REQUEST FOR CEO ENDORSEMENT[1]

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

PART I: PROJECT INFORMATION

Project Title: Preparation of Third National Communication (TNC) and other new information to the UNFCCC			
Country(ies):	India	GEF Project ID:[2]	4673
GEF Agency(ies):	UNDP	GEF Agency Project ID:	4603
Other Executing Partner(s):	Ministry of Environment and Forests	Submission Date: Resubmission Date:	8 January 2013 22 February 2013
GEF Focal Area (s):	Climate Change	Project Duration(Months)	60
Name of Parent Program (if applicable): For SFM/REDD+ ☐	n/a	Agency Fee ($):	901,060

A. FOCAL AREA STRATEGY FRAMEWORK[3]

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount ($)	Cofinancing ($)
CCM-6 (select)	Outcome 6.1: Adequate resources allocated to support enabling activities under the Convention	Output 6.1: Countries receiving GEF support for national communication, etc.	GEFTF	8,560,074	25,740,000
		Subtotal		8,560,074	25,740,000
		Project management cost[4]	GEFTF	450,530	500,000
		Total project costs		9,010,604	26,240,000

B. PROJECT FRAMEWORK

Project Objective: To prepare the Third National Communication and other new information required to meet obligations under the UNFCCC

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount ($)	Confirmed Cofinancing ($)
1. India's National Circumstances	TA	1.1 Updated Report on India's National Circumstances	Detailed report with the following information 1. India's development priorities, policies and programmes at national and state level. 2. Geography, climate, economy and the climate sensitive sectors and communities.	GEFTF	430,936	950,000

[1] It is important to consult the GEF Preparation Guidelines when completing this template
[2] Project ID number will be assigned by GEFSEC.
[3] Refer to the Focal Area/LDCF/SCCF Results Framework when filling up the table in item A.
[4] GEF will finance management cost that is solely linked to GEF financing of the project. PMC should be charged proportionately to focal areas based on focal area project grant amount.

			3. Existing institutional arrangements relevant to the periodic conduct of GHG inventory. 4. Progress on national actions to reduce GHG emissions.			
2. National GHG Inventory	TA	2.1 Information of GHG inventory for 2011, 2013 and 2014; and trends over 2000-2012. 2.2 Increased accuracy of GHG inventory through the use of tier-III methodologies for most sectors. 2.3. Strengthened and streamlined National institutional structure for long term National GHG inventory and the estimation of GHG emissions.	2.1.1. Documented inventory of GHG emissions for (a) Energy (b) Transport (c) Industry (d) Agricultural (e) Land-Use Change and Forestry, and (f) Waste sectors. 2.1.2. Completed National Activity Data and established Emission Factors database and information for all source categories. 2.2.1. Documented national and other methodologies adopted for the GHG inventory. 2.2.2. Developed and implemented tier II&III methodologies, emission factors and models for inventory of GHG emissions in some sectors, including the adoption of the 2006 IPCC inventory guidelines where relevant. 2.2.3. Adopted methodological approaches for uncertainty estimation as per the IPCC Good Practice Guidance and other appropriate methodologies. 2.3.1. Established National Inventory Management System (NIMS) through sectoral institutions and network of supporting research institutions 2.3.2. Established Quality Control and Quality Assurance Procedures. 2.3.3. Published and disseminated GHG inventory.	GEFTF	1,479,360	3,140,000
3. Impacts and vulnerability assessment and adaptation measures	TA	3.1. Improved climate change projections with the use of advanced and updated Regional Climate Change models. 3.2. Availability and clearer understanding of climate scenarios for India. 3.3. Improved understanding of projected climate change impacts for	3.1.1. Developed and applied advanced models to profile climate variability at sub-regional level (such as state and district). 3.1.2 Developed climate variability maps at district level for India. 3.2.1. Documented climate scenarios (short-, medium-, and long-term) based on Multiple Global climate models (GCM) / Regional Climate Models (RCMs) and climate change parameters at RCM grid level. 3.3.1. Documented projections and results of impact assessments	GEFTF	1,935,195	8,400,000

		all relevant sectors and regions. 3.4. Improved understanding of, and appropriate actions planned for addressing, vulnerability to climate change at different sectors and regions. 3.5. Increased understanding of Adaptation framework, measures and possible projects.	of climate change based on multiple GCMs for different sectors in India. 3.4.1. Developed multiple impact assessment models for adoption[5] 3.4.2 Developed district level vulnerability assessment reports 3.5.1. Developed spatial vulnerability profiles in GIS format at sub regional level (such as state and district) based on vulnerability indices for different sectors, sub sectors at district level covering parameters such as, cropping system and watershed level. 3.5.2. Documented ranking of most vulnerable natural ecosystems, crops, and water resources at sub-regional level (such as state or district) for India. 3.5.3. Adaptation framework describing measures currently implemented and proposed measures. 3.5.4. Adaptation action plans, including strategies for implementation and project profiles for key adaptation options.			
4. Measures to mitigate climate change	TA	4.1. Increased understanding of GHG mitigation policies and measures at national and state level. 4.2. Increased understanding of gaps and constraints pertaining to financial, technical and capacity needs to address climate change.	4.1.1. Documentation on national climate change mitigation policies. 4.1.2. Improved future GHG emission scenarios for India using up-to-date information. 4.1.3. Mitigation potential for energy and land-use change 4.1.4. National climate change mitigation action plan and state level climate change action plans. 4.2.1. Report on the gap analysis and constraints pertaining to (a) access to technologies and technology transfer arrangements, (b) financial assistance needed for technology transfer and capacity development, and (c) investment requirements for mitigation measures based on the national and state climate change action plans.	GEFTF	1,144,045	2,500,000

[5] These are based on: (a) Dynamic global vegetation models, INFOCROP, Cropsyst, SWAT etc.; (b) Analysis of impacts on cropping system, river basin, forest type scales assessed at district level; and, (c) Impacts assessments for short 2030, medium 2050 and long 2075 terms for all relevant sectors.

			4.2.2. Completed technology needs assessment (TNA) for different sectors. 4.2.3 Documentation on the detailed information of key mitigation-adaptation technology needs, availability of those technologies in the country, national R&D programmes, implementation & monitoring of activities, technology transfer needs, and financial support needed along with limitations.			
5. Other information relevant for the preparation of the TNC	TA	5.1. Comprehensive description of systematic observations and research on climate change. 5.2. Strategy for a sustainable national communication process. 5.3. Increased public awareness and understanding of climate change	5.1.1. Documentation on the status and need for research on systematic observations, and technical and financial limitations. 5.1.2. Documentation on the update of the financial resources and technical support received from national and international resources for activities related to climate change. 5.2.1. Report on the planned activities to establish a long term strategy for national communications preparation along with financial, institutional limitations, adaptation and mitigation measures to overcome the limitations. 5.3.1. Strengthened system of information dissemination on climate change through workshops, seminars, training and publications. 5.3.2. Designed activities for enhancing participation of the relevant stakeholders in the preparation of the national communications.	GEFTF	666,818	1,470,000
6. Third National Communication report preparation	TA	6.1 Government of India-approved TNC Report and submitted to UNFCCC, along with relevant technical document and policy briefs.	6.1.1. Published TNC of India to UNFCCC[6] 6.1.2. Technical reports, such as the GHG inventories, V&A adaptation assessments at the sectoral level, brief summaries of key policy issues relevant for decision making, and brief summaries of the key climate changes issues and findings at the sub-regional (state and district) level	GEFTF	403,720	1,780,000
7. Other new	TA	7.1. Enhanced	Submitted Biennial Update	GEFTF	2,500,000	7,500,000

[6] This consists of: (a) National circumstances; (b) National GHG inventory; (c) Impacts and vulnerability assessment and adaptation measures; (d) Measures to mitigate climate change; and, (e) Other information relevant to achievement of the objectives of the convention.

information required under the aegis of the Convention		understanding of domestic mitigation actions, its need and the level/nature of support required, greenhouse gas emissions inventory and preparation of Biennial Update Reports for submission during 2014, 2016 and 2018	Reports, which will include the following: 7.1.1. Information on national circumstances and institutional arrangements relevant to the preparation of the national communications on a continuous basis 7.1.2. The national inventory of anthropogenic emissions by sources and removal of sinks of all greenhouse gases (GHGs) not controlled by the Montreal Protocol, including a national inventory report for the years 2010 and 2012 7.1.3. Information on mitigation actions and their effects, including associated methodologies and assumptions 7.1.4. Constraints and gaps, and related financial, technical and capacity needs, including a description of support needed and received 7.1.5. Information on the level of support received to enable the preparation and submission of biennial update reports 7.1.6. Other information relevant to the achievement of the objective of the Convention and suitable for inclusion in its biennial update report 7.1.7. Establishment of MRV system for reporting GHG mitigation and NAMAs			
				Subtotal		8,560,074	25,740,000
				Project management Cost[7]	GEFTF	450,530	500,000
				Total project costs		9,010,604	26,240,000

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME ($)

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount ($)
National Government	Ministry of Environment and Forests, Government of India	Grant	10,302,200
National Government	Ministry of Environment and Forests, Government of India	In-kind	15,787,800
GEF Agency	UNDP	In-kind	150,000
Total Co-financing			26,240,000

[7] Same as footnote #4.

D. GEF/LDCF/SCCF/NPIF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY[1]

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in $)		
				Grant Amount (a)	Agency Fee (b)[2]	Total c=a+b
UNDP	GEF TF	Climate Change	India	9,010,604	901,060	9,911,664
Total Grant Resources				9,010,604	901,060	9,911,664

E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Estimated person weeks	GEF amount ($)	Co-financing ($)	Project total ($)
National consultants*	2,349 (GEF) 6,347 (Co-financing)[8]	**1,475,000**	**3,985,769**	**5,460,769**
International consultants*				
Total	**8,696**	**1,475,000**	**3,985,769**	**5,460,769**

* Details to be provided in Annex C.

F. PROJECT MANAGEMENT COST

Cost Items	Total Estimated person weeks/months	GEF amount ($)	Co-financing ($)	Project total ($)
National consultants*	750 (GEF) 832 (Co-financing)	375,000	416,177	791,177
International consultants*		0	0	0
Office facilities, equipment, vehicles and communications*		20,500	28,594	49,094
Travel*		24,000	26,635	50,635
Others**	Miscellaneous	9,030	28,594	59,624
	UNDP Direct Project Services	22,000		
Total	**1,582**	**450,530**	**500,000**	**950,530**

* Details to be provided in Annex C.

** Estimated costs of Direct Project Services (DPS) requested by the MoEF to UNDP for executing services as indicated in TBWP and as per the Agreement in Annexure 4 of the ProDoc for recruitment of consultants and selection & awarding of sub-contracts. In accordance with GEF Council requirements, the costs of these services will be part of the executing entity's Project Management Cost allocation identified in the project budget. In accordance with GEF Council requirements, the costs of these services will be part of the executing entity's Project Management Cost allocation identified in the project budget. DPS costs would be charged at the end of each year based on the UNDP Universal Pricelist (UPL) or the actual corresponding service cost. The amounts here are estimations based on the services indicated, however as part of annual project operational planning the DPS to be requested during the calendar year would be defined and the amount included in the yearly project management budgets and would be charged based on actual services provided at the end of that year.

[8] Based on an average fee of US$ 628 per week for the consultants paid for by national co-financing.

G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? No

(If non-grant instruments are used, provide in Annex E an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

H. DESCRIBE THE BUDGETED M &E PLAN:

Monitoring and Evaluation (M&E) will take place in line with UNDP/GEF guidelines. The following table gives a tentative distribution of the budget over the main items:

Type of M&E activity	Responsible Parties	Budget US$ *Excluding project team staff time*	Time frame
Inception Workshop and Report	▪ Project PMU	Indicative cost: 44,000	Within first two months of project start up
Development of M&E system	▪ Project team, Ministry of Environment and Forests (MoEF)	None	At the beginning of project implementation
Measurement of Means of Verification of project results.	▪ NPD/NPA will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on *output and implementation*	▪ Oversight by Project Manager ▪ Project team	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	▪ Project manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG	None	Annually
Periodic status/ progress reports	▪ Project manager and team	Part of PMU cost	Quarterly
Mid-term Evaluation	▪ Project management team ▪ UNDP CO and RCU ▪ External Consultants (i.e. evaluation team)	Indicative cost: 50,000	At the mid-point of project implementation.
Final Evaluation	▪ Project management team ▪ UNDP CO and RCU ▪ External Consultants (i.e. evaluation team)	Indicative cost : 50,000	At least three months before the end of project implementation
Project Terminal Report	▪ Project manager and team ▪ UNDP CO ▪ local consultant	None	At least three months before the end of the project
Audit	▪ UNDP CO ▪ Project manager and team	Indicative cost per year: 4,000 (total US$ 20,000)	Yearly
Visits to field sites	▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives	For GEF supported projects, paid from IA fees and operational budget	Yearly
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		US$ 164,000 (+/- 5% of total budget)	

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1. The GEF focal area/LDCF/SCCF strategies/*NPIF Initiative*:

The objective of this proposed project is to prepare and submit India's Third National Communication (TNC) to the UNFCCC and other new information required to meet obligations under the UNFCCC, which is on the biennial update reporting. The project objective will be achieved with the fulfillment of the following outcomes, which are in line with the GEF's climate change mitigation strategic objective (SO-6) under GEF-5: Enabling Activities: Support enabling activities and capacity building under the Convention. The outcome is: Completed climate change enabling activities under the UNFCCC.

