfactory.

3.3.3 Effectiveness

In terms of the extent to which the project's objectives were achieved or are expected to be achieved, TNC's performance exceeded the expectations entirely and significantlydespite the project implementation delays.

As indicated in Section 3.3.1, Table 8ACHIEVEMENT OF OUTCOMES AGAINST EOP TARGETS, at the level of project goal and objective, by the end of the project, the TNC Project implementation achieved all the targets set in the project results framework (log frame). With respect to the indicator of project goal, namely "the number of CCM and CCA measures formulated under the 3NC process

[3]This is both at the PSC and PMO levels. In the former, all major stakeholders are either member of the PSC or TAP and will be actively involved in the project critical decision-making process. In the latter, stakeholders mainly from academic and industrial circles are involved in implementing project activities (through sub-contracts) or involved in M&E activities.

and included in the completed 3NC Report that are planned for implementation by end-of-project (EOP)", the actual EOP achievement is doubled the set target.

At outcome level, as the major content of the TNC and 2BURs, the number of inventories developed under the project is 50% higher than that of the ProDoc target throughout the fields of Fossil fuel combustion, Biomass combustion, CH4 emissions from coal mining and post-mining activities, CH4 fugitive emissions from oil and gas system, Non-energy uses of fossil fuel, International bunkers. Moreover, the project voluntarily raised the bar, and adopted a more advanced methodology in calculating a significant part of the inventories (see Table 10METHODOLOGIES USED FOR THE NATIONAL GHG INVENTORY OF 2014).

Table 10METHODOLOGIES USED FOR THE NATIONAL GHG INVENTORY OF 2014

Source/ Sink Categories	CO_2		CH_4		N_2O	
	Method	Emission Factors	Method	Emission Factors	Method	Emission Factors
Energy industry	T2	CS	T1,T2	D,CS	T1,T2	D,CS
Manufacturing industries and construction	T2	CS	T1	D	T1	D
Transportation	T2	CS	T1,T3	D,CS	T1,T3	D,CS
Other sectors	T2	CS	T1	D	T1	D
Other	T2	CS	T1,T2	D,CS	T1,T2	D,CS
Fugitive emissions from solid fuels			T1,T2	D,CS		
Fugitive emissions from oil and natural gas			T1,T3	D,CS		
Mineral products	T1,T2	D,CS				
Chemical industry	T1,T2	D,CS	NE	NE	T3	CS
Metal production	T1,T2	D,CS	T1	D	NE	NE
Enteric fermentation			T1,T2	D,CS		
Manure management			T1,T2	D,CS	T2	D,CS
Rice cultivation			T3	CS		
Agricultural soils			NE	NE	T1,T2	D,CS
Field burning of agricultural residues			T1	D,CS	T1	D,CS
Forest land	T2	CS				
Cropland	T3	CS	IE	IE	IE	IE
Grassland	T2	CS	IE	IE	IE	IE
Wetlands	T2	CS	T2	CS	NE	NE
Settlements	T2	CS				

Other land	T1	D				
Harvested wood products	T2	CS				
Solid waste	T1,T2	CS	T1,T2	D,CS	T1	D,CS
Wastewater treatment			T1,T2	D,CS	T1,T2	D,CS

Note: 1. The methodological codes T1, T2 and T3 represent Tier 1, Tier 2, and Tier 3 methods, respectively.

2. *The emission factor code CS represents the country-specific emission factor in China, D represents the defaulted IPCC emission factor.*
3. *IE (included elsewhere) stands for sources which have been calculated and reported under other sub-categories. NE (not estimated) stands for existing emissions and removals which have not been estimated.*
4. *Their parallel appearance shows that the sub-items use different Tier methods or emission factor data sources.*

The 2 implementation period extensions of the project enabled the implementation of a few more supplementary and necessary activities (refer to Table 9ACHIEVEMENTS IN ADDITION TO PRODOC PLAN for the details). These additional activities were meant to further mainstream the NC activities into the GOC policy and decision-making framework. Hence, these are fully in line with the project's goal and objective.

The TE concluded that in terms of the effectiveness, the performance of the TNC Project implementation is highly satisfactory.

3.3.4 Efficiency

Resource allocation and cost effectiveness:

As elaborated in Section 3.2.3, the GEF budget allocation among project components were well balanced with less than 10% variation against the original plan, 38% more co-finance had been leveraged, the use of the fund and human resources was financially efficient.

As discussed in Section 3.3.1 and 3.3.3, the project completed the planned activities and met or exceeded the set targets for the indicators of the project outcomes. In terms of achievement of global environmental and development objectives, the project implementation was more cost-effective thanwhat was initially planned given the fixed budget and extended time span, compared with other enabling activity projects of similar size and magnitude.

Project management and timeliness

The TE investigation revealed that the more sophisticated management and institutional arrangements could have made the project implementation better, especially with regard to the chronic low delivery rate. In order to find the answers to the project's lingering low delivery rate, extensive and in-depth discussion had been made by the TE team with all the parties concerned, especially MEE and PMO.In summary of the discussion, the decisive and immediate reason is the complex and time-consuming supervision procedure of budget planning and allocation within the MEE managerial system due to the increasingly stringent anti-corruption policy of GOC. The solution to the issue does exist, as the project team put, which is to put the PMO outside the

managerial body of MEE without giving away its supervision and line of duty in terms of GEF/UNDP project. By doing so, without sacrificing the high standard GEF/UNDP financial management, the timeliness of budget planning and allocation could be much faster and more efficient. The MEE and its project team had realized it, for the TNC too late though, and they had made decision to correct it in the forthcoming 4NC Project.

In conclusion, the TE consider the rating of the TNC in the category of efficiency is moderately satisfactory.

3.3.5 Overall Project Outcome

The calculation of the overall project outcome rating was based on the ratings for relevance, effectiveness, and efficiency, of which relevance and effectiveness are critical. Overall project outcome is assessed using a six-point scale, described in Annex VITE Rating scales.

According to the rules of GEF/UNDP TE guideline, and combined with the individual scores of relevance, effectiveness, and efficiency, the TE concluded the overall rating of the TNC outcome is satisfactory.

3.3.6 Sustainability

FINANCIAL SUSTAINABILITY:

In general, according to relevant requirements of the Convention, "new" and "additional" climate finance support from developed countries is required to addressing the climate change in China, and other developing countries. Regarding the NC activities in particular, the manifesto mandate of the Convention ensured the financial support for future.

On the other hand, through the continual NC history, GOC showed a good track record to provide sufficient co-finance as of TNC, 38% more actual input than committed in the ProDoc. According to the public statement, the GOC will continual the like kind of commitment financially in the future.

In conclusion, without the GEF support, the relevant activities will unlikely self-sufficiently and automatically continued, the TE consider the financial sustainability of the project be Moderately Unlikely.

SOCIO-POLITICAL SUSTAINABILITY:

GOC showed strong commitment and political wills to further enhance its efforts of addressing the climate change.

In, 2015, the Chinese government officially submitted to the UNFCCC with its nationally determined contributions (NDC) target documents, presenting China's enhanced actions and measures on climate change as its nationally determined contributions that are made to achieve

the objective set out in Article 2 of the Convention and represent its utmost efforts in addressing climate change.

According to the document, China has set NDCs targets for 2030: to achieve the peaking of carbon dioxide emissions around 2030 and making best efforts to peak early; to lower carbon dioxide emissions per unit of GDP by 60% to 65% from the 2005 level; to increase the share of non-fossil fuels in primary energy consumption to around 20%; and to increase the forest stock volume by around 4.5 billion m3 on the 2005 level.

In conjunction with the targets, the document also presented the comprehensive policy and action plans to ensure the fulfillment of the targets.

Based upon the above evidence, the TE concluded the social-political sustainability of the project is likely.

INSTITUTIONAL FRAMEWORK AND GOVERNANCE SUSTAINABILITY

Since the Initial National Communication on Climate Change, the Chinese government has preliminarily established a national system for the preparation and reporting of National Communications on Climate Change and formed a relatively stable team for the preparation of National Greenhouse Gas Inventories, National Communications on Climate Change and Biennial Update Reports. According to the responsibilities of the departments engaging in the work on climate change, the national competent department is responsible for the preparation of National Greenhouse Gas Inventories, while the National Bureau of Statistics organizes relevant departments to provide basic statistical data, coordinates relevant industry associations and typical enterprises to provide relevant data and establishes national greenhouse gas inventory database to support the preparation of the National GHG Inventory database and data management. Upon completion, National Communications on Climate Change and Biennial Update Reports are approved by National Authority Responding to Climate Change and officially submitted to the secretariat of the Convention.

According to the public statement of GOC, the preparation and submission of the country's National Communications and Biennial Update Reports, including National Greenhouse Gas Inventories, comprise a continuous, deepening task requirement. Therefore, the current institutional framework and governanceunder the MEE for these activities will be maintained for future NC Projects but with the suggestion to place the financial planning and management of the NC Project with a special entity outside of the MEE.

The TE concluded the institutional sustainability of the project is likely.

ENVIRONMENTAL SUSTAINABILITY:

On one hand, the on-going climate change have been justified by more and more scientific evidence; on the other hand, coping with the climate change are drawing more and more

consensus globally. As one of the fundamental efforts to address the issue, NC will continue in the future. Therefore, the activities will be sustainable environmentally.

The TE concluded the environmental sustainability of the project is likely.

OVERALL SUSTAINABILITY

Based on the above individual scores on socio-political, financial, institutional, as well as environmental factors, the TE consider the overall sustainability of the project is likely.