This proposed project will be carried out in accordance with the UNFCCC Guidelines for National Communications. Moreover, this is a "must do" project that India has to do in order to fulfill its obligations to the UNFCCC (Article 12), based on the guidelines provided by the COP for non-Annex I countries (Decision 17/CP.8). Moreover, the project would also assess, during the preparation of full scale project document, the need for incorporating new decisions regarding reporting and other guidelines that might emerge in the future.

A.1.2. For projects funded from LDCF/SCCF: the LDCF/SCCF eligibility criteria and priorities:

N/A

A.1.3 For projects funded from NPIF, relevant eligibility criteria and priorities of the Fund:

N/A

A.2. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

The preparation of the TNC and other new information required to meet the obligations under Convention is consistent with the commitment of Government of India to fulfill its obligations under the UNFCCC. India has been in the forefront of international efforts in developing a solid scientific understanding of climate change. The country has recognized the importance of climate change as evidenced by the adoption of the National Action Plan on Climate Change (NAPCC) in 2008. Many of its state governments are also committed to address the impacts of climate change and have initiated the process of preparing their respective State Action Plan on Climate Change (SAPCC) incorporating GHG inventory, mitigation, impacts, vulnerability and adaptation components. India has also announced post-Copenhagen a plan for reducing the energy intensity of GDP. The Government of India has already prepared and is in the process of finalizing several missions to be incorporated in the NAPCC, e.g. National Solar Mission, National Energy Efficiency Mission and Greening India Mission. Activities leading to the preparation of TNC, in particular the data, model outputs, mitigation-adaptation strategies, etc. would also contribute to strengthening the implementation of the NAPCC. Thus the proposed TNC project from India is fully consistent with the national plans and priorities. Also, the proposed project is consistent with the aims and objectives as well as the provisions of the UNFCCC.

As an improvement to the previous NC formulations (i.e., INC and SNC), the scope of the TNC will be expanded to cover the states in each state. Thus the data and information gathering will be carried out down to the state level. The expansion of the coverage will help in shaping up and strengthening the sub-national i.e. state level action plans. This project will also facilitate in the preparation of the Biennial Update Report 2014.

B. PROJECT OVERVIEW:

B.1. Describe the baseline project and the problem that it seeks to address:

The commitments[9] of developing countries, including India, as Parties to the UNFCCC establish common obligations for all Parties taking into account the common but differentiated responsibilities of countries and their specific national and regional development priorities, objectives and circumstances. Developing country Parties will provide the UNFCCC with adequate information on the status of implementation of such obligations[10]. National communications are required to include an inventory of net anthropogenic emissions of GHGs not included in the Montreal Protocol, and a general description of the steps taken or envisaged to implement the Convention in the country. The present proposal to request resources from GEF to implement the TNC in India fits within the described context and is prepared in accordance with UNFCCC guidance.

[9] As described under paragraph 1 of Article 4 of the Convention. One of the main commitments is to develop, periodically update, publish and make available to the Conference of the Parties, inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases (GHGs) not controlled by the Montreal Protocol.

[10] As called for under Article 12.1.

The preparation and submission of National Communications (NCs) is an obligation and contribution of India to the UNFCCC. As with the other Parties to the Convention, India has actively undertaken, and will continue to do, the task of sharing information on its implementation efforts as well as on the constraints, problems and gaps the country faces in implementing the Convention. For India, the NCs will not only continue to be the main reporting instrument of the UNFCCC but will also be an important strategic tool to help align its interests and priorities to the overall goals of the UNFCCC.

India has successfully prepared its First and the Second National Communications, and through this proposed full size project intends to prepare its TNC as well as strengthen institutional and analytical capacities at decentralized level with the financial assistance from the GEF. Since the preparation of its first NC (INC), the process of development of national communications has triggered large scale networking, capacity building and involvement of research organizations and various government departments. The preparation of the 2 previous NCs has led to the development of expert teams for preparation of GHG inventories as well as assessment of impacts, vulnerability, and adaptation. India is a large country with diverse climatic, socioeconomic systems and natural ecosystems. In India, there is a large dependence of population on climate sensitive resources such as water resources, food production, forests and fisheries. Despite the activities implemented during the preparation of the two previous NCs, there are still many limitations with respect to estimation of GHG inventories, projection of climate change at regional level, development and adoption of appropriate climate impact models and development of vulnerability profiles, at the state level. This is due to the large diversity of industries, settlements, natural and socioeconomic systems. Given the size of the country and diversity of complex socio-economic and natural systems, there is still a need for involving more local institutions, building technical and infrastructural capacities and stakeholder participation in climate change related activities relevant to NC preparation.

India has announced its National Action Plan for Climate Change (NAPCC) in 2008, which also includes 8 national missions namely: Green India Mission; Enhanced Energy Efficiency; Solar Mission; Sustainable Habitat Mission; Sustaining the Himalayan Ecosystems; Sustainable Agriculture; Water Mission; and Strategic Knowledge Mission. State APCCs are being prepared and completed actions plans are currently under implementation. The information and knowledge developed, capacity built and institutional network developed during the preparation of first and second national communications has assisted the preparation of climate action plans and missions. The institutions and networks established during the preparation of the INC have been further strengthened during the preparation of the SNC.

However, there are still many scientific, technical and institutional limitations in the: (i) adoption of tier-II and tier-III methods for enhancing the quality of GHG inventory, including disaggregated state/regional level to be aggregated at the national level; (ii) development of region-specific emission factors for different sectors and reducing activity data uncertainty in key sources; (iii) adoption of multiple Global Climate Models (GCMs) and Regional Climate Models (RCMs) for impact assessment and downscaling of climate change projections for disaggregated sub-regional level, and cropping systems scales; (iv) adoption of impact assessment models at disaggregated levels such as disaggregated sub-regions, different cropping systems, watershed levels, different forest types and species level assessment; (v) carrying out impact assessment for short term periods such as up to 2030; (vi) data limitations for inventory and impact assessment models; (vii) absence of models to suit Indian forest types, cropping systems and mountainous regions; (viii) absence of information, data, maps for preparation of vulnerability profiles to enable mainstreaming of adaptation in developmental programmes; (ix) estimation of climate risk related economic damages and costs; (x) climate impact assessment on infrastructure; (xi) integrating climate change adaptation actions with national, state and sub-regional level planning processes, (xii) integrated impact assessment duly integrating sectoral impacts over specific sub-regions, and, (xiii) involvement of stakeholders at decentralized levels, creation of education, awareness and building capacities to enable adaptation decision making at decentralized levels.

The salient features of the proposed TNC when compared with the previous NCs are: (i) improvement in the National GHG inventory estimates and reduced uncertainty by shifting to higher tier methodologies for main sources, while adopting the relevant scientific elements of IPCC GHG Inventory Guidelines of 2006 (ii) reliable climate projections at regional level using multiple climate models (iii) reliable assessment of climate change

impacts using multiple GCM scenarios and multiple impact assessment models at sub-regional level; different cropping systems, forest types, watersheds, coastal settlements, etc. (iv) spatial vulnerability indices and profiles for different sectors and regions and at decentralized levels, (v) development of adaptation frameworks, practices to enable mainstreaming of adaptation into developmental programmes, estimate the costs and benefits of adaptation and mitigation programmes (vi) development of sustained institutional and technical capacities for continued preparation of National Communications, and other new information required under the aegis of the Convention.

The process and results of the TNC preparation as well as strengthened institutional and analytical capacities at decentralized level would enable India to prepare improved climate change adaptation and mitigation strategies, enhanced technology transfer for adaptation and mitigation, sustained institutional capacity for developing future national communications. All these activities would enable India to meet the obligations under the UNFCCC as well as addressing global climate change concerns in particular mitigation, adaptation and technology transfer. This will ultimately enable India to shift to a low carbon and sustainable development path keeping in mind the primary goals of economic development and conservation of environment and natural resources. The proposed project involves the following major components:

Component I: India's National Circumstances

This component would involve the updating of the information on the prevailing conditions and situations at the national and state levels regarding development priorities and objectives that serve as the basis for addressing issues relating to climate change. Such information provided on national circumstances is critical for understanding India's vulnerability, its capacity and options for adapting to the adverse effects of climate change, as well as options for addressing its GHG emissions within the broader context of sustainable development. Among the information that would be provided under this component are the following:

- Demographic and socioeconomic features, such as occupation patterns, rural-urban population
- Land use pattern and systems, area under different cropping systems, forest types and soil types, etc.
- River basins and valley systems and irrigation systems
- Climatic systems, monsoon, rainfall and temperature trends and variability and dependency on monsoons
- Status of natural resources
- Climate sensitive sectors, infrastructure and systems, and vulnerable populations and regions
- Report on India's developmental policies and programmes at national and state levels
- Report covering the existing institutional arrangements relevant to the preparation of the GHG inventory on a periodic basis.

These sets of information need to be generated to take stock of progress on actions towards addressing issues relating to climate change. The information gathering work is also for understanding the current institutional arrangements for periodic conduct of GHG inventory as there are still many scientific, technical and institutional limitations when looked at sub-national level. There are still limitations that have to be addressed such as lack of reliable and complete activity data for many sectors at dispersed and large point source level, downscaling of climate change projections for sub-regional level, lack of impact assessment models at sub-regional level and lack of existing institutional arrangements relevant to the preparation of the GHG inventory on a periodic basis. In order to effectively address these, the above mentioned set of information is very necessary. In this regard, this is indeed an important activity to guide the process of preparing the Third National Communication especially in reporting on the developmental policies and programmes at the national and state levels; and supporting the existing institutional arrangements relevant to the preparation of the GHG inventory.

This component will not be limited to a simple update of the national circumstances from the Second National Communication, as the national climate change agenda has evolved rather significantly in the past few years. Among this is India's launch of the NAPCC, which consists of eight National Missions. Numerous other initiatives and measures are also planned to be implemented during the period overlapping with the implementation of the TNC. These initiatives include those to be carried out by states that have committed to address the impacts of climate change. In line with this, many state governments are in the process of preparing their respective SAPCC incorporating GHG inventory, climate change mitigation actions, adaptation to climate change based on

vulnerability and adaptation analyses, and other components as mentioned earlier. Therefore, NAPCC would require updated assessment of national circumstances, particularly activities related to mainstreaming of climate change into national development plans, and in particular state development plans with recognition to issues that have local relevance and peculiarities. The vast scale of scientific assessments (in line with the NAPCC and SAPCC) that have to be done warrants the allocation of necessary financial resources, especially when considering the varied circumstances at the regional level. The allocation of appropriate financial resources will ensure the alignment of mainstreaming efforts at regional level in the context of national climate change strategies.

Component II: National GHG Inventory:

The GHG inventories would be made available for the latest year possible, i.e. 2010 and 2012 for BUR and 2014 for TNC by adopting the latest IPCC guidelines as well as good practice guidance and by reducing the uncertainty associated with GHG inventory. In between year inventories (2011 and 2013) and 2000-2012 trend assessment will also be prepared under TNC process to achieve a continuous and consistent time series inventory for India. The inventory would cover the following sectors:

- Energy Sector
- Industrial Processes Sector
- Agricultural Sector
- Land-Use Change and Forestry Sector
- Waste Sector.

The GHG inventory process would involve the following activities and procedures:
National Activity Data and Emissions Factors database: It is necessary to have National Inventory Management System (NIMS) with the involvement of institutions and experts with varied research experience that will look at the various aspects of inventory development. Also a national emission factor database would be developed/revised/updated for key sources and country specific emission factors as per different IPCC inventory categories that belong to different sectors, regions based on field studies; laboratory measurements; and also surveys of industries, municipalities, households, farms, and unorganized sectors etc to improve the activity data accuracy and consistency. The database would be validated along with uncertainty associated with the emission factors and activity data.

Tier-II and tier-III methods and models: Currently, only four of the seventeen key categories use higher Tier methods for emissions estimate. Based on the experience and capacity built during the previous NC preparations, higher Tier methods and models will be adopted for the formulation of the TNC. This would involve development, validation and application of models for different sectors and regions. Graduation to higher Tiers would potentially lead to reduction of uncertainties and complete estimation of inventory for all the relevant IPCC inventory categories for India.

Adoption of IPCC 2006 GHG Inventory Guidelines: The latest IPCC guidelines and good practice guidance recommended by the UNFCCC would be adopted. Moreover, the scientific and methodological improvements suggested in the IPCC GHG Inventory Guidelines-2006 would also be incorporated for various sectors.

Development of National GHG inventory system: It is necessary to build on the base of existing knowledge institutions engaged in the preparation of earlier national communications for the preparation and operation of NIMS. Hence, it is required to formulate an approach to bridge the gap in activity data identified in inventory preparation of SNC.

The NIMS was developed under the SNC, where it has addressed the following:

(a) Institutional arrangements (i.e., Indian Network for Climate Change Assessment (INCCA)) that worked mainly on vulnerability assessment & adaptation and GHG emission inventory of 2007
(b) Establishment of database management including methodological issues to an extent
(c) Procedure for archiving and continuous update of the database

(d) Uncertainty management issues of the inventory

During the SNC preparation, the arrangements related to the formulation of a separate steering group to oversee the operations of NIMS and provision of technical guidance were not finalized. In addition, identifying elements and issues and preparing subsequent inventories thereafter requires continuous updating of inventories at regular intervals and as per requirements.