3.3.7 Country ownership

The TE assessed the extent of country ownership from following aspects:

- As elaborated in the Section 2.2, the project concept was directly originated within the national sectoral and development plans.
- The outcomes from the project have been successfully incorporated into the national sectoral and development plan. For instance, 8 CCM and CCA measures formulated under the TNC process and included in the completed TNC Report have been included in the GOC plan for implementation, which exceeded the EOP targets by 100%.
- As discussed in Sections 3.1 and 3.2, there are strong and numerous evidencewhich showed that relevant country representatives (e.g., governmental official, civil society, etc.) actively involved in project identification, planning and implementation. They were also included in the decision-making process as the members of the project/ board, namely, PSC.
- As discussed in Section 3.2.3 and 3.3.6, the recipient government maintained financial commitment to the project during the implementation of the project and will be so in the future.
- As discussed in Section 3.3.6, the government approved policies and modified regulatory frameworks in line with the project's objectives.
- The PSC of the project worked as intergovernmental committee given responsibility to liaise with the Project Team and involved multi-agencies into the project.

In summary, the project showed strong country ownership.

3.3.8 Catalytic/Replication Effect

The TE assessed the catalytic or replication effectof the project in following aspects:

SCALING-UP:

Since the beginning of the 12th FYP, China come up with more detailed national carbon emission control targets down to the provincial (regional, municipal) level. During the 13th FYP period,

provincial-level carbon emission intensity control targets are to reduce carbon emission by 20.5%, 19.5%, 18%, 17% and 12% respectively.

DEMONSTRATION:

At present, 23 Chinese provinces, regions or cities initiated low carbon energy technology application pilots,withtargets of reaching the peak of CO2 emissions before 2030. These pilotsare not part of the 3NC Project, but are activities that were influenced by the 3NC Project activities that were carried out in the provinces. Of these 23 provinces, 8 cities including Ningbo and Wenzhou have set the targets of reaching the peak during the 13th FYP period (2016-2020), 7 cities including Wuhan and Shenzhen planned to reach the peak during the 14th FYP period (2021-2025), and 8 provinces and cities including Yan'an and Hainan to reach the peak during the 15th FYP period (2026-2030).

REPLICATION:

China has established a statistical indicator system on climate change, and by including basic statistical indicators on GHG emission into the government statistical indicator system, China has established a basic statistical system matching the preparation of GHG inventories. In 2014, NBS, together with NDRC, Ministry of Transport, and other relevant departments, set up a 23-member Leading Group on Climate Change Statistics. The operational mechanism is to put the government statistical authority at the core with collaboration and coordination from member departments. China has actively carried out capacity building of the basic statistical team on climate change.

Based upon the achievements of 1NC, 2NC and TNC, China has further improved relevant data management system, providing technology support for the normalization and standardization of compilation of GHG inventories, and has strengthened CO2 emission accounting and situation analysis of the performance of carbon emission intensity reduction targets. By the end of 2014, 31 provinces (autonomous regions, municipalities) and the Xinjiang Production and Construction Corps completed compilation of GHG inventories for 2005 and 2010, and the assessment format table and joint review indicator system of provincial-level GHG inventories took an initial shape. In 2015, China further arranged the compilation work of provincial-level GHG inventories for 2012 and 2014 in provinces (autonomous regions, municipalities) . To support the compilation work of provincial-level GHG inventories, TNC organized relevant capacity building programs to train the capabilities of the personnel working at inventory compilation institutions, enhancing local GHG inventory compilation capacity.

3.3.9 Progress to Impact

As the latest phase of acontinued and successful cooperation between China and GEF/UNDP, and one of the fundamental pieces of the nation’s instruments in addressing climate change, the TNC Project made its significant contribution to the nation and the international communityin enabling the nation continually to improve and scale-up its climate change data collection and reporting system.

As discussed in the previous sections, through the implementation of TNC, 1) the methodologies of developing national inventories have been improved (see table 10); 2)local technical capacities of developing international standard inventories have been strengthened (at both provincial level and city level); 3) at national level, industries, and governmental agencies have began to introduce the inventory data collecting into their routine operation; and national statistical bureau are trying to further establish its national carbon accounting system; 4) internationally, the experts from TNC are not only participated in consulting developing countries inventory development, but also participated in reviewing developed countries inventories development.

Although the nation's inventories development methodologies still have room for further improvement, and the national carbon accounting system is still in its early stage of development, and the international cooperation is still yet to taking momentum, thanks to the implementation of TNC, the nation is on the right track in cooperation with UNDP/GEF to generate further and more significant impact nationally and internationally.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 MAIN FINDINGS

PROJECT DESIGN & FORMULATION:

- Overall, the project design and formulation is found to be sound, based on standard UNDP-GEF project design criteria.
- The project design is fully in line of country and GEF strategic priorities.
- The project's indicators are found to be SMART.
- The GOC administrative restructuring and Covid-19 pandemic caused the delays in project activities implementation, necessitating the request and approval of extension of the project implementation period. The original assumptions and risk management plans were partly based on lessons from the previous NC projects andwere later proven practical during the project implementation.
- The project is found to be inclusive and effective in involving various stakeholders in the process of project design.

PROJECT IMPLEMENTATION

- Adaptive Management:
  - The major events that impacted the project implementation that necessitated two extensions of the project implementation period were the GOC administrative restructuring and the Covid-19 pandemicbroke out.
  - In response to the unexpected big changes, the UNDP, MEE, and the PMO communicated closely and reacted actively. Part of the response was the request for project implementation period extension.The work plan was revised, the activities and budget plan were adjusted accordingly consistent with the formal GEF/UNDP procedure and rules.
  - As a result, all the major designed targets (namely the 2BUR, 2BUR, TNC) had been completed and submitted to the Convention on time. Besides of the completion of all the original planned activities, the project took advantage of the opportunities, added several additional activities aiming to achieve the extra achievements (see Table 9ACHIEVEMENTS IN ADDITION TO PRODOC PLAN for the details).
- Actual Stakeholder Participation:
  - The institutional arrangement ensured the inclusive and comprehensive involvement of all the targeted stakeholders in the implementation.
  - The multi-agencies PSC and multi-disciplinary/multi-industrial TAP actively involved in the project management, AWP development, financial planning, and other decision-making process. Stakeholders actively involved in the project financial planning and management. First of all, during the annual meetings, the annual financial plans were reported by the PMO, and reviewed by all PSC and TAP members. Secondly, during the two project extensions, the revised financial plans were developed by the PMO, in consultation with the PSC and TAP. Thirdly, according to the TE interviews with PMO, PSC, and TAP, during the daily project management, the PMO kept closed contact with PSC, TAP and subcontractors

in terms of project financial management, and the feedbacks from these stakeholders were incorporated in the follow-up financial planning process.
    - M&E process also actively involved the stakeholder participation.
    - PSC members, TAP members, and local governments directly involved in the inventory development and refinement, so as to contribute to the progress towards achievement of project objectives.
- Project Finances &Co-Finance
    - The financial management is found fully in line with the GEF/UNDP rules and policies. The financial management and auditing was practiced on regular basis by the independent financial firms appointed by UNDP. The planning, reporting, approving and documentation processes had been practiced in accordance with the GEF/UNDP requirement by all the parties (financial management firm, auditing firm, MEE, PMO, UNDP CO).
    - The expenditure deviations from planned outcome budgets were minor amendments involving amounts of less than 10% of the total project budget. These reallocations had been included in AWPs and approved by UNDP, TPR and documented in APR/PIR.
    - However, for a major part of the project implementation, management of GEF outcome budgets has been chronically less satisfactory in terms of annual delivery rates. Besides of the GOC restructuring and Covid-19, PMO acknowledged that one of the reasons for the low delivery rate is the insufficient planning skills and procrastinated approval process within NDRC/MEE due to the more stringent financial management policy by GOC. Nonetheless, the PMO managed to deliver the major planned outputs on schedule. This means the subcontractors who worked on the project activities have to do their tasks without pay for quite some time, which is fine with them because they trusted the creditability of the PMO through their long-term partnership.
    - Overall actual co-financing expenditure accounts for 138% of the total committed co-finance budget until end of project. The source of co-finance was solely from GOC in the form of in-kind recurrent expenditure.
- Monitoring & Evaluation:
    - M&E design at entry: The M&E plan was well-conceived, practical, and sufficient at the point of CEO Endorsement. The M&E plan included a baseline, SMART indicators, and data analysis systems. The baseline conditions, methodology, logistics, time frames, and roles and responsibilities were articulated. The M&E budget in the project document was realistic and enough tocover all the M&E activities.
    - M&E implementation: During the project implementation, the designed M&E plan had been carried out in a consistent and effective manner. The M&E budget was appropriately planned and allocated, the data on indicators/tracking tools specifically gathered and documented, the progress and financial reporting were conducted timely and with solid quality, the M&E results were effectively circulated and discussed among the parties concerned (especially between MEE and UNDP CO), based on the circulation and discussion, the reactions were quick and focused, as a result, the information provided by the M&E system was used to improve and adapt project performance.

- The evaluation team concluded that the TNC project's M&E at both design and implementation met the expectations and were satisfactory. Therefore the overall M&E performance of the project was satisfactory.

- UNDP Implementation/Oversight and MEE Execution:
  - The UNDP China's designated Program Manager has effectively provided periodic oversight in implementation, including prompt and timely reporting, providing guidance about reporting to ensure that the progress is implemented in line with UNDP-GEF guidelines, and providing feedback on project planning accordingly.
  - MEE and PSC have effectively undertaken their dutiesregarding day-to-day project management, M&E responsibilities, including the review and approval of AWPs and Budgets (for endorsement to UNDP-GEF for the latter's final approval), providing guidance on the effectiveness of project implementation, and overall M&E of project implementation. For instance, some PSC members triangulated the project results with the data generated by their respective organizations. Similarly, inventory compiling methods and recommendations for activities were provided by members based on information received from their own organizations.
  - TE conclude that the oversight and implementation performances of both UNDP and MEE, respectively, were satisfactory.
- Risk Management:
  - With the GOC restructuring and Covid-19 pandemic, the project team reacted quickly and effectively. Because of this, the major targets (2 BURs and TNC) were delivered on time, the activities especially related with local management were eventually delivered, although behind schedule. Overall, all the targets set during the project design were fulfilled, and quite some of which were overfulfilled. The details of the results are presented in Section 3.3.1 of the report.