The NIMS may address the requirements of documentation, archiving and continuous updating of the database and uncertainty management issues of the GHG inventories being developed across the years. Under the TNC, the following strategies are proposed:

- Institutional structure: Further strengthening and streamlining of the institutional structure to sustain and take care of long term reporting requirements of national GHG inventory and the estimation of GHG emissions. Establishing of a separate steering group to oversee the operations of the NIMS and provide technical guidance. This process will be driven by experts in various inventory sectors of energy, IPPU, agriculture, waste and LUCF through national and state level institutions. India has many eminent international inventory experts and their services will be deployed appropriately for this purpose.
- Regular efforts for activity data uncertainty reduction: Stress will be laid on reducing uncertainty in activity data, especially from sources such as coal-mix at power plants and other energy intensive sectors, diesel generator based fuel consumption in urban areas, energy consumption in informal and unorganized sectors, biomass consumption for energy purposes etc. Primary surveys need to be conducted on a regular basis.
- Improving emission factors continuously: The robustness of the GHG inventory making process is dependent on the Tier of methodology used. Higher the Tier, more representative is the emission estimated of the actual emissions. Of the total 1727.71 million tons of CO_2 equivalent emissions from India in 2007, 21% of the emissions have been estimated using Tier I methodology, 67% by Tier II and 12% by Tier III. For improving the inventory estimations of key categories using Tier II and Tier III methodologies, there is a need to move up the Tier ladder. Strategies needed include improvement in assimilation of activity data representing national circumstances, bridging data gaps, and eliminating uncertainties by developing country specific GHG emission factors.
- Uncertainty reduction and estimation: The GHG inventory in some of the sectors such as LULUCF and agriculture is characterized by high uncertainty. Uncertainty was assessed using Tier II IPCC methods during the SNC preparation. This uncertainty would be reduced through the adoption of QA/QC procedures and shift to Tier III methods during the TNC preparation.
- Quality control and Quality assurance: Standard IPCC sectoral QC methodologies will be followed. A QA/QC plan will be prepared and implemented in phases.
- Inventory software selection: This is a very important aspect of the whole NIMS process. This has to ensure that updating of methodologies and related information are absorbed in the system in a sustained manner. Appropriate UNFCCC or IPCC (2006) software will be deployed for creating Indian GHG inventory for various sectors. All the existing data will be converted into standard formats and archived.
- Data reporting and archiving will be done.
- Capacity Building for NIMS: Capacity building is essential at institutional and individual levels. Capacity at the institutional level addresses the needs of inventory preparation at national, sectoral and point source level that requires collection and archiving of data on a continuous basis. Establishment of a National Inventory Management System is therefore necessary. It is also important to involve new institutions with varied research experience, to widen the pool of researchers and enable the integration of latest practices.

In the other words, the TNC will focus on continuous implementation and improvement of the NIMS elements developed under SNC. The gap in activity data identified in inventory preparation during the SNC will also be filled. In order to embed these elements, it needs additional financial resources especially for the studies to be conducted at regional level, use of higher tier methodologies, etc.

Therefore, it is necessary to identify researchers and groups that will be involved in the assessments and complete institutional arrangements for reporting, documentation, archiving mechanisms for undertaking GHG emission

estimates. A national inventory system for different sectors will be further updated and improved by identifying lead institutions, initially with the support of INCCA, to be supported by a network of institutions for making periodic GHG inventory on a continuous basis. The technical and institutional capacity would be enhanced with additional financial support for the inventory process.

Component III: Impacts and vulnerability assessment and adaptation measures
This component would involve improved assessment of climate change impacts and vulnerability of different sectors and regions at decentralized level as well as development of adaptation strategies and practices. Multiple climate model projections and multiple impact assessment models would be adopted for realistic assessment of climate change impacts. Vulnerability profiles would be developed at sub-regional level to enable mainstreaming adaptation into developmental programmes and projects. Climate impacts and vulnerability will also be assessed particularly focused on the short term (2030) along with medium (2050) and long term (2075).

Development of climate projections using multiple GCMs and RCMs: During the 2 previous NC preparations only one GCM and RCM model was used. Given the variations in the projections for the future climate, for the TNC multiple GCMs will be adopted to make reliable projections along with uncertainty estimates. Climate projections would be made by down-scaling the GCM outputs to finer grid scales such as 20×25 km^2. Climate variability and climate projections would be determined at state level for different parameters such as temperature, rainfall, floods and droughts.

Impact assessment for all the sectors using multiple models: It is necessary to identify researchers and groups that will be involved in the development of climate change scenarios for India. Also, it is required to identify climate models (Multiple models) that can be used to simulate the highly variable climate in India. The impact assessment would cover all the sectors wherever possible using multiple models along the following lines:
Sectors: Agriculture (different cropping systems), forest ecosystems, river basins and watersheds, coastal zones, fish production, health, energy systems, infrastructure and built space, livelihoods, industrial ecosystems, slums and rural households, low carbon initiatives
Scale: Climate impacts would be assessed at finer scales to enable adaptation policy formulation. The scale to be used is determined by the GCM and the downscaled RCM.
Period for assessment: To enable short term adaptation policy development, the focus of impact assessment would be for short term period, along with impact assessments for medium and long term.
Models: The most advanced impact assessment models available would be adopted for impact assessment and wherever possible multiple models would be used to obtain a range of impact assessments.

Crop production: INFOCROP and Cropsyst
Water resources: SWAT
Forest ecosystems: LPJ, IBIS and CLM

Vulnerability profiles: Climate change risk and vulnerability assessment tool and framework will be developed. It is very necessary to identify and prioritize vulnerable sectors at the national level, as well as develop vulnerability indicators and profile for these sectors, regions and population. This would require the conduct of activities such as identification of scientist/groups that will develop the socioeconomic scenarios relevant to Indian circumstances especially for vulnerability assessment. It is necessary that the scenarios must be developed at national level as well as sub-national level e.g. at agro-ecological zones. Vulnerability profiles would be developed based on vulnerability indices for different sectors, sub sectors at sub-regional, cropping system and watershed level. Spatial vulnerability profiles on a GIS format would be developed at sub-regional level along with ranking of the most vulnerable natural ecosystems, food production systems and water resources. Vulnerability indices would be developed for a set of indicators identified for each sector. These indicators would be quantified, normalized and aggregated to obtain composite vulnerability indices for different sectors. Vulnerability profiles would be developed according to:

- Different sectors and sub sectors
- At cropping system, forest type, watershed and sub-regional level
- For short, medium and long term periods.

Adaptive capacity: The adaptive capacity of the natural and socioeconomic systems, the institutions (such as departments of agriculture, forests and irrigation) and local communities (farmers, coastal fishermen and forest dwellers) would be assessed.

Adaptation framework and decision tool: It is necessary to identify priority adaptation strategies. An adaptation framework would be developed incorporating the impact assessment, vulnerability profile development, adaptation capacity assessment and participation of different stakeholders. Studies would be conducted to assess the traditional adaptation practices and coping strategies. In addition to traditional adaptation strategies, modern scientific methods and practices for enhancing adaptation would be developed for different sectors and regions and methodologies for merging the traditional and modern technologies would also be explored.

Component IV: Measures to mitigate climate change

Under this component, work on mitigation actions and information on mitigation related activities will be presented. The information on mitigation inter-alia would include description of actions, nature of action, coverage and progress indicators. It will also provide information on methodologies, assumptions, progress of implementation including steps undertaken or envisaged. Further, the work would also include synthesis of information emerging from several national climate change missions especially activities relating to mitigation. It will also attempt identification of existing policies/actions/programmes/projects both at national and state levels that are focusing on climate change mitigation and adaptation. In addition to national missions, state level action plans for climate change would be assessed and incorporated as relevant. It is also envisaged to identify institutions and approaches including models that can be utilized to develop information relating to GHG emissions. The TNC will also develop improved GHG emissions estimates using country specific emission factors and projections for India using more up to date information. It also envisaged developing assessments based on appropriate models, availability of technologies, R&D programmes, technology transfer needs, mitigation potential, costs and benefit including the limitations of such assessments. The work will also include identification of mitigation opportunities and potential in various activities. The TNC would document information on progress of implementation of mitigation actions, results achieved, estimated emissions reduction to the extent possible. Besides, information would also include description of domestic measures, report and verification arrangements.

The TNC would facilitate increased understanding of GHG mitigation policies and measures at national and state level. India has adopted NAPCC, wherein enhancing energy efficiency mission and solar mission are two important national missions. Ensuring energy security, improving access and affordability of modern energy resources for all Indians, diversifying energy resources, resource use efficiency enhancement, reducing technical and commercial losses in power transmission, and enhancing renewable energy are pillars of Indian energy policies. The Bureau of Energy Efficiency has already instituted many demand side energy efficiency improvement measures and policies such as Perform Achieve and Trade (PAT) scheme, labels and standards, etc. Many state governments have devised their own mechanisms and policies for energy sector that would contribute to climate change mitigation, e.g. solar park programme in Gujarat state, renewable power obligation in many states, replacing incandescent lamps with compact florescent lamps, three phase power for rural areas, agriculture pump set replacement programmes etc. TNC will document these developments. Land use sectors include cropland, forestland, grassland, and wetland. The national and state-level land use policies will be assessed. This would also include assessment of current and proposed afforestation and reforestation rates, deforestation, forest degradation, and fuelwood and timber extraction. Policy factors driving land use and land use change will be assessed. Potential future land use changes will be projected and its implications for GHG emissions and removals will be assessed. The implications of existing land use policies in agriculture and forest sector on the carbon stocks in land use sectors will be assessed.

TNC will also estimate future GHG emission projections for India using up-to-date information, preferably until 2030. This component will include socio-economic scenario creation, future GHG emission projection and low carbon economy research and emission estimation. Future GHG emissions reflect the development pathways based on national and sub-regional socio-economic scenarios in future. These include economic development, population growth, regional development, technological penetration and adoption, income distribution, urbanization, rural

development, management and enhancement of natural resources such as water and green cover, education and health, and climate change policies. For a developing country like India, integrating sustainable development and climate change policies and measures is paramount for a sustained inclusive development. Socio-economic scenarios will be developed to capture these myriad dimensions and parameters in an integrated manner. These scenarios will be linked to global scenarios such as Representative Concentration Pathways (RCPs) and Shared Socio-economic Pathways (SSPs).

This component will also estimate mitigation potential for India, especially from energy sector and land-use change. Decoupling energy and economic growth, and decoupling energy and GHG emissions are the two fundamental approaches for mitigation from energy and industry. Enhancing energy efficiency in major energy intensive sectors, fuel switching, cleaner technologies and processes, low GWP gas introduction in industrial applications, transport, buildings, water use efficiency, waste to energy and demand side management are some of the important mitigation strategies. Mitigation impact of the policies that are already in place at central and state levels, policies that are under discussion, and advanced policies that would be required for integrating sustainable development and climate change concerns would be documented. Various missions under NAPCC will also be assessed for classifying mitigation potential assessment. Baseline creation for some key sectors would be attempted, although India is a very diverse country for sectoral energy consumption. Low carbon development is important research area for India since considerable infrastructure, power plants and systems are yet to be built. These could follow a low carbon pathway therefore reducing the need for mitigation. The opportunities and initiatives existing to follow a low carbon path in various sectors will be analyzed and documented.

Increased understanding of gaps and constraints pertaining to financial, technical and capacity needs to address climate change will also be created. Energy sector is the largest contributor to GHG emissions in India. There are many data gaps such as informal sector, unorganized sector, biomass reporting, top-down and bottom-up consumption of almost all fuels, coal grade consumption details, proper sectoral allocation of fuel consumption etc. Land use policies will be assessed for agriculture, forests and grasslands. The implications of the existing land use policies determining the availability of land for mitigation will be assessed. There are competing demands on land for food production, infrastructure development, expansion of settlements, etc. Barrier analysis will be conducted to assess and rank the barriers. Potential data gaps in mitigation assessment include baseline biomass and soil carbon stocks, growth rates of biomass and soil carbon for different land categories and mitigation options, and costs and benefits data. Apart from these technical constraints, continuous funding of climate change mitigation and adaptation measures, policies and plans is also needed.

Technology needs assessment (TNA) for different sectors is an important aspect of India's climate change policy and action plan. India is a vast country, where myriad technologies of broad vintages and spectrum co-exist. This poses huge challenge for assessing technology needs for climate change mitigation and adaptation in different sectors and regions. Technology need assessment is based upon technology availability, economic potential, diffusion rates, adoption capabilities, traditional practices and behavioural patterns, among many other factors. TNC will assess this for different sectors.

Component V: Other information relevant for the preparation of the TNC

This component of the project explicitly deals with national issues concerning capacity needs (more at the aggregate level) with specific reference to regional diversity and would involve the following:

- Analysis of the capacity building needs (including education and training) including for absorbing technology transfers, activities for research, implementation and monitoring of climate change mitigation-adaptation activities and NC preparation.
- Assessment of the status and needs for research and systematic observations and limitations.
- Evaluation of financial resources and technical support received from national and international sources for activities related to climate change including new initiatives of all the line ministries vis-à-vis their climate change concerns.

- Formulated a framework in accessing updated information/data from different institutions, establishment of a long term strategy for NC preparation, along with financial, institutional limitations and mitigation measures to overcome the limitations.
- Organization and conduct of workshops, seminars and training programmes to disseminate information on climate change in different parts of India.
- Activities aimed at enhancing the participation of the relevant stakeholders at national and state level would be considered. Stakeholders include government departments, industry, elected representatives, research organizations and NGOs.

One of the major focus areas for the TNC report pertains to activities planned at decentralized level (state). Such activities would require significant resources for assessing local capacities and developing further the existing levels in line with the requirements for formulating National Communications and in implementing measures and actions developed and stated in NC reports. This would also entail the operationalization of a more robust, systematic and continuous information dissemination system (through establishment of zonal and regional networks, organizing of dissemination events) and updating the same on a regular basis. This would require identification of key stakeholders, defining a sustainable role for all and ensuring a sustainable system that will be complementary to achieving the objectives of the Convention.

Component VI: Third National Communication report preparation and related studies

A draft national communication report would be prepared and presented at workshops to seek the opinion of different stakeholders particularly research organizations. Apart from the required components of NCs (National circumstances, GHG inventory, vulnerability and adaptation etc.), the descriptions of the NC process/methodology followed, activities and participation of different organizations would be included in the TNC report. After the expert consultations, the TNC report would be finalized and submitted for GOI approval, and the approved document would be finally submitted to UNFCCC. A number of technical reports, such as the GHG inventories, V&A adaptation assessments at the sectoral level, key policy issues relevant for decision making, brief and summaries of the key climate changes issues and findings at the state level in collaboration with the local institutions/government involved.

The distribution of publications does not only pertain to the finished product i.e. the TNC report but also the numerous and in-depth publications focusing on vulnerability & adaptation and inventory assessments. During the TNC project, a major focus would be at decentralized levels and the major research and capacity development activities that will be carried out are expected to produce reports that contain in-depth analysis of information at decentralized level. The information that will be generated will have to be communicated in regional or local language in most cases. Therefore, financial resources are needed for the translation of such reports in local language in addition to the main report of TNC.

The guidelines regarding MRV and other mechanisms are still evolving and therefore the assessment of the nature of their incorporation for reporting purpose would be discussed as the guidelines and other related matters evolve.

Component VII: Other new information required under the aegis of the Convention

In line with the decision set forth during COP 17 in Durban, non-Annex 1 countries like India shall submit a Biennial Update Report every two years, either as a summary of parts of their national communication in the year when national communication is submitted or as a stand-alone update report, containing updates of national greenhouse gas inventories, including a national inventory report and information on mitigation actions, needs and support received. To comply with this new obligation, such report will be prepared taking into account their development priorities, objectives, capacities and national circumstances. Data gathering and analysis work, as well as consultations with relevant institutions that were involved in the national communications preparation, will be carried out in order to deliver and consolidate the following items into India's Biennial Update Report:

- Information on national circumstances and institutional arrangements relevant to the preparation of the national communications on a continuous basis;

- National inventory of anthropogenic emissions by sources and removal by sinks of all GHGs not controlled by the Montreal Protocol;
- Information on mitigation actions and their effects, including associated methodologies and assumptions;
- Constraints and gaps, and related financial, technical and capacity needs, including a description of support needed and received;
- Information on the level of support received to enable the preparation and submission of biennial update reports;
- Information on domestic measurement reporting and verification; and,
- Information that India considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its biennial update report.

BURs will be prepared for reference years 2010 and 2012 and submitted in 2014, 2016 and 2018 respectively as initial BUR, second BUR and Third BUR. The TNC and Third BUR will be created from TNC will be submitted in 2017 and 2018 respectively for the reference year 2014, following the UNFCCC reporting requirements and guidelines. The discussions (through expert group consultations, workshops and seminars) necessary to come up with the stocktaking, analytical and updating work to be done in the preparation of the biennial update report shall cover the major components of the national communications, as well as the level and nature of support received by the country in implementing the planned mitigation and adaptation actions, as well as the estimated level of support required. MRV mechanisms would be appropriately included for domestic NAMAs for 2014, 2016 and 2018 BURs. Please refer to Table below for milestones and timelines.

Milestone	Year	TNC	BURs
TNC project CEO Endorsement/Approval	2013	Yes	
First BUR	2014		Yes
Mid-term review of TNC	2015	Yes	
Second BUR	2016		Yes
Submission of the TNC to UNFCCC	2017*	Yes	
Third BUR	2018		Yes
TNC project implementation completion	2018	Yes	

*India would adhere to the UNFCCC reporting guidelines and COP decisions on TNC submission dates.

This component will enhance understanding of domestic mitigation actions, its need and the level/nature of support required, greenhouse gas emissions inventory and other related information. Updated information on the national circumstances consisting of; changes in development priorities, policies, national and state level developmental programmes. Information on GDP, growth rates, land use changes, energy production and consumption, and other relevant factors will be updated.

BUR is a continuous process starting from the first BUR reporting in 2014 by India. Therefore requirement for sustained institutional arrangements will have to be articulated in various activities and sectors. Establishment of institutional arrangements relevant to the preparation of the BUR on a continuous basis will be estimated and presented.

The national inventory of anthropogenic emissions by sources and removal of sinks of all greenhouse gases (GHGs) not controlled by the Montreal Protocol, including national inventory report will be estimated for various BURs. For the First BUR, GHG inventory will be estimated, updated and presented on a biannual basis for the inventory year 2010. The methods and guidelines provided in the IPCC 2006 GHG inventory guideline will be generally followed for the GHG inventory and reported using the UNFCCC reporting guidelines for non-annex-I countries to the extent capacity permits. Uncertainty in the estimates of GHG inventory will be estimated and reduced with successive

inventory submissions.

Information on mitigation actions and their effects, including associated methodologies and assumptions is the next major component of BUR. Domestic mitigation actions planned and implemented will be presented, including those mandated through NAPCC. Progress made on the different mitigation missions such as solar energy and energy efficiency will be presented. Implications of mitigation missions and national and state level mitigation actions for GHG emissions will be estimated and presented, such as for agriculture, buildings, energy supply, industries, transport, forestry and waste. Appropriate MRV systems would also be designed. Projections of mitigation potential of the mitigation policies and programmes will be made using appropriate models. The models adopted, data used, and assumptions made will be reported.

Constraints and gaps, and related financial, technical and capacity needs, including a description of support needed and received will also form parts of BUR. Institutional arrangements required and the status of the existing institutions for conducting GHG inventory on a continuous basis will be assessed and reported. Modelling and data constraints for GHG inventory will be identified and addressed. Long-term arrangements needed for sustained GHG inventory preparation for the BUR updates will be assessed and established. Technical manpower and infrastructural needs for GHG inventory and mitigation assessment, along with the existing barriers will be identified, assessed and addressed. Technology needs for mitigation along with the financial support required for implementing the mitigation actions will be assessed. The support provided by the Government of India and the state governments to institutions involved in the preparation of biennial reports will be included in the BUR and for mitigation actions will be reported. The financial support received from GEF-UNDP, Government of India and the state governments for preparation of biennial reports will also be presented.

BUR also includes information on programmes and activities, which are relevant in the context of and in response to climate change. Other information relevant to the achievement of the objective of the Convention and suitable for inclusion in its biennial update report includes many developmental programmes that enhance the resilience and adaptive capacity of vulnerable regions, populations and ecosystems. Programmes and policies that are aimed at promoting sustainable development and which also promote mitigation and adaptation to climate change will be included in the BAU.

Finally appropriate MRV mechanisms would be developed for domestic NAMAs. These would consider differences in the type of NAMAs, for instance, energy, transport, industry and forestry related NAMAs and also be dynamically adjusted for the 3 BURs (2014, 2016 and 2018).

B. 2. incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

N.A.

B.3. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF). As a background information, read Mainstreaming Gender at the GEF.":

The TNC will address gender concerns by recommending the building of adaptation capacities of women to cope with the adverse impacts of climate change and reduce negative effects on household welfare and environmental sustainability. In this regard, the TNC project would work towards gender mainstreaming that identifies gaps in addressing equality through the use of sex-disaggregated data, systematically analyze and address the specific needs of both women and men; identify targeted interventions to enable women and men to participate in – and benefit equally from – development efforts. Therefore, for attaining gender equality towards access to energy security and natural resource management in the context of adaptation towards climate change, the TNC process would develop strategies and policies to close the gaps. Also, the process will identify resources and expertise for

implementing such strategies, develop steps that would monitor the results of implementation, and identify institutions that can be made accountable for outcomes to promote gender equality.

B.4 Indicate risks, including climate change risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the project design:

Based on the experiences from the preparation of the two previous NCs, no major risks are anticipated. Further, the Government of India is fully committed to addressing climate change concerns at the national and global levels as evidenced by the NAPCC and its missions. Some of the potential minor risks could be as follows:

(a) Access to multiple climate change models: In the TNC preparation, multiple downscaled GCMs at finer grid scales would be adopted to assess the impacts at micro levels. There could be delays in accessing the models and modeled outputs. This risk could be mitigated by forming expert teams involving multiple institutions in India to develop downscaling methods using GCM outputs available at the IPCC data centre.

(b) Lack of technical capacity: This risk is minimal since there are a large number of institutions in India which are capable of conducting field studies and modeling required for the TNC preparation. India has also set up a National Climate Change Research Centre as well as several scientific centers to promote research on climate change. The Government of India has also initiated the process of INCCA, which would complement and augment the TNC process, as well as other new information required under the aegis of the Convention as it emerges.

(c) Coordination with stakeholders at National and State levels: India is a large country with 28 states and 7 Union territories and thus coordination could be a challenge. However, with the preparation of the state climate change action plans and establishment of state level climate change coordinating committees, the coordination may be facilitated to a certain degree. Finally, the Prime Minister's Climate Change Advisory Council would enable overcoming any coordination barriers.

(d) Non-finalization of new reporting guidelines: There is a potential risk that clarity and actual guidelines for the additional reporting requirements (not available at the moment) may not be agreed in the upcoming COPs. Therefore, in the light of this development, there is a need to undertake a mid-term review for assessing the nature of the new guidelines and its incorporation thereof.

(e) Non-availability of finance: The nature and quantum of tasks is contingent upon the timely and adequate availability of finance. These attributes of financial arrangement would be a significant barrier in achieving the desired outcomes/objectives of the various elements.

B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

The stakeholders of the project are the Government of India and the Indian people whom it represents, the policymakers at central, state, district, block and village levels, the scientific community, industry, and all those who could be affected by climate change and actions to mitigate and adapt to climate change. Various components of the project would address concerns of these key myriad stakeholders to diverse level and extents. Involvement of these key stakeholders in designing and implementing this project would depend upon their capabilities and practical involvement. Efforts have been made in INC and SNC to involve large number of stakeholders and existing networks are a testimony of fruitful efforts. Involvement will be sought from research institutions such as universities, the institutions of the ministry of earth sciences, science and technology institutes such as the Council of Scientific and Industrial Research, Indian Council for Agricultural Research of the Ministry of Agriculture, Indian Institutes of Management and Technology. In addition, the line ministries and government departments relevant for climate change mitigation and adaptation at the state, and local level decision making bodies (Panchayati raj institutions) will be involved in the process. Participation will also be sought from other

stakeholders including civil society groups, community based organizations and other policymakers as appropriate.