PROJECT RESULTS AND IMPACTS

- Progress Towards Objectives & Expected Outcomes:
  - At the level of project goal and objective, by the end of the project, all targets set for the indicators were achieved. In particular, with respect to the project goal indicator "the number of CCM and CCA measures formulated under the 3NC process and included in the completed 3NC Report that are planned for implementation by end-of-project (EOP)", the actual EOP achievement was twice of the set target.
  - At outcome level, as the major content of the TNC and 2BURs, the number of inventories developed under the project was 50% higher than the set target throughout the fields of Fossil fuel combustion, Biomass combustion, CH4 emissions from coal mining and post-mining activities, CH4 fugitive emissions from oil and gas system, Non-energy uses of fossil fuel, International bunkers. Moreover, the project voluntarily raised the bar, and

adopted a more advanced methodology in calculating a significant part of the inventories.
    - The TE concluded that in terms of the effectiveness, the results of the TNC Project indicate that the effectiveness is highly satisfactory.
- Relevance:
    - The project's objectiveand outcomes are highly relevant with beneficiaries' requirements, country needs, global priorities and partners' and donors' policies. The TE considered the rating of the project is highly satisfactory.
- Effectiveness:
    - The TE concluded In terms of the extent to which the project's objectives were achieved or are expected to be achieved, TNC's performance exceeded the expectations entirely and significantly.
- Efficiency:
    - TE consider the rating of the TNC in the category of efficiency is moderately satisfactory.
- Overall Project Outcome
    - The calculation of the overall project outcome rating was based on the ratings for relevance, effectiveness, and efficiency, of which relevance and effectiveness are critical. Overall project outcome is assessed using a six-point scale, described in Annex VI TE Rating scales. According to the rules of GEF/UNDP TE guideline, and combined with the individual scores of relevance, effectiveness, and efficiency, the TE concluded the overall rating of the TNC outcome is satisfactory.
- Sustainability:
    - TE found the project's financial sustainability is moderately unlikely, institutional, socio-politically, and environmentally sustainable. The overall sustainability of the project is therefore MU.
- Country Ownership:
    - TE found the project showed strong country ownership.
- Catalytic & Replication Effects:

- At present, 23 Chinese provinces, regions or cities initiated low carbon energy technology application pilots, with targets of reaching the peak of CO2 emissions before 2030. These pilots are not part of the 3NC Project but are activities that were influenced by the 3NC Project activities that were carried out in the provinces. Of these 23 provinces, 8 cities including Ningbo and Wenzhou have set the targets of reaching the peak during the 13th FYP period (2016-2020), 7 cities including Wuhan and Shenzhen planned to reach the peak during the 14th FYP period (2021-2025), and 8 provinces and cities including Yan'an and Hainan to reach the peak during the 15th FYP period (2026-2030).
- China has established a statistical indicator system on climate change, and by including basic statistical indicators on GHG emission into the government statistical indicator system, China has established a basic statistical system matching the preparation of GHG inventories. In 2014,

NBS, together with NDRC, Ministry of Transport, and other relevant departments, set up a 23-member Leading Group on Climate Change Statistics. The operational mechanism is to put the government statistical authority at the core with collaboration and coordination from member departments. China has actively carried out capacity building of the basic statistical team on climate change. Based upon the achievements of 1NC, 2NC and TNC, China has further improved relevant data management system, providing technology support for the normalization and standardization of compilation of GHG inventories, and has strengthened CO2 emission accounting and situation analysis of the performance of carbon emission intensity reduction targets. By the end of 2014, 31 provinces (autonomous regions, municipalities) and the Xinjiang Production and Construction Corps completed compilation of GHG inventories for 2005 and 2010, and the assessment format table and joint review indicator system of provincial-level GHG inventories took an initial shape. In 2015, China further arranged the compilation work of provincial-level GHG inventories for 2012 and 2014 in provinces (autonomous regions, municipalities) . To support the compilation work of provincial-level GHG inventories, TNC organized relevant capacity building programs to train the capabilities of the personnel working at inventory compilation institutions, enhancing local GHG inventory compilation capacity.

- Progress to Impact:
  - As the latest phase of a continued and successful cooperation between China and GEF/UNDP, and one of the fundamental pieces of the nation's instruments in addressing climate change, the TNC Project made its significant contribution to the nation and the international community in enabling the nation continually to improve and scale-up its climate change data collection and reporting system.
  - As discussed in the previous sections, through the implementation of TNC, 1) the methodologies of developing national inventories have been improved (see table 10); 2) local technical capacities of developing international standard inventories have been strengthened (at both provincial level and city level); 3) at national level, industries, and governmental agencies have begun to introduce the inventory data collecting into their routine operation; and national statistical bureau are trying to further establish its national carbon accounting system; 4) internationally, the experts from TNC are not only participated in consulting developing countries inventory development, but also participated in reviewing developed countries inventories development.
  - Although the nation's inventories development methodologies still have room for further improvement, and the national carbon accounting system is still in its early stage of development, and the international cooperation is still yet to taking momentum, thanks to the implementation of TNC, the nation is on the right track in cooperation with UNDP/GEF to generate further and more significant impact nationally and internationally.
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4.2 BEST PRACTICES AND LESSONS LEARNED

Best Practices

Stakeholder Involvement

The project was designed building upon the previous experiences in 1NC and2NC projectsand included an inclusive and effective stakeholder engagement plan, and solid partnership.

The TE team found that the project was designed using a participative approach. Stakeholders with various backgrounds relevant to the planned project activities were extensively and consistently consulted since the beginning of project formulation, and stakeholders' financial commitments and buy-in was obtained at the design stage.

Several stakeholder consultation-workshops and a logical framework analysis (LFA) exercise were conducted, and which gave way tomobilizing interest and support from various stakeholders/ proponents. Key stakeholders such as GOC agencies and institutes, industry associations, research bodies, and other relevant stakeholders, etc. were consulted. The experiences and recommendations of consulted stakeholders and stakeholder feedback were integrated into the project design and logical framework. These pre-project activities therefore led the various stakeholders to participate actively and commit valuable resources and support to serve not only in their own programs but also in the achievement of the overall government goals on climate change.

During the project implementation, the Implementing Partner decided, and approved by PSC during the inception, to set up a Technical Advisory Panel (TAP). The major function of TAP is to provide high quality guidance to the NC activities, and provide needed expertise to NDRC and PMO in ensuring the quality control of the outputs from subcontracts. The role of TAP in providing expert advice to local management institutions has also been critical in ensuring that project activities and implementation strategies are based on sound knowledge. According to the interview with the PMO and expert, the national PMO sent experts to the SARs to provide technical assistance and particularly guidance on inventory development methodology and provide guidance on report review and revision.due to the timely and effective supports from the TAP, the technical barriers in project implementation in both SARs have been effectively removed, and the completion and submission of the inventories are timely and with high quality.

Over the course of implementation, the project has partnered with various public and industrial stakeholders. These include central government agencies, local governments, industry associations, manufacturing enterprises, research institutes, etc. Major partnership activities included policy development and implementation, inventory compiling at national level and BUR development, local inventory development, and M&E of project activities.

The TE found that the cooperation and partnership is effective throughout the implementation of the project, and proved successful in supporting the project decision-making, , and M&E of the implementation process.

Bulk of the project budget were spent for project activities that were carried out through subcontracting and individual consulting. The PMO held annual knowledge sharing workshops among the teams and subcontractor that responsible for the development of inventories of various sectors and industries to provide technical guidance in unifying the methodologies applied.These meetings facilitated the unification of methodology and enhanced the quality control of the outputs.

Successful Capacity Building and Higher Quality of Key Outputs

In terms of the extent to which the project's objectives were achieved or are expected to be achieved, TNC's performance exceeded the expectations entirely and significantly despite the project implementation delays.

As indicated in Section 3.3.1, Table 8ACHIEVEMENT OF OUTCOMES AGAINST EOP TARGETS, at the level of project goal and objective, by the end of the project, the TNC Project implementation achieved all the targets set in the project results framework (log frame). With respect to the indicator of project goal, namely "the number of CCM and CCA measures formulated under the 3NC process and included in the completed 3NC Report that are planned for implementation by end-of-project (EOP)", the actual EOP achievement is doubled the set target.

At outcome level, as the major content of the TNC and 2BURs, the number of inventories developed under the project is 50% higher than that of the ProDoc target throughout the fields of Fossil fuel combustion, Biomass combustion, CH4 emissions from coal mining and post-mining activities, CH4 fugitive emissions from oil and gas system, Non-energy uses of fossil fuel, International bunkers. Moreover, the project voluntarily raised the bar, and adopted a more advanced methodology in calculating a significant part of the inventories (see Table 10METHODOLOGIES USED FOR THE NATIONAL GHG INVENTORY OF 2014).