National GHG Inventory	
Sectors : Energy	
Indian Institute of Management, Ahmedabad	National Public Institute, Lead
Central Mining and fuel Research Institute, Dhanbad	National Public Institute, Participating Institution
Central Road Research Institute, New Delhi	National Public Institute, Participating Institution
Indian Institute of Petroleum, Dehradun	National Public Institute, Participating Institution
Cement Manufacture Association, New Delhi	Industry Body, Participating Institution
Jadavpur University, Kolkata	Education and Research Institution
The Energy and Resources Institute, New Delhi	Education and Research Institution
Petroleum Planning and Analysis Cell, New Delhi	National Public Institute, Participating Institution
Others	Other Participating Institutions
Sector: IPPU	
Dr. Sukumar Devotta	Eminent Industry Expert, Lead
National Chemical Laboratory, Pune	National Public Institute, Participating Institution
The Energy and Resources Institute, New Delhi	Education and Research Institution
Central Glass and Ceramic Research Institute, Kolkata	National Public Institute, Participating Institution
Cement Manufacture Association, New Delhi	Industry Body, Participating Institution
Central Mining and fuel Research Institute, Dhanbad	National Public Institute, Participating Institution
Confederation of Indian Industry, New Delhi	Industry Body, Participating Institution
Jadavpur University, Kolkata	Education and Research Institution
Indian Lead Zinc Development Association , New Delhi	Industry Body, Participating Institution
National Environmental Engineering Research Institute, Nagpur	Education and Research Institution
National Metallurgical Laboratory, Jamshedpur	Industry Body, Participating Institution
Indian Institute of Chemical Technology, Hyderabad	Industry Body, Participating Institution
Jawaharlal Nehru Aluminium Research Development and Design Centre (JNARDCC), Nagpur	Industry Body, Participating Institution
C-STEP, Bangalore	Participating institution
Others	Other Participating Institutions
Sector: Agriculture	
Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad and ICAR Indian Council of Agriculture Research, New Delhi	Education and Research Institution
Indian Agriculture Research Institute, New Delhi	Education and Research Institution
Institute of Radio Physics and electronics, Calcutta University	Education and Research Institution
Regional Research Laboratory, Bhubaneshwar	Education and Research Institution

Central Leather Research Institute, Chennai	Education and Research Institution
Indian Grassland and Forest Research Institute	Education and Research Institution
Indian Veterinary Research Institute, Izatnagar	Education and Research Institution
Bidhan Chandra Krishi Viswavidyalaya, West Bengal	Education and Research Institution
National Dairy Research Institute, Karnal	Education and Research Institution
Indian Grassland and Fodder Research Institute, Jhansi	Education and Research Institution
National Physical Laboratory, New Delhi	National Public Institute, Participating Institution
Central Rice Research Institute, Cuttack	Education and Research Institution
Others	Other Participating Institutions
Sector: Waste	
National Environmental Engineering Research Institute, Nagpur	Education and Research Institution, Lead
National Physical Laboratory, New Delhi	Education and Research Institution
Others	Other Participating Institutions
Sector: LULUCF	
Indian Institute of Science, Bangalore	National Public Institute
Forest Survey of India, Dehradun	National, Participating Institution
National Remote sensing Agency, Hyderabad	National, Participating Institution
Forest Research Institute, Dehradun	Research Institution
Indian Council of Forest Research Institute, Dehradun	Education and Research Institution
Others	Other Participating Institutions
Impacts and Vulnerability Assessment and Adaptation Measures	
Sector: Climate Scenario	
Indian Institute of Science, Bangalore	National Public Institute
Indian Institute of Tropical Metrology, Pune	National Public Institute
Indian Institute of Technology, Gandhinagar	Nationl Public Institute
Others	Other Participating Institutions
Sector: Extreme Events	
Indian Institute of Science, Bangalore	National Public Institute
Indian Institute of Tropical Metrology, Pune	National Public Institute
Others	Other Participating Institutions
Sector: Socio Economic Scenario	
Indian Institute of Management, Ahmedabad	National Public Institute, Lead
Institute of Economic Growth, New Delhi	Education Institution
Others	Other Participating Institutions
Sector: Future Emission Projection	
Indian Institute of Management, Ahmedabad	National Public Institute, Lead
National Chemical Laboratory, Pune	National Public Institute
The Energy and Resources Institute, New Delhi	Education and Research Institution
Integrated Research and Action for Development, New Delhi	Civil Body
Indian Institute of Science, Bangalore	National Public Institute
Others	Other Participating Institutions
Sector: Public Health	
National Institute of Malaria Research, New Delhi	National Public Institute
Indian Institute of Tropical Metrology, Pune	National Public Institute
National Physical Laboratory, New Delhi	National Public Institute

Indian Institute of Technology, Bombay	National Public Institute
Others	Other Participating Institutions
Sector: Coastal	
National Institute of Oceanography, Goa/ Indian Institute of Bombay, Mumbai	National Public Institute, Lead
Indian Institute of Technology, Bombay	National Public Institute
Jadavpur University, Kolkata	Education and Research Institution
The Energy and Resources Institute, New Delhi	Education and Research Institution
Others	Other Participating Institutions
Sector: Forest & Natural Ecosystem	
Indian Institute of Science, Bangalore	National Public Institute, Lead
Tamil Nadu Agriculture University, Coimbatore	Education and Research Institution
Jawaharlal Nehru University, New Delhi	Education and Research Institution
Jadavpur University, Kolkata	Education and Research Institution
Forest Survey of India, Dehradun	National, Participating Institution
The Energy and Resources Institute, New Delhi	Education and Research Institution
Inspire Network for Environment, New Delhi	Civil Body
National Institute of Oceanography, Goa	National Public Institute, Lead
Kerala Forest Research Institute, Peechi	Research Institute
Others	Other Participating Institutions
Sector: Infrastructure, energy and Industry	
Indian Institute of Management, Ahmedabad	National Public Institute, Lead
Central Mining and fuel Research Institute, Dhanbad	National Public Institute
Maulana Azad National Institute of Technology and School of Planning and Architecture, Bhopal	National Public Institute
International Management Institute, Kolkata	National Public Institute
National Council for Cement and Building Materials, Ballabgarh	National Public Institute
Adani Institute of Infrastructure Management Ahmedabad	Research Institute
Others	Other Participating Institutions
Sector: Water Resources	
Indian Institute of Technology, Delhi	National Public Institute
Remote sensing Application centre, Lucknow	National Public Institute
Global Hydrological Solutions, New Delhi	Civil Body
Indian Institute of Technology, Gandhinagar	National Public Institute
Jadavpur University, Kolkata	Education and Research Institution
Development Alternatives, New Delhi	Civil Body
Jawaharlal Nehru University, New Delhi	Education and Research Institution
Guru Gobind Indraprastha University, New Delhi	Education and Research Institution
The Energy and Resources Institute, New Delhi	Education and Research Institution
Others	Other Participating Institutions
Sector: Agriculture (Rice & Wheat)	
Indian Council of Agriculture Research (ICAR), New Delhi	Education and Research Institution
Indian Agriculture Research Institute, New Delhi	Education and Research Institution
Tamil Nadu Agriculture University, Coimbatore	Education and Research Institution
Central Rice Research Institute, Bhubaneshwar	Education and Research Institution
University of Agriculture Science, Dharwad	Education and Research Institution
Others	Other Participating Institutions

Sector: Agriculture (Dryland & Rainfed)	
Central research Institute for Dryland Agriculture, Hyderabad	National Public Institute
Indian Agriculture Research Institute, New Delhi	National Public Institute
University of Agriculture Science, Dharwad	Education and Research Institution, Lead
Agriculture universities (As appropriate)	Education and Research Institution, Lead
Others	Other Participating Institutions
Integrated Sector: Water - Agriculture- food security - energy - Livelihoods - Adaptation	
Central Research Institute for Dryland Agriculture, Hyderabad	Education and Research Institution, Lead
Action for food Production, Udaipur	Civil Body
Central Soil water Conservation Reaserch and Training Institute, Dehradun	Education and Research Institution
Institute of Home economics, New Delhi	Education and Research Institution
Indian Institute of Management, Ahmedabad	National Public Institute
M. S Swaminathan Research Foundation, Chennai	Education and Research Institution
Tamil Nadu Agriculture University, Coimbatore	Education and Research Institution
Others	Other Participating Institutions
Integrated Sector: Water- Human Health- Livelihoods - Adaptation	
Jadavpur University, Kolkata	Education and Research Institution, Lead
National Institute of Malaria Research, New Delhi	National Public Institute
INRM Consultants, New Delhi	Civil Body
Others	Other Participating Institutions
Integrated Sector: Forests - Forest Products-Water- Livelihoods - Adaptation	
Indian Institute of Science, Bangalore	National Public Institute, Lead
Inspire Network for Environment, New Delhi	Civil Body
Others	Other Participating Institutions
Integrated Sector: Natural - Ecosystems & Livelihoods	
The Energy and Resources Institute, New Delhi	Education and Research Institution, Lead
Integrated Research and Action for Development, New Delhi	Civil Body
Institute of Mineral and Material Technology, Bhubaneshwar	National Public Institute
Others	Other Participating Institutions
Integrated Sector: Energy - Infrastructure - Adaptation	
Indian Institute of Management, Ahmedabad	National Public Institute, Lead
Maulana Azad National Institute of Technology, Bhopal	National Public Institute
Others	Other Participating Institutions
Integrated Sector: Residential- Infrastructure - Water- Adaptation	
Maulana Azad National Institute of Technology, Bhopal	
Indian Institute of Technology, Bombay	National Public Institute, Lead
Indian Institute of Management, Ahmedabad	National Public Institute
Institute of Economic Growth, New Delhi	Education and Research Institute
Integrated Research and Action for Development, New Delhi	Civil Body
Others	Other Participating Institutions
Sector: Low Carbon Society	
Indian Institute of Management, Ahmedabad	National Public Institute, Lead

Integrated Research and Action for Development, New Delhi	Civil Body
Confederation of Indian Industry, New Delhi	Industry Association
Green Building Council, Hyderabad	National Public Institute
Centre for Policy Research, New Delhi	National Public Institute
Indian Institute of Technology Delhi, New Delhi	National Public Institute
Indian Institute of Tropical Metrology, Pune	National Public Institute
The Energy and Resources Institute, New Delhi	Education and Research institute
Maulana Azad National Institute of Technology, Bhopal	National Public Institute
Madras School of Economics, Chennai	Education and Research institute
Others	Other Participating Institutions
India's National Circumstances	
Sector: National Circumstances	
National Remote sensing centre, Hyderbad	National Public Institute
Madras School of economics, Chennai	Education and Research institute
Indian Institute of Management, Ahmedabad	National Public Institute
Indian Metrological Development, New Delhi	National Public Institute
Indian Institute of Science, Bangalore	National Public Institute
Others	Other Participating Institutions
Measures to Mitigate Climate Change	
Indian Institute of Management, Ahmedabad	National Public Institute, Lead
Bureau of Energy Efficiency, New Delhi	National Bureau for Energy Efficiency
Indian Institute of Technology Delhi, New Delhi	National Public Institute
Indian Institute of Science, Bangalore	National Public Institute
Integrated Research and Action for Development, New Delhi	Civil Body
Confederation of Indian Industry, New Delhi	Industry Association
Green Building Council, Hyderabad	Industry Association
Centre for Policy Research, New Delhi	Research Institute
Indian Institute of Technology Delhi, New Delhi	National Public Institute
Indian Institute of Tropical Metrology, Pune	National Public Institute
The Energy and Resources Institute, New Delhi	Education and Research Institution
Maulana Azad National Institute of Technology, and School of Planning and Architecture, Bhopal	National Public Institute
Madras School of Economics, Chennai	National Public Institute
Price Waterhouse Coopers, New Delhi	Consulting organization
Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad	National Public Institute
Indian Grassland and Forest Research Institute, Jhansi	National Public Institute
C-STEP, Bangalore	Participating Institution
Others	Other Participating Institutions
Other Information relevant for the preparation of TNC	
Sector: Research & Systematic Observation	
Indian Institute of Science , Bangalore	National Public Institute
Forest Survey of India, Dehradun	National Public Institute
Geological Survey of India, Kolkata	National Public Institute
Indian Space Research Organisation, Hyderabad	Government Body
Botanical survey of India, Kolkata	National Public Institute

National Institute of Disaster Management, New Delhi	National Public Institute
Others	Other Participating Institutions
Sector: Constraints & Gaps	
Indian Institute of Management, Ahmedabad	National Public Institute, Lead Institution
Indian Agricultural Research Institute	National Public Institute
Indian Institute of Technology, Delhi	National Public Institute
Indian Institute of Science, Bangalore	National Public Institute
The Energy and Resources Institute, New Delhi	Education and Research Institution
Forest Survey of India, Dehradun	National Public Institute
Indian National Centre for Ocean Information services, Hyderabad	National Public Institute
Indian Council of Forestry Research & Education, Dehradun	National Public Institute
National Dairy Research Institute, Karnal	National Public Institute
Indian Institute of Public Health, Bangalore	National Public Institute
Others	Other Participating Institutions
Sector: Education, Research, and Capacity Building	
Centre for Environment Education, Ahmedabad	Education and Research Institution
Others	Other Participating Institutions
Sector: Steps taken or envisaged to Implement the Convention	
Indian Institute of Technology, Delhi	National Public Institute
Indian Institute of Technology, Bombay	National Public Institute
Development Alternatives, New Delhi	Civil Body
Indian Institute of Management, Ahmedabad	National Public Institute
Others	Other Participating Institutions

The impacts of climate change are expected to be on natural systems that will in turn affect the human population. Therefore, the results presented through the TNC will be of immediate use to the policymakers for developing and implementing adaptation strategies for coping with the adverse impacts on, say, agriculture, forests and forest products, other natural ecosystems including water resources, human health and on accessibility to energy through renewable and new energy sources. Further, NGOs and the private sector to an extent can be involved in the delivery of the technologies and techniques of adaptation. Also the mitigation strategies to be implemented to reduce the intensities will be directly implemented by the public sector and the private sectors.

B.6. Explain how cost-effectiveness is reflected in the project design:

The design of the TNC draws on the experiences and results of the previous NCs; in particular, activities are focused on areas and sectors that have been identified as most relevant for the GHG balance in India. A central element of the strategy to enhance the cost effectiveness of the TNC Project is the capitalization on institutional networks and working relations built during the First and Second NCs, and on existing experience with climate change within national institutions. National Inventory Management System would built upon and strengthen the existing institutional structures and measurement capabilities created during first two NCs. The databases already developed using INC and SNC will be used, duly validating them for completeness, consistency and accuracy of time series inventory assessments. Similarly the climate modeling, sectoral and regional impact assessments capabilities developed during INC and SNC will be used as baselines for a deep-dive into detailed sub-regional integrated assessments.

B.7. Outline the coordination with other related initiatives:

The process of TNC preparation and other new information to meet the obligations under Convention will be fully linked to many of the ongoing efforts in India aimed at promoting mitigation and adaptation strategies,

and consistent with the NAPCC. The TNC will be prepared by involving all the relevant ministries and a large network of national institutions spread across India. The involvement of the stakeholders in particular the various ministries relevant to climate change will be ensured with the formation of a National Steering Committee (NSC) chaired by the Secretary, Ministry of Environment and Forests. Institutional and technical arrangements for sustained NC will be an outcome of the TNC. BUR is a continuous process starting from the first BUR reporting in 2014 by India. Therefore requirement for sustained institutional arrangements will have to be articulated in various activities and sectors. Establishment of institutional arrangements relevant to the preparation of the BUR on a continuous basis will be estimated and presented.

C. GEF AGENCY INFORMATION:

C.1 Confirm the co-financing amount the GEF agency brings to the project:

UNDP will provide US$ 150,000 as co-financing in-kind towards the personnel cost in monitoring and supervising the project.

C.2 How does the project fit into the GEF agency's program (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:

The project is aligned with the current Country Programme Action Plan (2008-2012) which supports the Government of India in meeting its commitments under the different multilateral environmental agreements. This support will also continue in the following CPAP (2013-2017), which is currently being designed. UNDP India indicated in its midterm evaluation report of its approach in moving towards a low carbon climate resilient development pathway.

The Energy and Environment Unit of the UNDP CO has seven programme officers that support implementation of projects related to the different GEF focal areas, including biodiversity, climate change, land degradation and chemical management. Backed up also with technical expertise available in the UNDP Asia-Pacific Resource Centre (APRC) based in Bangkok, Thailand, the India country office has sufficient staff for effective supervision and implementation of this project. A professional staff from the Country Office (EEU) will be responsible for oversight and project assurance and will represent UNDP in the NSC meetings. Expertise of other professional staff in EEU in climate change, renewable energy, natural resources management and land degradation issues shall also be utilized, when necessary, to support implementation of the project.

PART III: INSTITUTIONAL COORDINATION AND SUPPORT

A. INSTITUTIONAL ARRANGEMENT:

On behalf of the Government of India, the Ministry of Environment and Forests will act as the Executing Agency to coordinate and implement project activities. MoEF invited UNDP to act as GEF Implementing Agency for the development of the TNC project. UNDP will assist MoEF for the entire project length to implement the activities set forth on behalf of the GEF.

B. PROJECT IMPLEMENTATION ARRANGEMENT:

The Project for Preparation of TNC and other new information to the UNFCCC will be executed by the MoEF of the Government of India. The MoEF will be responsible for the technical implementation of the project as a whole. The MoEF is the nodal ministry for the issue of climate change in India and holds the responsibility for preparing the National Communications to the UNFCCC; the MoEF further houses the Designated National Authority of the CDM in India. The ministry also hosts the GEF operational focal point responsible for all the GEF supported projects in the country. Given the size and complexity of the project, MoEF will coordinate the project activities through a project

management cell. Partnerships between key partners and institutions will be facilitated and new partnerships encouraged, especially in areas not sufficiently addressed by the SNC.

Preparation of the Third National Communication and the Biennial Update Report require a comprehensive institutional, technical and administrative arrangement, in addition to stakeholders' consultation/participation in the various tasks and activities. To ensure adequate attention and participation, elaborate implementation arrangements have been devised. A National Steering Committee (NSC) under the chairmanship of Secretary (MoEF) will oversee the preparation and implementation of the work programme of the National Communication and the Biennial Update Report. The NSC will have members from those administrative government Ministries/Departments, which are concerned with the various elements of information in these two reports. Technical consultations are envisaged on multi-disciplinary aspects of the information relating to GHG inventories, impacts, vulnerability and adaptation, climate scenarios, sea level rise etc. Considering the wide range of requirements, it has not been found practical to have a single committee in the preparation of earlier communications. Instead, a number of wide ranging consultations are envisaged for TNC, NAMAs, BURs and for other elements. In order to have the benefit of multifaceted views on various issues, the following exclusive committees have also been envisaged, which will have members from the government, academia and civil society:

a) Expert Committee on Nationally Appropriate Mitigation Actions (EC – NAMAs)
b) Expert Advisory Committee on Biennial Update Report (EAC – BUR)

Coordination with other GEF funded projects in India that has similar activities and future CTCN of the UNFCCC will be established through involving relevant institutions and experts in the proposed TNC/BUR project, to the extent possible. A National Project Director (NPD) supported by a Project Management Unit (PMU) will be responsible for implementation of the work programme and coordination of the various activities. A schematic representation of the implementation arrangement is provided in Figure below.

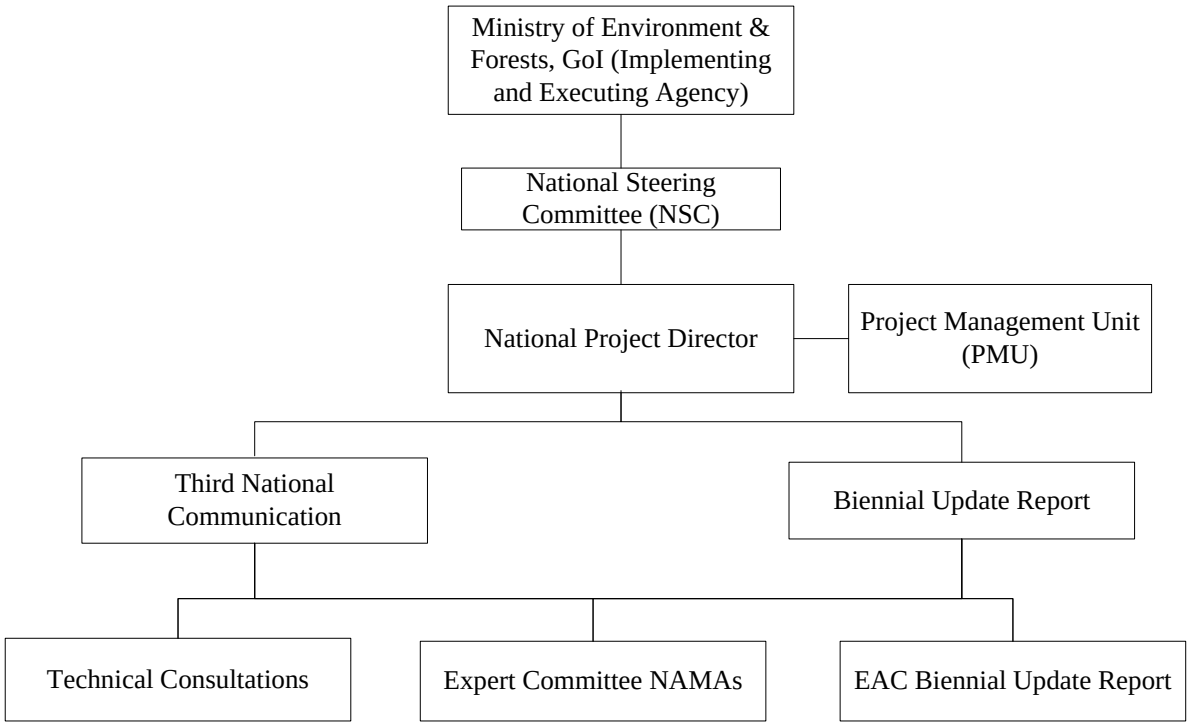

Figure 1: Institutional structure

PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF

The project design is fully aligned with the non-Annex I reporting commitments under the UNFCCC. Moreover, it is in accordance with the current guidelines defined in Decision 17/CP.8 of the UNFCCC and also with Decision 8/CP.11 (periodicity of submission of National Communications from non-Annex I Parties).

A few changes into the project document (in comparison to the approved PIF) were made. They reflect responses to the suggestions made by the STAP and government reviews.

In addition, further information was included into the Project Document, without deviation from original PIF. They relate to: (i) inclusion of activities for each output in a work plan, which gives a better idea of the steps that need to be taken for achieving the objective of the project and the new information to be gathered by the TNC; (ii) updating the list of network institutions based on their participation in INC, SNC, INCCA and other climate change project initiatives; and (iii) the refinement of the outputs of the component on Methodological Approach Regarding Vulnerability Assessment and Adaptation Measures. The refined outputs and related activities will allow for the development of more accurate and consistent GHG inventory, regional climate change scenarios at a higher spatial resolution and with quantification of uncertainties in the climate change projections generated from different lateral boundary conditions and perturbed members of regional model.

PART V: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):): (Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Hem Pande	GEF Operational Focal Point	**MINISTRY OF ENVIRONMENT AND FORESTS, GOVERNMENT OF INDIA**	**11/27/ 2012**

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date *(Month, day, year)*	Project Contact Person	Telephone	Email Address
Adriana Dinu Officer in Charge UNDP/GEF		February 22, 2013	Butchaiah Gadde, UNDP APRC, Bangkok	+66 2 304 9100 Ext. 5048	butchaiah.gadde@undp.org

ANNEX A: PROJECT RESULTS FRAMEWORK

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD: Management and preparation for climate change and disasters					
Country Programme Outcome Indicators: Government, industry and other relevant stakeholders actively promote more environmentally sustainable development and resilience of communities is enhanced in the face of challenges of climate change, disaster risk and natural resource depletion					
Primary applicable Key Environment and Sustainable Development Key Result Area: 1. Mainstreaming environment and energy					
Applicable GEF Strategic Objective and Program: Enabling Activities (CCM-6): Support enabling activities and capacity building under the Convention					
Applicable GEF Expected Outcomes: Adequate resources allocated to support enabling activities under the Convention (Outcome 6.1)					
Applicable GEF Outcome Indicators: Completed and submitted Third National Communication (TNC) and Biennial Update Report (BUR)					
Strategy	**Objectively Verifiable Indicators**			**Source of Verification/Means of Gauging Success**	**Risks and Assumptions**
	Indicator	**Baseline**	**Target (End of Project)**		
Project objective: To prepare the Third National Communication and other new information required to meet obligations under the UNFCCC	(A) National GHG inventory according to IPCC guidelines for the sectors; (i)Energy, (ii)Industry, (iii)Agriculture, (iv)LULUCF and (v)Waste for 2011, 2013 and 2014; and trend analysis over 2000-2012	(A) SNC	(A) TNC	Project evaluation and official reports to the UNFCCC	**Risks:** No major risks have visualized in the successful implementation of this project as government of India is fully committed to meeting the obligation towards the UNFCCC especially in the context of submission of National communication **Assumptions:** Government of India maintains its support to implement the UNFCCC.
	(B) Climate projections and assessment of impacts and vulnerability and adaptation policies & measures to address climate variability, climate change and extreme events	(B) SNC	(B)TNC		
	(C) Assessment of policies and measures to mitigate climate change	(C) SNC	(C)TNC		
	(D) Publication of Third National Communication	(D) N/A	(D)TNC		
	(E) Biennial Update Report for reference year 2014	(E) N/A	(E) BUR-2018		
Outcome 1: Updated report on India's national circumstances prepared	(A) Report on national and state level developmental priorities in the context of climate change	(A) SNC	(A) TNC	Project reports, information contained in third NC	**Risks:** No risks have been identified **Assumptions:** (A) All the data, information required is accessible (B) TNC will benefit from the experience gained in preparing INC & SNC
	(B) Report on the national actions to reduce GHG emissions	(B) SNC	(B) TNC		
	(C) Report on the status of the environment, natural resources and energy use	(C) SNC	(C)TNC		
	(D) Description of the status of the national missions under NAPCC	(D) SNC	(D)TNC		

Outcome 2: National GHG inventory prepared for the years 2011, 2013 & 2014	(A) National GHG inventory for the sectors; (i)Energy, (ii)Industry, (iii)Agriculture, (iv)LULUCF and (v)Waste for 2011, 2013 & 2014; and trend analysis over 2000-2012	(A) GHG inventory available for the period 1994, 2000 & 2007 from INC, SNC and INCCA report respectively	(A) GHG inventory prepared for the 2011, 2013 & 2014; and trend analysis over 2000-2012	Reports on status of preparation of inventory and supporting documents	**Risks:** A large number of institutions from different parts of India will be involved in the preparation of GHG inventory and emission factor database. Co-ordination of the efforts and the periodic delivery of the data may cause delays. **Assumptions:** (1) India has a large number of experts who are authors for the IPCC, GHG inventory reports (2003, 2006); (2) Indian experts are also GHG inventory review experts for UNFCCC for Annex1 countries inventory review; (3) TNC will benefit from experience in preparing inventory for SNC & INCCA; (4) Government of India maintains its support to implement UNFCCC
	(B) IPCC 2006 guidelines, AFLOU approach adopted	(B) IPCC 2003, LULUCF, guidelines, methods used in SNC	(B) Activity data on emission factors generated for all sectors including AFLOU		
	(C) Uncertainty of the GHG inventory estimation using Approach-2 methods and reduction	(C) Uncertainty estimated using Tier 1 methods in SNC	(C) Uncertainty estimates provided in third NC		
	(D) Emission factor database and activity database prepared	(D) Book published on emission factors	(D) Emission factors and activity database available		
	(E) QA/QC procedures established	(E) No previous experience	(E) QA/QC systems established and operational		
	(F) National inventory management system for different sectors	(F) No previous experience	(F) Institutional arrangements for sustained inventory established and operational		
Outcome 3: Impacts and vulnerability assessments, and adaptation measures	(A) Climate variability profiles & trends prepared at national & state level	(A) No state level climate variability profiles available	(A) Climate variability profiles and maps prepared at state level	- Project reports - Technical reports -TNC	**Risks:** (1) Delay in availability in RCM (Regional Climate Model projections) from multiple GCMs; (2) Data limitations for impact assessment in different sectors such as agriculture, forest and water resources; (3) Complex coordination between large number of institutions making impact modeling and vulnerability profile development **Assumptions:** (1) Impact, vulnerability & adaptation assessments will benefit from INCCA studies and SNC. (2) TNC will benefit from participation of several IPCC authors of working group I & II. (3) Government of India maintains its support to implement UNFCCC; (4) Statistically downscaled GCM outputs are available that can reasonably substitute RCM
	(B) Climate change projections using latest CIMIP5 multiple GCM based outputs for different RCP scenarios at national & state level	(B) Climate change projections are available only for SRES A2, B2 & A1B scenarios	(B) Climate change projections and maps prepared based on multiple model ensemble based on CIMIP5 & RCP scenarios at GCM & RCM grid scales. Projections of extreme events made available		