The main reasons for the achievement, apart from the significantly supportive policy environment, and active and effective involvement of all stakeholders, at project implementation level, the critical factor is the extensive training/studyactivities organized by PMO. According to the interviewed subcontractors and PSC/TAP members, During the development of inventories, under the guidance of UNDP and MEE, the training/communication have been conducted at both national and local level consistently. Through these study/training workshops, the methodologies have been unified, the more advanced calculation methodologies were introduced and applied.
Lessons Learnt

The TE found that the more sophisticated management and institutional arrangements could have made the project implementation better, especially with regard to the chronical low delivery rate. In order to find the answers to the project's lingering low delivery rate, extensive and in-depth discussions were conducted by the TE team with all the parties concerned, especially MEE and PMO. In summary of the discussions, it was found out that the decisive and immediate reason was the complex and time-consuming supervision procedure of budget planning and allocation within the MEE managerial system due to the increasingly stringent anti-corruption policy of the GOC. The solution to theproblemdoes exist, as the project team put, which is to put the PMO outside

the managerial body of MEE without giving away its supervision and line of duty in terms of GEF/UNDP project. By doing so, without sacrificing the high standard GEF/UNDP financial management, the timeliness of budget planning and allocation could be much faster and more efficient. The MEE and its project team had realized it, for the TNC too late though, and they had made decision to correct it in the forthcoming 4NC Project.

Another lesson learnt from the TNC project, as the PMO put, is that sufficient management personnel and capacity is important inefficient project implementation. Due to the institutional arrangement of the PMO inside MEE, the project manager is also the division chief inside MEE, which means that the project management is its part-time job, and the project has no project level technical advisor, the project coordinator is the only person full-time engaged, which makes the project management personnel insufficient.

4.3 CONCLUSIONS

TNC is aligned with the development strategy and priority of GEF/UNDP, GOC, and the project is of significant help to achieve national and global environment benefit. The Chinese Government at the highest levels has expressed its support for full compliance to the UNFCCC. As such, the TNC project have been effectively used as platform on which to improve understanding of climate change in China and to inform CC policies across all important economic sectors.

The project design draw lessons learnt from previous NC projects, the decision-making process involved all the major stakeholders, the implementation proved that the project indicators are SMART.

The project experienced 2 big, unexpected events in its implementation period. In mid-2019 the GOC initiated the national wide administrative restructuring, which moved the entire project management from NCRC to MEE. In late 2019, the Covid-19 hit the project. The project therefore extended twice. The TE found that Implementing and Executing Agencies have adaptively managed the project, making refinements to planned project implementation mechanisms based on learning from this and other projects, and to adapt to the changing development context. The PMO's performance in the whole progress towards the desired results is effective, exercising enough capacity and intelligence in adapting to changing situations and priorities; however, due to the inefficient financial planning and time-consuming approval procedure, the delivery rate of the project had been chronically low.

Allset targets of the indicators of the project outcomes have been achieved. In terms of project goal and objective, the actual achievements of the set targets of the indicators were significantly exceeded.

The Project’s partners and stakeholders have significantly manifested their strong support and commitment to the success of the project. The project’s experience and approach, including

project management mechanism and key activities are replicable and sustainable in the future GOC or GEF-UNDP projects.

The overall TE rating of the project is shown in the table below.

1.Monitoring & Evaluation (M&E)	Rating	Reference
M&E design at entry	S	
M&E Plan Implementation	S	
Overall Quality of M&E	S	
2.Implementing Agency (IA) Implementation & Executing Agency (EA) Execution	Rating	
Quality of UNDP Implementation/Oversight	S	
Quality of Implementing Partner Execution	S	
Overall quality of Implementation/Execution	S	
3.Assessment of Outcomes	Rating	
Relevance	HS	
Effectiveness	HS	
Efficiency	MS	
Overall Project Outcome Rating	S	
4.Sustainability	Rating	
Financial sustainability	MU	
Socio-political sustainability	L	
Institutional framework and governance sustainability	L	
Environmental sustainability	L	
Overall Likelihood of Sustainability	MU	

COMMENT: Please indicate in the table above in the "Reference" column, the Section and Page of the report where the supporting statements for each of the ratings can be read.

4.4 RECOMMENDATIONS

Rec #	TE Recommendation	Entity Responsible	Time frame
A	Comprehensively incorporate the best practices and lessons learnt of TNC into 4NC preparation and implementation		

A.1	*–More specific plan on risk control and adaptive management*	*MEE, UNDP CO*	*Apply immediately for 4NC project preparation.*
A.2	*–More inclusive stakeholder engagement plan* 1. More stakeholders could be involved in the future NC project, for instance, the industrial associations could be involved in 1) project design; 2) substantial inventory development. 2. *PSC members could be more inclusive, to involve more industrial partners (such as more industrial associations)* 3. The PSC members could play more active role, not only in annual project planning and meeting, but also more project daily management decision-making activities.	*MEE, UNDP CO*	*Apply immediately for 4NC project preparation.*
A.3	*–Feasibility study to move the PMO to the outside of MEE*	*MEE, UNDP CO*	*Apply immediately for 4NC project preparation.*
B	Information dissemination internationally		
B.1	*–Documentation, and Dissemination of Success Stories, as well as more knowledge sharing actions*	*MEE, UNDP CO*	*Apply immediately for 4NC project preparation.*
B.2	*–Seek new South-South cooperation project under the coordination of UNDP* *During the TE process, in consultation with MEE and NPD, it was found that there were extensive South-South cooperation activities on climate change are being conducted by MEE with other countries under the framework of BRI, and MEE is very interested in seeking opportunities to develop NC related cooperation under its BRI program, so, is suggested by TE, during the preparation of 4NC, the preparation team could hold special consultative meetings with MEE and UNDP reginal office to discuss the feasibilities of these kind of cooperation under 4NC.*	*MEE, UNDP CO*	*Apply immediately for 4NC project preparation.*

ANNEXES

I. TE TERM OF REFERENCE

Project Background

Climate is an important component of the natural environment that sustains human beings. A moderate and stable climate system is essential for the survival and evolution of all living creatures, and necessary for the sustainable development of human society. Scientific research concludes that the global climate is undergoing a significant change – climate system is warming, and extreme climate events have become more frequent. Global climate change will affect human society in all aspects. It will not only affect the stability of ecosystem, but also the development of human society.

Undoubtedly, climate change attaches great concern of the global community. The Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC) states that "*most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations*". In addition, the Fifth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC) has further strengthened the scientific conclusion that human activity accounts for climate change. As international consensus on addressing climate change continues to deepen and China's strength increases, China is faced with a new situation regarding the climate change issue.

There are many measures have been taken so as to address climate change effectively and efficiently, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted by the international community in June 1992 and came into force in March 1994, thanks to the joint efforts of all related parties. The UNFCCC stipulates clearly that the Parties to the Convention shall protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Additionally, the UNFCCC also requires all Parties to submit national inventories, which include anthropogenic emissions by sources and removals by sinks of all greenhouse gases (GHGs). It further provides that all Parties shall formulate, implement, publish, and regularly update national programs to address climate change, promote the development and application of technologies that reduce or prevent anthropogenic emissions of GHGs. Moreover, it is urgent to improve the sinks of GHGs, develop adaptation plan and promote the exchange of information about climate change and response measures; promote education, training and public awareness related to climate change. According to the UNFCCC, each Party has the responsibility to exchange communication, including a national inventory of emissions by sources and removals by sinks of all GHGs, a general description of steps taken and envisaged to implement the UNFCCC as well as other information that the Party considers appropriate.

The Chinese government attaches great significance to its international obligations, and engaged officials and experts of relevant government departments, social groups, research institutes,

universities, and enterprises to develop China's Initial National Communication (hereinafter referred to as INC) in accordance with the UNFCCC *Guidelines for the preparation of national communications from non-Annex I Parties*. The INC was completed after 3-year concerted efforts of more than 400 experts from about 100 organizations and submitted to the Secretariat of the UNFCCC in October 2004. In 2008, China launched the preparation of its Second National Communication (hereinafter referred to as 2NC). After four-year coordinated efforts of relevant government departments, scientific research institutions, universities, state-owned enterprises, and civil societies, with further elaboration by the National Leading Group on Climate Change (NLGCC), the 2NC was completed and approved by the State Council in 2012 and submitted to the UNFCCC on 8 November 2012. The compilation of 2NC was based on *the guidelines for the preparation of the second national communications from non-Annex I Parties*, which were adopted by the Conference of the Parties (COP) at its eighth session.

The 2NC is composed of 8 parts providing information on national circumstances, national GHG inventory, climate change impacts and adaptation, policies and actions for climate change mitigation, other relevant information on achieving the objective of the Convention, needs for financial support, technologies and capacity building, basic situation of the Hong Kong Special Administrative Region (SAR) and Macao SAR on addressing climate change. The 2NC has fully reflected China's national circumstances related to climate change. On the whole, China will sincerely carry out all the tasks in the China's National Climate Change Programme, strive to build a resource conservative and environmentally friendly society, enhance national capacity to mitigate and adapt to climate change, and make further contribution to the protection of the global.

In this context, the Third National Communication of the People's Republic of China on Climate Change (hereinafter referred to as 3NC) project will be conducive for China to establish national systems, methodologies and further strengthen coordination and institutional arrangements for the preparation of national communications. It will further strengthen China's capacity to develop national GHG inventory, including the capacity to determine activity data, appropriate emission factors, collecting field measurement data and controlling inventory quality. The 3NC will enhance China's ability to project future GHG emissions, develop and maintain national GHG emission database. The 3NC will comprise 2012 national GHG inventory and emission projections, policies and measures for climate change mitigation, analysis on mitigation actions, and institutional structure of Measurement, Reporting and Verification (MRV), promotions for public awareness related to climate change, GHG inventory and basic information of the Hong Kong SAR and Macao SAR on addressing climate change. It will also assess the impacts of and vulnerability to climate change so as to identify adaptation options in the short and long terms.