	(C) Quantitative impacts of climate change using latest models for different sectors such as (Water resource, agriculture, forest ecosystems, health, coastal zones etc.)	(C) SNC presents climate impacts based on SRES scenarios	(C) Impacts of climate change on key sectors assessed using latest climate change projections for RCP scenarios and improved impact models		outputs from multiple GCMs.
	(D) Climate change vulnerability profiles developed at national &state level for different sectors	(D) Vulnerability profiles are not available for all the key sectors at national & state level	(D) Vulnerability profiles based on climatic, bio-physical & socio-economic factors developed		
	(E) Adaptation matrix for coping with climate impacts for different sectors and different regions	(E) Preliminary adaptation practices presented in SNC for only agriculture and forest sectors	(E) Adaptation matrix developed for projected climate change impacts for different sectors at regional level and updated information for agriculture and forest sectors		
	(F) Adaptation framework and policies for mainstreaming developed	(F) No adaptation framework presented in SNC and no national & state level adaptation framework & policies exist for mainstreaming adaptation in different sectors	(F) Policy framework developed for mainstreaming adaptation		
Outcome 4: Measures to mitigate climate change	(A) Documentation and synthesis of national climate change policies.	(A) No such analysis is available, except a book published in 2004	(A) Climate change policy synthesis, analysis and implications described	Project reports, information contained in the TNC	**Risks:** (1) Lack of data for state level mitigation assessments (2) Limited participations of some states (3) Delay in decisions on selection of scenarios (4) Involvement of multiple stakeholders may lead to delays in agreement of mitigation strategies (5) Coordination of the large number of

	(B) GHG emissions scenarios for 2020 and 2030	(B) Ministry of Environment has published GHG emissions for 2030, which is outdated	(B)Improved model based GHG emissions projections developed		institutions could lead the delays in preparation of GHG emission scenarios, mitigation plans and TNA **Assumptions:** (1) TNC will benefit from experience gained during preparation for SNC, INCCA reports on GHG emissions projections and low carbon strategy from the Planning Commission (2) Capacity building at national and particularly at state level (3) Multiple institutions will be involved and networks created for different sectors (4) Indian Government maintains its support to implement the UNFCCC
	(C) Mitigation potential of Energy and Land use sectors and projections for 2020 and 2030 based on modelling	(C)Mitigation potential not reported in SNC, but a few published papers available, which are based on limited information	(C)Model based mitigation potential estimates for energy and land use sectors along with marginal abatement cost curves developed		
	(D) Mitigation action plans at national and state levels	(D) No national mitigation plan available apart from a Low Carbon strategy prepared by the Planning Commission. State level preliminary mitigation plans available for some states	(D) Sectoral mitigation options developed at national & state level along implications for GDP, employment, etc.		
	(E) Constraints, gaps and related technical, financial and capacity needs	(E) SNC	(E) Gaps and constraints analyzed and barriers are ranked using AHP methods		
	(F) TNA and technology transfer and financial needs	(F) SNC	(F) Detailed TNA and technology transfer and financial needs assessed		
Outcome 5: Other information relevant for the preparation of the TNC – Comprehensive description of climate change research, strategies for sustainable National Communication	(A) Climate change research status and needs	(A) SNC information until 2010	(A) Systematic and comprehensive plan for research and climate change along with estimation of financial resources	Project reports, TNC	**Risks:** (1) Limited public interest in climate change issues (2) Delay in agreements on institutional arrangements for sustained national communication process **Assumptions:** (1) TNC will benefit from experience gained in the preparation of SNC (2) Indian Government maintains its support to implement the UNFCCC

process and communicating climate change to public	(B) Financial and technical support for climate change related activities received from national and international sources	(B) No quantitative estimates available in SNC	(B) Report on the financial flows into climate change activities from national and international sources		
	(C) Institutional arrangements for sustained National Communication process	(C) No institutional arrangement for long term and sustained preparation of national communication process presented in SNC	(C) Institutional arrangements with roles and responsibilities and financial and technical resource needs assessed and made available		
	(D) Stakeholder consultation and communicating climate change to different stakeholders	(D) Limited stakeholder consultation during SNC and no programs for communicating climate change	(D) Mechanisms and institutional arrangements made and implemented for communicating climate change to stakeholder and public		
Outcome 6: Third National Communication Report Preparation	(A) Reporting of the outcomes of the National Communication process on the NATCOM website, along with GHG inventories, climate change projection and impact and vulnerability maps	(A) SNC reported on the website	(A)All information relevant to preparation of TNC published on the NATCOM website	(1) Periodic technical reports, books and journal articles (2) Third NC report (3) Final evaluation report	**Risks:** (1) Delays in submission of technical reports, project reports and submission of information to PMU by large diversity and number of institutions (2) Difficulties in coordination with large number of institutions spread all over the country **Assumptions:** (1) Indian Government maintains its support to implement the UNFCCC
	(B) Publication / printing of the TNC	(B) SNC published and shared with the public and stakeholders	(B) TNC finalized and presented to Government of India and report published after approval		
	(C) Summary Report of the National Communication translated in major languages of India	(C) So far no summaries has been published in major Indian languages	(C) Summary and key findings of the TNC published in major India languages		
	(D) Periodic technical reports on climate change projections, impacts and vulnerability assessments\	(D) A few technical reports published during the preparation of SNC	(D) Periodic technical reports, book and journal articles published		
	(E) Final evaluation report	(E) Final evaluation report of SNC completed	(E) Final evaluation report completed and submitted		

Outcome 7: Enhanced understanding of domestic mitigation actions and preparation of Biennial Update Reports for submission during 2014, 2016 and 2018	(A) Biennial update of GHG inventory for the years 2010 and 2012	(A) No previous reports other than SNC reporting GHG inventory for year 2000	(A) BUR for 2014, 2016 and 2018	BUR 2014, 2016 and 2018 project reports	**Risks:** (1) Delay in compilation of GHG inventory for year 2010 and 2012 by 2014 and 2016, respectively due to limited time **Assumptions:** (1) Indian Government maintains its support to implement the UNFCCC
	(B) Update of the national circumstances and institutional arrangements from BUR perspective for 2014 and 2016	(B) Only SNC report	(B) BUR for 2014, 2016 and 2018		
	(C) Mitigation actions and their effects until 2020, including associated assumptions, methodologies and modeling	(C) No previous reports	(C) BUR for 2014, 2016 and 2018		
	(D) Update on the technical, financial capacity needs and support received for implementing these mitigation actions	(D) Only SNC	(D) BUR for 2014, 2016 and 2018		
	(E) Biennial Update Reports (BUR) submitted in 2014 and 2016	(E) Only SNC	(E) BUR for 2014, 2016 and 2018		

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

STAP Comments: STAP Screening of the PIF (4 February 2010)

STAP expresses its consent to the project.

STAP is highly supportive of this project, and compliments India for the PIF prepared and the approach proposed for the following reasons.

1. India aims to adopt IPCC 2006 GHG inventory guidelines for TNC.
2. India aims to develop a National GHG inventory system, which only countries like Canada and Australia have.
3. India aims to adopt Tier III IPCC methods for GHG inventory.
4. India aims to use multiple GCM as well as down scaled regional climate projections.
5. A unique feature aimed at strengthening the institutions and analytical capacities at sub national or state level. India is a large country and India may have several obligations under UNFCCC in the coming years, thus, it's a good idea to deepen and decentralize technical and institutional capacities in the long term interest of addressing climate change.
6. National activity data and emission factor database: This is really recommendable since IPCC also has emission factor database (EFDB) and India could contribute to IPCC EFDB.

Response to STAP:

All STAP comments were addressed in the Project Document, as follows:

1. The assumption is correct and was detailed in Output 2.2.2. It is proposed to use the latest IPCC guidelines including the adoption of 2006 IPCC GHG Inventory Guidelines.
2. In general, the lessons learnt from previous processes were included into project design. One of the main lessons learnt is to develop network of institutions with a lead institution or each of the outputs such as sectoral GHG inventory and impact assessment according to sector. Further, given the size of the country, participation of a large number of institutions in inventory data collection is crucial for the project's success. Thus, the TNC proposes to expand and strengthen the network of institutions for different activities of the National Communications preparation process and develop a National GHG Inventory Management System.
3. The assumptions are correct and India will conduct key category analysis and aims to adopt higher tiers for each of the key categories.
4. Yes indeed, India proposes to estimate uncertainty and also initiate improved activity data and emission factor generation for reducing the uncertainty. The details are presented in the Full Project Document.
5. It must be recalled that in Decision 8/CP.11, Parties to the UNFCCC recognized that "the submission of national communications is very important for Parties to better understand climate change issues", "and that the preparation of national communications is a continuing process". India has been making all the steps to strengthen its national institutions and the capacity of necessary technical teams to undertake the GHG inventory and assessments. However, in accordance with Article 4.3 of the UNFCCC, "the developed country Parties and other developed Parties included in Annex II shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1". Therefore, enabling activities will be financed by the GEF, as national communications represent an obligation of non-Annex I parties under the UNFCCC. India also has established INCCA to promote research and knowledge generation on climate change which will go a long way in sustaining the GHG inventory estimation as well as assessment of the impacts of climate change. In this way, it is possible to strengthen the technical and institutional capacities at decentralised level.
6. As detailed under Output 2.1.2, emission factor database is an important Output expected under TNC

GEF COUNCIL COMMENTS

I. Comments from Canada (February 2012)

- ***We welcome this proposal by India to prepare its Third National Communication to the UNFCCC and appreciate the complexity and scale of effort required to undertake this exercise.***

- ***To aid in understanding ongoing cost pressures for donor countries more information on how the cost of the project was determined would be appreciated. We note in particular that past NATCOM and other climate change projects in India have made investments in data-gathering methodologies, human capacity and systems. Does this factor into your cost projections?***

RESPONSE:

TNC will include several new components and activities and will be a significant improvement over SNC, compared to improvements in SNC over INC. New climate change scenarios and models, impact models, multiple models, new inventory guidelines, integrated assessments, vulnerability profile development, sustained institutional arrangements, etc., are being planned for TNC which were not part of SNC. Further there is a need for intensification of the ongoing activities for gathering activity data and emission factors as well as for building capacity to address the new reporting requirements. It is true that India has benefited from the investments made during the INC and SNC but new and additional resources will be required for the set of new and additional activities to meet the requirements of BUR and TNC. Given the size and diversity of India, the investment made during INC and SNC is small, thus requiring the proposed scale of funding. The additional components and activities under TNC are as follows:

- Adoption of IPCC Good Practice Guidance for LULUCF 2003 and IPCC 2006 Guidelines requires significant additional Activity Data and Emission Factors.
- Generation of new and additional Activity Data and Emission Factors for adopting the latest IPCC GHG inventory guidelines.
- Establishment of national GHG Inventory Management System for sustained GHG inventory estimation and reporting.
- Special Report on Emissions Scenarios (SRES)-based climate projections are not relevant today.
- Need for understanding, downloading, validation of model simulated current climate with observed climate, statistical significance testing, downscaling of global circulation model grids to regional climate model grids, developing ensembles of CMIP5 models totalling around 20 models.
- Projections of climate change parameters according to Representation Concentration Pathway (RCPs) scenarios of 2.6, 4.5, 6.0 and 8.5.
- Building capacity and generating data for using multiple climate change impact models for agriculture, forests, water resources, infrastructure, health etc.
- Integrated multi-sectoral assessment of impacts of climate change at appropriate scales.
- Development of climate change vulnerability profiles based on biophysical and socio-economic indicators for different sectors and developing a composite vulnerability index at decentralized levels such as state and district.
- Developing national adaptation framework, strategies and practices for different sectors.
- Assessment of mitigation potential in different sectors and the associated costs were not estimated in SNC. For the first time, India is making an assessment of the mitigation potential, barriers to mitigation, cost-effectiveness of different mitigation opportunities.
- Ranking of the mitigation options to identify the cost-effective options with maximum potential and minimum barriers.
- Development of low-carbon strategies and assessment of implications for GDP and investment requirements.
- Adoption of remote sensing techniques for developing land use change matrix.