Decision 2/CP.17 adopted by the seventeenth session of the Conference of the Parties (COP) of the UNFCCC stipulates that "*non-Annex I Parties, consistent with their capabilities and the level of support provided for reporting, should submit their first biennial update report by December 2014. In using the Guidelines, non-Annex I Parties should take into account their development priorities, objectives, capacities, and national circumstances. Non-Annex I Parties shall submit a biennial update report every two years, either as a summary of parts of their national communication in the*

year in which the national communication is submitted or as a stand-alone update report. The first biennial update report submitted by non-Annex I Parties shall cover, at a minimum, the inventory for the calendar year no more than four years prior to the date of the submission, or more recent years if information is available, and that subsequent biennial update reports shall cover a calendar year that does not precede the submission date by more than four years". Therefore, the preparation and submission of China's Initial Biennial Update Report (hereinafter referred to as BUR) will be important demonstration and guarantee to improve the consistency, transparency, integrity, accuracy, and timeliness of data contained in its national communications.

The 3NC and the BUR will enable China to better assess domestic climate change impacts, vulnerability, and adaptation measures, enhance China's capacity in measurement, statistics, and monitoring, and promote public awareness related to climate change. On the other hand, the preparation of the 3NC and the BUR will also demonstrate and strengthen China's efforts to address climate change. It will assist the international community to better comprehend China's climate change actions and enhance international cooperation and exchanges.

Project Summary

This project is to enable China to fulfill its commitments under the UNFCCC to prepare its Third National Communication (3NC) and Initial Biennial Update Report (BUR) and to gradually establish a supporting system of developing NCs and BUR in accordance with the *Guidelines for the Preparation of National Communications from Non-Annex I Parties* (17/CP.8) and *Biennial Update Reporting Guidelines for Non-Annex I Parties* (2/CP.17) adopted by the Conference of Parties (COP). Based on the experience and lessons learned from the previous two 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, enhance technical capacity of national experts, and strengthen the institutional framework for the preparation of NCs and BURs. 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 Greenhouse Gas (GHG) inventory of 2010 and 2012, with extended categories and sources of GHG emissions and reduced uncertainties of the inventory. It will further improve the national GHG inventory database management system, with a view to administering inventory data in a more scientific way and making the preparation of GHG inventories a continuing process. The project will further improve the approach for projecting GHG emissions in China and estimate China's CO2 emission from energy activities in 2025. It will also identify key impacts of climate change and corresponding adaptation measures, describe relevant policies and measures which China adopts to address climate change, and introduce the activities of enhancing public awareness on climate change. It will provide relevant information on addressing climate change by Hong Kong and Macao. The project will lead to the submission of the 3NC and BUR to the Conference of the Parties (COP) to the UNFCCC.

Duties and Responsibilities

- Define the evaluation methodology and schedule, and report to the PMO.
- Documentation of the review
- Leading the TE Team in planning, conducting, and reporting on the evaluation
- Deciding on division of labor within the team and ensuring timeliness of reports
- Use of best practice evaluation methodologies in conducting the evaluation.
- Leading presentation of the draft evaluation findings and recommendations in-country
- Conducting the debriefing for the UNDP China Office and the TNC PMO
- Leading the drafting and finalization of the TE report

Competencies

1. Updating of National GHG Emission Inventory and GHG Inventory Database, and Enhancement of GHG Emission Forecasting and Modeling Systems.
2. Assessment on Impacts of, Vulnerability and Adaptation to Climate Change.
3. Updating of Climate Change Mitigation, Measures, Options and Actions for 3NC.
4. Improving Public Awareness and Informing Policy Decision Making on Climate Change.
5. Inventory of GHG Emissions and Other Relevant Information on Climate Change in Hong Kong and Macau SARs.
6. Supplementary Support for Achieving Convention Objectives and Publication and Dissemination of the 3NC Report.
7. Supporting China Biennial Update Report completed and Submitting to the UNFCCC.

Objectives of the Terminal Evaluation

The objectives of this Terminal Evaluation (TE) seek to fulfill the following overarching objectives of the monitoring and evaluation of GEF projects:

The objective of the TE is to gain an independent analysis of the progress of the project. The Terminal Evaluation will identify potential project design problems, assess progress towards the achievement of the project objective, identify and document lessons learned (including lessons that might improve design and implementation of other UNDP-GEF projects), and make recommendations regarding specific actions that should be taken to improve the project in future. The TE will assess early signs of project success or failure and identify the necessary changes to be made. The project performance will be measured based on the indicators of the project's logical framework (see Annex 1) and various Tracking Tools.

The TE must provide evidence based information that is credible, reliable, and useful. The review team is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Technical Adviser based in the region and key stakeholders. Interviews will be held with the following organizations and individuals at a minimum:

1. UNDP staff who have project responsibilities;

2. Executing agencies (including but not limited to senior officials and task team/ component leaders: MEE, key experts and consultants in the demonstration areas, PSC members;

3. The Chair of Project Steering Committee

4. Project stakeholders, including academia, local government, and CBOs.

The team will review all relevant sources of information, such as the project document, project reports – including Annual APR/PIR, project budget revisions, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based review.

Scope of the Evaluation

The scope of the TE covers the entire UNDP/GEF-funded project and its components as well as the co-financed components of the project.

The TE will assess the Project implementation taking into account the status of the project activities and outputs and the resource disbursements made up to the point of the start of the review.

The evaluation will involve analysis at two levels: component level and project level. On the component level, the following shall be assessed:

- Whether there is effective relationship and communication between/among components so that data, information, lessons learned, best practices and outputs are shared efficiently, including cross-cutting issues.

- Whether the performance measurement indicators and targets used in the project monitoring system are specific, measurable, achievable, reasonable, and time-bounded to achieve desired project outcomes.

- Whether the use of consultants has been successful in achieving component outputs.

The evaluation will include such aspects as appropriateness and relevance of work plan, compliance with the work and financial plan with budget allocation, timeliness of disbursements, procurement, coordination among project team members and committees. Any issue or factor that has impeded or accelerated the implementation of the project or any of its components, including actions taken and resolutions made should be highlighted.

On the project level, it will assess the project performance in terms of: (a.) Progress towards achievement of results, (b.) Factors affecting successful implementation and achievement of results, (c.) Project Management framework, and (d.) Strategic partnerships.

Progress towards achievement of results (internal and within project's control)

- Is the Project making satisfactory progress in achieving project outputs vis-à-vis the targets and related delivery of inputs and activities?

- Are the direct partners and project consultants able to provide necessary inputs or achieve results?

- Given the level of achievement of outputs and related inputs and activities to date, is the Project likely to achieve its Immediate Purpose and Development Objectives?

- Are there critical issues relating to achievement of project results that have been pending and need immediate attention in the next period of implementation?

Factors affecting successful implementation and achievement of results (beyond the Project's immediate control or project-design factors that influence outcomes and results)

- Is the project implementation and achievement of results proceeding well and according to plan, or are there any outstanding issues, obstacles, bottlenecks, etc. on the consumer, government or private sector or other organizations that are affecting the successful implementation and achievement of project results?

- To what extent does the broader policy environment remain conducive to achieving expected project results, including existing and planned legislations, rules, regulations, policy guidelines and government priorities?

- Is the project logical framework and design still relevant in the light of the project experience to date?

- To what extent do critical assumptions/risks in project design make true under present circumstances and on which the project success still hold? Validate these assumptions as presently viewed by the project management and determine whether there are new assumptions/risks that should be raised?

- Is the project well-placed and integrated within the national government development strategies, such as community development, poverty reduction, etc., and related global development programs to which the project implementation should align?

- Do the Project's purpose and objectives remain valid and relevant, or are there items or components in the project design that need to be reviewed and updated?

- Are the Project's institutional and implementation arrangements still relevant and helpful in the achievement of the Project's objectives or are there any institutional concerns that hinder the Project's implementation and progress.

Project management (adaptive management framework)

- Are the project management arrangements adequate and appropriate?

- How effectively is the project managed at all levels? Is it results-based and innovative?

- Do the project management systems, including progress reporting, administrative and financial systems and monitoring and evaluation system, operate as effective management tools, aid in effective implementation and provide sufficient basis for evaluating performance and decision making?

- Is technical assistance and support from project partners and stakeholders appropriate, adequate, and timely?

- Validate whether the risks originally identified in the project document and, currently in the APR/PIRs, are the most critical and the assessments and risk ratings placed are reasonable.

- Describe additional risks identified during the evaluation, if any, and suggest risk ratings and possible risk management strategies to be adopted.

- Assess the use of the project logical framework and work plans as management tools and in meeting with UNDP-GEF requirements in planning and reporting.

- Assess the use of electronic information and communication technologies in the implementation and management of the project.

- On the financial management side, assess the cost effectiveness of the interventions and note any irregularities.

- How have the APR/PIR process helped in monitoring and evaluating the project implementation and achievement of results?

Strategic partnerships (project positioning and leveraging)

- Asses how project partners, stakeholders and co-financing institutions are involved in the Project's adaptive management framework.

- Identify opportunities for stronger collaboration and substantive partnerships to enhance the project's achievement of results and outcomes.

- Are the project information and progress of activities disseminated to project partners and stakeholders? Are there areas to improve in the collaboration and partnership mechanisms?

Evaluation Methodology

The TE Team is expected to become well versed as to the project objectives, historical developments, institutional and management mechanisms, activities, and status of accomplishments. Information will be gathered through document review, group and individual interviews and site visits. Review relevant project documents and reports will be based on the following sources of information: review of documents related to the project and structured interviews with knowledgeable parties.

The TE Team will conduct an opening meeting with the National Project Director (NPD), Project Management Office (PMO), the Ministry of Finance, and the China International Center for Economic and Technical Exchanges. An "exit" interview will also be held to discuss the findings of the assessment prior to the submission of the draft Final Report.

Prior to engagement with PMO, the TE Team shall receive all the relevant documents including at least:

- The Project Document and Project Brief

- Inception Report

- Annual Work and Financial Plans

- Annual Project Report/Project Implementation Review (APR/PIR) for 2015 and 2016

To provide more details, as may be needed, the following will be made available for access by the TE Team:

- Executive summary of all quarterly reports
- Internal monitoring results
- Terms of Reference for past consultants' assignments and summary of the results
- Past audit reports

All additional material related to the project management and implementation and held by the PMO and their subcontracts will be available for review at the discretion of the Evaluation Team.

The TE Evaluation Team should at least interview (online) the following people:

- National Project Director
- National Project Coordinator
- PMO Director
- International Chief Technical Advisor
- Project Financial Officer
- A representative of the Project Steering Committee
- UNDP Country Office in China in-charge of the Project

It is also anticipated that the TE will interview a number of sub-contractors and recipients of services and make site visits to implementation areas. However, the degree to which such interactions are required will be at the discretion of the Evaluation Team.

With the aim of having an objective and independent evaluation, the TE Team is expected to conduct the project review according to international criteria and professional norms and standards as adopted by the UN Evaluation Group.

Required Skills and Experience

?The TE Team will be composed of one International Lead Consultant and one National Consultants. The Team is expected to combine international standards of evaluation expertise, excellent knowledge of Energy Efficiency and Climate Change projects and the national context of in which the project is being implemented.

At the minimum, the members of the TE Team shall have the following professional background and responsibilities:

- Minimum of ten years accumulated and recognized experience in the Energy Efficiency and climate change area.
- Minimum of five years' experience of project evaluation and/or implementation experience in the result-based management framework
- Familiarity with China
- Experience with multilateral and bilateral supported project environments
- Comprehensive knowledge of international project best practices
- Very good report writing skills in English.

All TE Team Members

The members of the team must be independent from both the policy-making process and the delivery and management of the UNDP/GEF assistance to the project. Therefore, candidates who had any direct involvement with the design and implementation of the project will not be considered.

Evaluation Schedule and Deliverables

The TE is provisionally scheduled to commence in November 2020. The draft evaluation report should be produced with 2 weeks, highlighting important observations, analysis of information and key conclusions including its recommendations. Based on the scope of the TE described above, the Evaluation Report will include, among others:

- Findings on the project implementation achievements, challenges, and difficulties to date;
- Assessments of the progress made towards the attainment of outcomes;
- Recommendations for modifications and the future course of action;
- Lessons learned from the project structure, coordination between different agencies, experience of the implementation, and output/outcome.

The report will be initially shared with UNDP China Office and PMO to solicit comments or clarifications. Consequently, a presentation of the report will be made to an open meeting of all project stakeholders for comment. The final TE report will then be submitted within 1 month of the initiation of the evaluation. Three copies of the report will be submitted to the UNDP China Office and a copy to PMO.

There will be two main deliverables:

- TE report, including an executive summary, fulfilling the evaluation requirements set out in this Terms of Reference (TOR). The final report (including executive summary but excluding annexes) should not exceed 50 pages.

- A power-point presentation of the findings of the evaluation

Budget

All the costs incurred for the conduct of the TE for the Project shall be charged against project funds allocated for the conduct of such activity. Payment of the TE Evaluation Team's professional fees shall be made in accordance with the Special Service Agreement to be issued in this regard.

Evaluation Criteria

- The award of the contract will be made to the Individual Consultant who has obtained the highest Combined Score and has accepted UNDP's General Terms and Conditions. Only those applications which are responsive and compliant will be evaluated. The offers will be evaluated using the "Combined Scoring method" where:

- Technical evaluation - 70%; (includes 20% of Job-Related Technical Expertise; 25% of Relevant working experience; 25% of Methodology & Approach to Assignment)

- Financial Evaluation - 30%.

II. TE MISSION ITINERARY

PROJECT DATA		
UNDP and GEF Project ID Numbers	UNDP Project ID: 00088737	
Evaluation Time Frame and Date of Evaluation Report	**Content**	**Time**
	Inception Meeting	25-Nov-20
	Ongoing data gathering and interviews as requested by the MTR team	November 26-December 9, 2020
	PPT Presentation of initial TE findings and recommendations	10-Dec-20
	Validation of financial and other reporting information, additional analysis	December 11, 2020-March 5, 2021
	Submission of Draft MTR	6-Mar-21
Evaluation Team Members	Litong Xu (International Evaluator) Zhihong Wei, JiFengLi (National Evaluator)	

III. LIST OF PERSONS INTERVIEWED

Name	Designation	Organization	Role in the Project
Liu Shijun	Project Manager	UNDP China	Implementing agency
Li Dan	Project Assistant	UNDP China	Implementing agency
Sun Zhen	Department Director	MEE	NPD
Miao Weijie	Staff	MEE	PMO Coordinator
Yuan Jiashuang	Department Vice-Director	CMA	PSC member, member of project development team
Sun Yaowei	Department Vice-Director	Energy Bureau, NSRC	PSC member
Ou Xunmin	Associate Professor	Tsinghua Univ.	TAP member
Pan Li	Division Chief	China Federation of electric power enterprises	TAP member
Li Yongliang	Devision Chief	China Petrochemical Federation	TAP member
Su Minshan	Vice-Director	NCSC	Member of project development team, Subcontractor
Ma Cuimei	Research Staff	NCSC	Member of project development team, Subcontractor
Wang Tian	Research Staff	NCSC	Expert on Hong Kong and Macao, Subcontractor
Liu Bin	Research Staff	Tsinghua Univ.	Subcontractor
Tong Qing	Research Staff	Tsinghua Univ.	Subcontractor
Han Shenghui	Research Staff	CAS	Subcontractor
Zhang Wen	Research Staff	CAS	Subcontractor
Yu Yongqiang	Research Staff	CAS	Subcontractor
Li Yu-e	Research Staff	CAAS	Subcontractor

Zhu Jianhua	Research Staff	CAS	Subcontractor
Yu Yongqiang	Research Staff	CAS	Subcontractor
Gao Qingxian	Research Staff	CRAES	Subcontractor
Ma Zhanyun	Research Staff	CRAES	Subcontractor
Zhou Li	Research Staff	Tsinghua Univ.	Subcontractor

IV. LIST OF DOCUMENTS REVIEWED

1 Project Identification Form (PIF)
2 Final UNDP-GEF Project Document
3 CEO Endorsement Request
4 Inception Workshop Report
5 Mid-Term Review report and management response to MTR recommendations
6 All Project Implementation Reports (PIRs)
7 All Annual Progress Reports (APRs)
8 All Quarterly Reports
9 All AWPs
10 Minutes of TPR Meetings
11 Communications between MEE and UNDP on project extensions.
12 GEF Tracking Tools (from CEO Endorsement, midterm, and terminal stages)
13 Co-financing data with expected and actual contributions broken down by type of co-financing, source, and whether the contribution is considered as investment mobilized or recurring expenditures.
14 Audit reports
15 All Electronic copies of project outputs (booklets, manuals, technical reports, articles, etc.)
16 list of formal meetings, workshops, etc. held, with date, location, topic, and number of participants.
17 List of all contracts and procurement items (with budget, duration, task, and contact information)
18 List of related projects/initiatives contributing to project objectives approved/started after
19 Data on relevant project website activity – e.g. number of unique visitors per month, number of page views, etc. over relevant time period, if available
20 UNDP Country Programme Document (CPD)
21 List and contact details for project staff, PSC, TPA, subcontractors, and other key stakeholders
22 Project deliverables that provide documentary evidence of achievement towards project outcomes

V. TE QUESTION MATRIX AND QUESTIONNAIRE

PROJECT DESIGN AND LFA DEVELOPMENT AND EFFECTIVENESS

1. PROJECT SUMMARY TABLE
2. What the considerations of LFA were in terms of inter component inter-output linkage and linkage of component and its output?
3. Who involved in project and LFA design?
4. Lessons learned from SNC? Any change and improvement?
5. How to incorporate SMART principle in LFA design?
6. How effective is the project design on providing guidance for planning and implementation of different activities and outputs listed in the Logical Framework?
7. Do the PMO and other stakeholders find the project PMP/log frame goals and outcomes to be realistic, indicators to be SMART and outputs to be trackable?
8. Any changes during implementation of LFA and component/activity against original design? (For example, 1BUR?)
9. In retrospective, overall quality of project design, LFA? Lessons learned, best practices? If FNC, any change planned?
10. Target/indicator system in ProDoc and annual WP, discussion on possibility of future improvement?

PROJECT MANAGEMENT

1. How many staff work at the PMO and what is the respective function of each staff member? Please provide organogram of the PMO
2. Has the project faced any HR challenges, e.g., insufficient or under qualified staff, high turnover, non-availability on in country technical knowhow, etc.? If yes, how have these been resolved?
3. Has there been a turnover/change in personnel on key project positions, e.g., PMO Director, NPD, etc.? If yes, when, and how has this lack of continuity affected the project?
4. Have there been any delays in recruitment of key staff members (e.g., CTA, M&E Officer, etc.) /contractors, etc. If yes, what were the reasons?
5. How has this delayed hiring affected the project?
6. Who are members of the PSC? How often has the PSC met? Dates of PSC meetings. Organization chart, difference from ProDoc?
7. What is the % distribution of PSC members according to sector, i.e. public, private,

international, NGOs, etc.

8. What important decisions have been taken by the PSC?
9. How has the PSC steered the project in the right direction?
10. How could the role of the PSC have been improved?
11. In addition to the PMO and PSC, does the project also have local PMOs and PSCs?
12. What is the role of TAP? Who are the members of this team?
13. What important advice has been provided by the TAP? And how has the TAP contributed to the project's success?
14. How could the roles of TAP have been improved?

ADMINISTRATIVE RESHUFFLING

1. What is the plan of this restricting? When? How? Purpose and objective?
2. Impact on TNC institutional arrangement? (NPD, PMO, PSC, others)
3. Impact on LFA, objective/goal, components/activities?
4. Any anticipated uncertainties and risks? And counter measures?
5. Timeline of change?

STAKEHOLDERS (TABLE)

1. Who are the key public sector stakeholders and what is the role of each?
2. Who are the key private sector stakeholders and what is the role of each?
3. Partners at local level? When and how to be involved?
4. Which stakeholders under each project outcome have been particularly active in ensuring the project's success? How?
5. Did any stakeholders not meet their commitments? If yes, who are they and what was the reason?

UNDP IMPLEMENTATION AND MEE EXECUTION

1. What support has been provided by the UNDP/MEE to the project? E.g. linkages with international experts, etc.
2. What has been the role of the UNDP/MEE in monitoring and course correction?
3. How could the role of the UNDP/MEE have been improved? E.g. timely budget releases, simpler reporting formats, etc.
4. What support has been provided by the GEF Focal Point?

STAKEHOLDER COLLABORATION AND COMMUNICATION

1. How was stakeholders' engagement plan changed in implementation? organizations and entities? Roles? Reason? Results?
2. What were the advantages of including these organizations and entities in the project planning and implementation?
3. How has the project collaborated with some of the other GEF UNDP programs () and with other development partner EE programs, e.g., WB, JICA, etc.
4. What have been some of the synergies or positive outcomes of these collaborations?
5. If the project has not collaborated with any of these projects/programs, what opportunities have been lost?
6. How has the collaboration between the various stakeholders leveraged the project performance?
7. What were key challenges faced by the PMO in facilitating the collaboration of such a large variety and number of stakeholders? How were some of these challenges mitigated?
8. How do the various stakeholders and partners interact to ensure communication and linkages between their respective activities? E.g. quarterly meetings arranged by the PMO or any other events, etc.
9. HK, Macau in particular?

ADAPTIVE MANAGEMENT

1. During the time of implementation, have there been any changes in the project document? If yes, what were these changes? Were these changes incorporated in the project's log frame? What was the process of having these changes approved? E.g. approval from PSC, approval from GEF, etc. What challenges were faced by the project for making any changes in the project approach/log frame, etc.?
2. What were the major changes made in the work plan during the inception period (Ref. Inception Report)?
3. Have there been any significant delays in implementation of activities (delay of three months or more)? If yes, which activities were these and what caused the delays?
4. How did these delays affect the project's progress? What was the impact of activity delays on other components and activities? How were these problems mitigated?
5. Were the project target locations / cities identified in the project changed during the implementation ()? If yes, why? And what was the process of identifying the new locations? How did this change affect the project meeting its goals and objectives?
6. Lessons learnt and best practices?

ASSUMPTIONS AND RISKS

1. ProDoc design and implementation on risk control? (table, no in ProDoc, but in PIR? Why?)
2. Any new risks and countermeasures? Results?
3. Administrative restructuring?
4. Overall comments? Future plan?

BUDGET AND CO-FINANCING, DELIVERY RATE (TABLES)

1. Is the budget sufficient for the proposed activities? If no, what problems has the project faced regarding budget allocations? What efforts have been made to resolve some of these problems?
2. Is there any revision on budget plan? Why? How? Result?
3. Were all the committed finances (GEF) and co-financing (different sources, etc.) delivered on time? If no, please provide details, e.g. reason for delay in provision of funds, impact of delayed funds on project progress and achievement of outcomes, etc.
4. What was the project's annual delivery rate for each year since project start? What were the reasons for low delivery in some of the years? How were these issues resolved?
5. Were all the key stakeholders, able to meet their co-financing requirements? If no, what was the reason and how did the lack of this financing affect the project?
6. If yes, was the co-financing equal to or more than the expectation in the project design? What was the reason for the low or high co-financing? E.g., change in GOC policy, change in bank policy, interest of consumers, etc.
7. How did the co-financing affect the project's success?
8. Have regular project financial audits been undertaken? Were these audits satisfactory? If not, what were the reasons and how were these issues resolved?
9. Co-financing table and delivery rate table

M&E AND REPORTING

1. Has the project developed an M&E framework? If yes, what are the main components of the M&E framework?
2. What was the process of developing and approval of this framework? If no, what were the reasons? E.g. lack of qualified personnel in the PMO, lack of funding, lack of initiative by project management, etc.

3. What are the major advantages of using this M&E system? E.g., support to promoting the project's successes, assistance with periodic reporting, etc.
4. What have been the major challenges in undertaking project M&E? How have these challenges been mitigated? E.g., lack of technical training, lack of funding for studies, lack of SMART indicators, etc.
5. How is the log frame used for purposes of Planning, M&E, and Reporting? What problems have been faced by the PMO when reporting against the log frame?
6. Were any of the evaluation reports or results of surveys or impact assessments uploaded to the project website or any other public source?
7. Did the project submit its reports on time? What problems were faced in reporting? How were these resolved?
8. How have the APR/PIR process helped in monitoring and evaluating the project implementation and achievement of results?

PERFORMANCE EVALUATION FRAMEWORK

1. Presentation of progress (outcome at component level)
2. PPM, any target unfulfilled, why?
3. Addition activities, outputs, why add these?
4. On the component level, the following shall be assessed:
    a) Whether there is effective relationship and communication between/among components so that data, information, lessons learned, best practices and outputs are shared efficiently, including cross-cutting issues.
    b) Whether the performance measurement indicators and targets used in the project monitoring system are specific, measurable, achievable, reasonable, and time-bounded to achieve desired project outcomes.
    c) Whether the use of consultants has been successful in achieving component outputs.
    d) Is there any delay or delivery issues? Why? How to deal with it? Result? Plan?
5. Project Level
    a) What are the key sub-contracted activities under the project? When did each activity start and finish?
    b) Are there any outstanding activities in any of the sub-contracts?
    c) What were the challenges in sub-contracting? E.g., availability of local expertise, cost, coordination, commitment, and timely delivery by sub-contractors, etc.?

d) What was the process of sub-contractor selection? How did the project ensure transparency in selection of subcontractors' organizations?

e) Please provide TORs of each sub-contracted activity

IMPACT

1. What are the unique and irreplaceable contributions of GEF intervention?
2. Has the project undertaken any impact surveys? If yes, what are the major outcomes? E.g., Impact of the promotion and advocacy program, studies on effectiveness of implementation results of formulated policies and standards, etc.
3. Which of the project activities/components have had the highest （most significant） impact? Why?
4. Which of the project activities/components have had the least impact? Why?
5. What problems were faced in assessing the impact? E.g., lack of an M&E system to assess impact, lack of cooperation of project stakeholders in reporting progress/impact, etc.
6. What is the project impact on goal and outcome? What methodology was used to assess this impact?
7. If the project has not been able to achieve these goal and outcome level indicators, what are the reasons for that?

MAINSTREAMING AND SUSTAINABILITY

1. What have been the key measures of sustainability/replicability embedded in the project design and delivery?
2. Which outcomes/results of the project are particularly sustainable? Why?
3. Which outcomes/results of the project are least sustainable? Why?
4. What are the major risks to the sustainability of the project's activities? E.g., lack of funding, high product cost, lack of technical capacity, etc.
5. What are the points/measures that leverage sustainability at this point? E.g., new govt. policy, increased market demand, etc.?
6. How are the activities being replicated and scaled up? E.g., continuation of trainings, availability of financing, etc.
7. Is there a follow up project planned, either at UNDP or with any of the other sub-contractors/stakeholders, e.g., GEF/UNDP, etc.? If yes, how would this program be linked to TNC? If no, what is the reason?
8. Consideration on next follow-up project? (necessity, significance, advantages, how to

prepare in the future TNC activities)

9. Consideration on possible South-South cooperation?

CONCLUSIONS AND RECOMMENDATIONS

1. what are some of the key achievements of the TNC project?
2. what are some of the key innovations of the TNC project?
3. what are some of the key best practices of the TNC project?
4. In your opinion, what are some areas in which TNC could have played a more active role but did not play?
5. What are the key lessons learned from the implementation of TNC?
6. What are your recommendations to ensure sustainability of the TNC's key activities?
7. What components/activities would you recommend for a similar program in the future?
8. To what extent does the broader policy environment remain conducive to achieving expected project results, including existing and planned legislations, rules, regulations, policy guidelines and government priorities?
9. Is the project logical framework and design still relevant in the light of the project experience to date?
10. To what extent do critical assumptions/risks in project design make true under present circumstances and on which the project success still hold? Validate these assumptions as presently viewed by the project management and determine whether there are new assumptions/risks that should be raised?
11. Is the project well-placed and integrated within the national government development strategies, such as community development, poverty reduction, etc., and related global development programs to which the project implementation should align?
12. Are the Project's institutional and implementation arrangements still relevant and helpful in the achievement of the Project's objectives or are there any institutional concerns that hinder the Project's implementation and progress.

VI. TE RATING SCALES

Monitoring & Evaluation Ratings Scale

Rating	Description
6 = Highly Satisfactory (HS)	There were no short comings; quality of M&E design/implementation exceeded expectations
5 = Satisfactory (S)	There were minor shortcomings; quality of M&E design/implementation met expectations
4 = Moderately Satisfactory (MS)	There were moderate shortcomings; quality of M&E design/implementation more or less met expectations
3 = Moderately Unsatisfactory (MU)	There were significant shortcomings; quality of M&E design/implementation was somewhat lower than expected
2 = Unsatisfactory (U)	There were major shortcomings; quality of M&E design/implementation was substantially lower than expected
1 = Highly Unsatisfactory (HU)	There were severe shortcomings in M&E design/implementation
Unable to Assess (UA)	The available information does not allow an assessment of the quality of M&E design/implementation.

Implementation/Oversight and Execution Ratings Scale

Rating	Description
6 = Highly Satisfactory (HS)	There were no shortcomings; quality of implementation/execution exceeded expectations
5 = Satisfactory (S)	There were no or minor shortcomings; quality of implementation/execution met expectations.
4 = Moderately Satisfactory (MS)	There were some shortcomings; quality of implementation/execution more or less met expectations.
3 = Moderately Unsatisfactory (MU)	There were significant shortcomings; quality of implementation/execution was somewhat lower than expected
2 = Unsatisfactory (U)	There were major shortcomings; quality of implementation/execution was substantially lower than expected
1 = Highly Unsatisfactory (HU)	There were severe shortcomings in quality of implementation/execution
Unable to Assess (UA)	The available information does not allow an assessment of the quality of implementation and execution

Outcome Ratings Scale - Relevance, Effectiveness, Efficiency

Rating	Description
6 = Highly Satisfactory (HS)	Level of outcomes achieved clearly exceeds expectations and/or there were no shortcomings
5 = Satisfactory (S)	Level of outcomes achieved was as expected and/or there were no or minor shortcomings
4 = Moderately Satisfactory (MS)	Level of outcomes achieved more or less as expected and/or there were moderate shortcomings.
3 = Moderately Unsatisfactory (MU)	Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings
2 = Unsatisfactory (U)	Level of outcomes achieved substantially lower than expected and/or there were major shortcomings.
1 = Highly Unsatisfactory (HU)	Only a negligible level of outcomes achieved and/or there were severe shortcomings
Unable to Assess (UA)	The available information does not allow an assessment of the level of outcome achievements

Sustainability Ratings Scale

Ratings	Description
4 = Likely (L)	There are little or no risks to sustainability
3 = Moderately Likely (ML)	There are moderate risks to sustainability
2 = Moderately Unlikely (MU)	There are significant risks to sustainability
1 = Unlikely (U)	There are severe risks to sustainability
Unable to Assess (UA)	Unable to assess the expected incidence and magnitude of risks to sustainability

VII. MAIN STAKEHOLDERS SUMMARY LIST

Stakeholder	Role in the Project
NCSC	Energy Inventory, database management, 3NC and 1BUR
ERI	Energy Inventory(road transportation and biomass) and others
Tsinghua Univ.	Industrial process inventory, emission forecasting, mitigation
Fudan University	Energy sector GHG Inventory
China Special Equipment Inspection and Research Institute	Energy sector GHG Inventory
China Coal Transportation and Sale Association	Energy sector GHG Inventory
China Petroleum and Chemical Industry Federation	Energy sector GHG Inventory
China Nitrogen Fertilizer Industry Association	Energy sector and Industry sector GHG Inventories
China Iron and Steel Association	Energy sector and Industry
China Cement Association	Sector GHG Inventories
China Non-Metallic Minerals Industry Association	Industrial sector GHG
China Electricity Council	Energy sector GHG Inventory
China Automotive Technology and Research Center	Energy sector GHG Inventory
Coal Information Institute(SAWS)	Energy sector GHG Inventory
China Coal Research Institute	Energy sector GHG Inventory
China Metallurgical Industry Planning and Research Institute	Industrial processes
China's Association of Fluorine and Silicon	Industrial processes
Foreign Economic Cooperation Office of the Ministry of Environment Protection	Industrial processes
Institute of Atmospheric Physics, Chinese Academy of Science	Agriculture sector GHG inventory
Institute of Environment and Sustainable Development in Agriculture(IEDA), CAAS	Agriculture sector GHG inventory, CCA adaptation
Chinese Academy of Forestry	LULUCF sector GHG Inventory

State Forestry Administration Survey Scheme Designing Institute	LULUCF sector GHG Inventory
Chinese Research Academy of Environment Science	Waste sector GHG inventory
Nanjing Institute of Technology	Waste sector GHG inventory

VIII. THE SIGNED EVALUATION CONSULTANT AGREEMENT FORM/ UNEG CODE OF CONDUCT FORM

Contract for the services of
an Individual Contractor

No: 2020-115 Vendor ID: 000000

This Contract is entered into on [12 Nov 2020] between the United Nations Development Programme (hereinafter referred to as "UNDP") and

Mr. Litong Xu (hereinafter referred to as "the Individual Contractor") whose address is.

19309 ROCK ELM WAY, Gaithersburg, MD20879, U.S.A.

WHEREAS UNDP desires to engage the services of the Individual Contractor on the terms and conditions hereinafter set forth, and.

WHEREAS the Individual Contractor is ready and willing to accept this Contract with UNDP on the said terms and conditions,

NOW, THEREFORE, the Parties hereby agree as follows:

l. Nature of services

The Individual Contractor shall perform the services as described in the Terms of References which form an integral part of this Contract and are attached hereto as Annex I in the following Duty Station(s):

2. Duration

This Individual Contract shall commence on [12 November 2020], and shall expire upon satisfactory completion of the services described in the Terms of Reference mentioned above, but not later than 128 February 2021], unless sooner terminated in accordance with the terms of this Contract. This Contract is subject to the General Conditions of Contract for Individual contractors which are available on UNDP website at www.undp.org/procurement and are attached hereto as Annex II.

3. Consideration

As full consideration for the services performed by the Individual Contractor under the terms of this Contract, including, unless otherwise specified, his/her travel to and from the Duty Station(s), any other travel required in the fulfillment of the Terms of Reference in Annex I, and living expenses in the Duty Station(s), UNDP shall pay the Individual Contractor **a total consultancy fee of USD 10,500 at a daily rate of USD 7()() for 15 days. The travel cost will be based on actual costs if any.** Payments shall be made following certification **by Liu Shijun, the Programme Manager of Sustainable Development Team** that the services related to each Deliverable, as described below, have been satisfactorily performed and the Deliverables have been achieved by or before the due dates specified below, if any.

If unforeseen travel outside the Duty Station not required by the Terms of Reference is requested by UNDP, and upon prior written agreement, such travel shall be at UNDP's expense and the Individual Contractor shall receive aper diem not to exceed United Nations daily subsistence allowance rate in such other location(s).

Pay terms:

- The daily subsistence allowance can be calculated by: Beijing — USD 237 and elsewhere — USD 156, with the terminal rate USD 47.

Where two currencies are involved, the rate of exchange shall be the official rate applied by the United Nations on the day the UNDP instructs its bank to effect the payment(s).

The service cost can be charged to the COA as follows.

GL Unit	Exp. Acct	Fund	Dept	Project No.	Activity		Donor	Operation Unit
UNDPI	71200	62000	39805	00088737	Activity 9	001981	10003	CHNIO

4. Rights and Obligations of the Individual contractor

The rights and obligations of the Individual Contractor are strictly limited to the terms and conditions of this Contract, including its Annexes, Accordingly, the Individual Contractor shall not be entitled to any benefit, payment, subsidy, compensation, or entitlement, except as expressly provided in this Contract. The Individual Contractor shall be solely liable for claims by third parties arising from the Individual Contractor's own acts or omissions in the course of performing this Contract, and under no circumstances shall UNDP be held liable for such claims by third parties.

5. Beneficiary

The Individual Contractor selects Xiaoxue Peng as beneficiary of any amounts owed under this Contract in the event of death of the

Individual Contractor while performing services hereunder. This includes the payment of any service-incurred liability insurance attributable to the performance of the services for UNDP.

Mailing address, email address and phone number of beneficiary:
19309 ROCK ELM WAY, GAITHERSBURG, MD20978, U.S.A.

xiaoxuep@hotmail.com; Phone number: 301-977-1275

Mailing address, email address and phone number of emergency contact (if different from beneficiary):

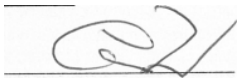
IN WITNESS WHEREOF, the Parties hereto have executed this Contract.

By signing below, I, the Individual Contractor, acknowledge and agree that I have read and accept the terms of this Contract, including the General Conditions of Contracts for Individual contractors available on UNDP website at www.undp.org/procurement and attached hereto in Annex II which form an integral part of this Contract, and that I have read and understood, and agree to abide by the standards of conduct set forth in the Secretary-General's bulletins ST/SGB/2003/13 of 9 October 2003, entitled "Special Measures for Protection from Sexual Exploitation and Sexual Abuse" and ST/SGB/2002/9 of 18 June 2002, entitled "Regulations Governing the Status, Basic Rights and Duties of Officials other than Secretariat Officials, and Experts on Mission".

□The Individual Contractor has submitted a Statement of Good Health and confirmation of immunization

AUTHORIZING OFFICER:
United Nations Development Programme

Name; Ge Yunyan
Operations Manager

Signature: 

Date; 12 Nov 2020

Name; Mr. Xu Litong
International Consultant

Signature: 

Date: 12 Nov 2020

Annex 11 -IC GTCs

INDIVIDUAL CONTRACTOR:

IX. THE SIGNED EVALUATION REPORT CLEARANCE FORM

Evaluation Report Reviewed and Cleared by

UNDP Country Office

Name: Liu Shijun

Signature: Liu Shijun Date: 09/13/2021

UNDP GEF RTA

Name: Manuel Soriano

Signature: Date: 13 Sep 2021