- Establishment of institutional arrangements for QA/QC for different sectors for the preparation of periodic GHG inventory.
- BUR is an additional reporting requirement and requires a whole setup, new activities, institutional arrangements and reporting procedures.

- ***We are supportive of India's decision to include the preparation of their first Biennial Update Report (BUR) to the UNFCCC within the scope of this project. However, it is not clear what methodology was used to determine the appropriate level funding. Can you explain your costing for the BUR?***

- ***There seems to be overlap between project component 7 (Other new information required under the aegis of the Convention) and other project components. Expected outputs 1 (Information on national circumstances), 2 (National inventory), and 3 (Information on mitigation) are the most resource intensive segments of the component, but are also covered under other project components dedicated to each (Project components 1, 2, and 4). Would it be possible to explain the distinction between these components further?***

RESPONSE (to the two above comments):

- The level of funding for the project is derived keeping in view the nature and contents of the two reports namely, BUR and TNC. Further, the size and diversity of India (sectors and regions) was also factored into cost estimation. Large number of institutions will be involved to generate information for reporting BUR and TNC.
- BUR and preparation of TNC are different set of activities with different reporting guidelines, formats and more importantly different timelines or years of reporting.
- The year of reference and the timeline of delivery of BUR and TNC reports is as follows:

- BUR & TNC	- Reporting year for GHG Inventory Mitigation etc.	- Year of submission
- BUR-I	- Inventory and mitigation reference year 2010	- 2014
- BUR-II	- Inventory and mitigation reference year 2012	- 2016
- BUR-III + Third NC	- Inventory and mitigation reference years 2011, 2013 and 2014 for TNC and the year 2014 for BUR-III	- 2018

- Activity Data and Emission Factor related information and data will be collected separately for three BURs (including the TNC) for the reference years 2010, 2012 and 2014. There is a need for technical effort and resources for annual and continuous updating of activity data and emission factor data required for the three reporting years.
- Emission factors will be periodically updated to reduce the uncertainty. The emission factors could vary from year to year for different sectors. For e.g. growth rates of forest and plantations, area reforested and afforested, the type and quality of the coal used can vary from year to year requiring different emission factors.
- Mitigation options, policies and interventions related data and information will have to be collected on a continuous basis for BUR reporting for the years 2010, 2012 and 2014. This requires significant technical manpower and institutional support on a continuous basis.
- India is a large country, requiring data gathering from different sectors and regions for GHG inventory as well as mitigation related reporting activities. For example, India has large number of rice production systems requiring measurements of emission factors for methane in each region.
- Mitigation component was not included by India during the reporting for INC and SNC reports. The mitigation component will be included for the first time for both BUR and TNC, which requires significant additional investment in technical and institutional capacity.

- The focus for reporting on mitigation actions is different for BURs and TNC. For BUR, the reporting on mitigation actions will be focused for the specific years and for the immediate or short term periods such as for the period 2012-2017 to coincide with India's 12th five year plan.
- Assessment and reporting of mitigation policies and measures for TNC is generally for various scenarios leading upto 2020s and 2030s. Thus the data and information required for mitigation actions for BUR and TNC reporting will be different requiring additional technical and institutional support.
- Activities related to TNC inventory preparation, mitigation policies and measures assessment would be initiated in the year 1 of the TNC process and will continue till the year of reporting, which is 2014. GHG inventory will also be prepared under TNC for the in between years, i.e. 2011 and 2013 to create a continuous and consistent time series. There will be a continuous improvement in the information on activity data and emission factors and on mitigation interventions.
- Domestic MRV for domestic mitigation actions will be conducted periodically and separately for reporting during 2014 submission followed by 2016 and 2018 submission.
- National Circumstances for BUR will focus on emissions and mitigation actions related issues. However National Circumstances for the TNC will focus on a whole range of social, economic, natural resources, agriculture, forestry, water sectors etc. The data, information and maps required for BUR and TNC are different.

- ***The proposal states under project component 5 that it will fund "Comprehensive description of systematic observations and research on climate change". Does this fall under the mandate of the SCCF as opposed to the GEF TF?***

RESPONSE

- "Research and systematic observation" is an integral component of the COP 8 guidelines for reporting information for the national communications and thus a part of GEF TF. Further, a nominal level of budget allocation is proposed for this activity.

II. Comments from Germany (February 2012)

- ***Germany requests that Final Project Documents are being sent to Council for review four weeks prior to CEO endorsement. Germany asks that Final Project Documents for the following projects will be sent to Council for review four weeks prior to CEO endorsement. The Final Projects should only be endorsed after the following points have been taken into account.***
- ***Germany welcomes India's ambitious proposal for robust national reporting, including several new milestones, such as using 2006 IPCC Guidelines, Tier 3 inventory methodologies and the development of a national emissions factor database. Given the high costs of the proposed activities, Germany requests to receive the draft final project proposal, which should include details regarding the calculation of costs and clear distinctions between costs for the biennial update report to be submitted in 2014 and the national communication to be submitted in 2016, four weeks prior to CEO endorsement. In addition, German requests the following points be taken into consideration:***
    - ***Please include information on domestic MRV in Component 7, as this is part of the Durban outcome and is omitted in the summary table.***

RESPONSE

- As suggested, MRV is included as one of the Outputs (Output 7.1.7) in Component 7.

    - **CEO endorsement of the TNC must be contingent on the submission of India's second national communication to the UNFCCC.**

RESPONSE

- India submitted its SNC on May 4, 2012 to UNFCCC.

ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT USING GEF/LDCF/SCCF/NPIF RESOURCES

Position title	USD/ person week	Estimated person weeks	Total (in USD)	Tasks to be performed
For Project Management				
National				
National Project Advisor (NPA)	750	100	75,000	• Supervise co-ordination between the steering committee, thematic working groups, consultants, NPD and UNDP. Co-ordinate all logistical arrangements for steering committee meetings, national workshops, consultations and meetings. • Supervise and advise on regular contacts as needed with all government, non-government, community-based and international organizations that are concerned in the planning process and ensure smooth functioning of the project. • Advise on regular contact with state officials involved in preparing state BSAPs, co-ordinate provision of technical and administrative assistance, provision of resources and materials. • Advise the consultative process with stakeholders including state governments, nodal agencies and co- operating partners. • Advice on training needs of Programme Officers, and make arrangements for providing the same. Ensure the project is in conformity with objectives of the UNFCCC. • Ensure that a participatory methodology is followed and effective stakeholder participation is achieved. Obtain technical inputs (material and human resources) to assess and include measures for recent issues in the field of climate change, particularly those emerging from recent COP (such as issues related to sustainable development, response strategies for impacts, abatement and adaptation etc.).
Programme Officers (4 nos - GHG Inventory, Impact vulnerability and adaptation, GHG mitigation, All other components of TNC and BUR)	500	450	225,000	• • Assist NPD/NPA in preparing detailed monthly plans and cost estimates for accounting and timely disbursement of funds as needed • The NPD/NPA will distribute work between the two consultants for coordinating the following activities, such that no overlap occurs. • Co-ordinate the implementation of project activities as set out in the project document. • Assist NPD/NPA in co-ordination between the steering committee, thematic working groups, Programme Officers, NPD/NPA and UNDP. • Co-ordinate all logistical arrangements for steering committee meetings, national workshops, consultations and meetings. • Maintain regular contacts as needed with all government, non-government, community-based and international organizations that are concerned in the planning process and ensure smooth functioning of the project. • Maintain regular contact with state officials involved in preparing state BSAPs, co-ordinate provision of technical and administrative assistance, provision of resources and materials. • Assist NPD/NPA to prepare detailed content of activities in conjunction with the thematic groups. Writing responsibilities for all project documents as assigned by the NPD/NPA. • Participate and contribute qualitatively to periodic brainstorming sessions with the NPD/NPA and thematic groups, to better define options, priorities and course of action.

				• Maintain regular contact with state planning teams, obtain regular status reports and provide assistance and guidance to states as appropriate. • Assist NPD/NPA in supervising the consultative process with stakeholders including state governments, nodal agencies and co-operating partners. • Ensure the project is in conformity with objectives of the UNFCCC. • Ensure that a participatory methodology is followed and effective stakeholder participation is achieved. • Obtain technical inputs (material and human resources) to assess and include measures for recent issues in the field of climate change, particularly those emerging from recent COP (such as issues related to sustainable development, response strategies for impacts, abatement and adaptation etc.). • Circulate reports, studies and documents prepared to prominent experts for technical reviews. Assist NPA in preparing the draft and final national communication.
Project Associates (2 nos)	150	500	75,000	• Co-ordinate the implementation of project activities as set out in the project document. • Assist in organizing the workshops all logistical arrangements for steering committee meetings, working group meetings, national workshops, consultations and meetings. • Maintain the contracts of each sub contract and update as required. • Assist in preparing the financial statements and maintaining the financial records. • Assist in ensuring timely delivery of each of the deliverables to the PMU by liaising with the project proponents • Assist in preparing progress reports. • Assist in preparing dissemination material
Total			**375,000**	
Justification for travel, if any: As required for project implementation				

The project management would involve a National Project Advisor (NPA), four Programme Officers and two Project Associates. The National Project Advisor will be a consultant hired for the duration of the project. It is critical that a highly qualified and motivated person with vast experience and proven track record of implementing and managing similar national projects involving GHG inventory, vulnerability assessment, and multi-disciplinary aspects of climate change be found and selected for this position. The Chairman of the Project Steering Committee should approve the candidate selected. The NPA will advise and review institutional arrangements, work program, technical cooperation, monitoring of the progress of implementation of various activities, the work of all Programme Officers and other working groups, including national workshops and consultations. The NPA will advise such that all activities are conducted in accordance with the methodologies outlined in the project document. Among others, she/he will be familiar with the UNFCCC, all IPCC reports including guidelines and recent COP guidance and emerging issues in the field of climate change and ensure these are incorporated in the project and that it conforms to objectives of the project. The NPA will report to the Executing Agency.

Four Programme Officers will be hired to assist the NPD/NPA in carrying out his/her duties. The four Programme Officers will look after four major elements i.e. (1) GHG inventory; (2) impact vulnerability and adaptations; (3) GHG mitigation; and (4) all other components of TNC and BUR. The Programme Officers will assist in preparing progress reports, financial statements, and liaising with the NPD/NPA, thematic working groups and state planning groups. The Programme Officers will assist in providing technical input to the state planning groups, disseminate materials and information, organize and co-ordinate workshops, meetings and consultations under the project. The Programme Officers will keep in regular contact with the thematic working groups and will facilitate their work as necessary. The Programme Officers should have an advanced degree and research experience in climate change. The Programme

Officers should have experience in undertaking projects related to inventory development, vulnerability assessment and adaptation, GHG mitigation actions, and other aspects of TNC and BURs. The Programme Officers should be well versed with the UNFCCC, UNDP and UNEP guides and IPCC scientific reports. They should have prior experience in organisation, co- ordination and management of international and national workshops and be familiar with participatory methodologies. He/she will need to have excellent inter-disciplinary, writing and communication skills. He/she should be bi-lingual in Hindi and English and be proficient in use of computers.

Two Project Associates will be hired to assist the PMU in carrying out the day to day activities. The Project Associate will assist in preparing progress reports and financial statements. The Project Associate will assist in preparation of dissemination materials and information, assist in coordination of workshops, meetings and consultations under the project.

Position Titles	***US$/ Person Week****	***Estimated Person Weeks*****	***Tasks To Be Performed***
For Technical Assistance			
Local			
GEF	628	2,349	Technical assistance for various aspects of technical work
Total amount (US$)		**1,475,000**	
Justification for travel, if any: As required for project implementation			

* Provide dollar rate per person week. ** Total person weeks needed to carry out the tasks.

The national consultants for technical assistance would cover wide expertise as required in a project of such a vast expanse. These would include GHG inventory estimation for energy, industrial process, agriculture, LULUCF and waste sectors; measurement of GHG emission factors; vulnerability assessment for wide regional and sectoral coverage including agriculture, water, forestry and land-use, energy, infrastructure, health, coastal, natural ecosystems; adaptation assessment experts; climate change modelling experts; socio-economic scenario generation and GHG emission projection experts; GHG mitigation assessment experts; legal and institutional experts; software and database management experts. Large training needs are also estimated in this project especially for GHG estimation using 2006 guidelines and related software; and sub-regional vulnerability and impact assessments. Financial and economic analysis experts would also be required apart from policy experts. The weekly rates are expected to vary between USD 500 to US$ 750 per expert. A total of 2,349 person weeks are estimated at an average rate of US$ 628 per person week using GEF support.

ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS

A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN.

The development of this project design was not granted with requested PPG funds. GEF considered that many of the activities proposed in the PPG proposal can be done during project implementation and therefore requested the project proponents to prepare the CEO Endorsement as soon as possible after the PIF approval in February 2012.

However, the project proponents with the support of UNDP, has developed this project design. It is considered that the PPG exercise has achieved the intended objective with the development of this FSP proposal.

B. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY:

NA

C. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW: **NA**

Project Preparation Activities Approved	***Implementation Status***	***GEF/LDCF/SCCF/NPIF Amount ($)***				***Cofinancing ($)***
		Amount Approved	***Amount Spent Todate***	***Amount Committed***	***Uncommitted Amount****	
	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
Total		0	0	0	0	0

* Any uncommitted amounts should be returned to the GEF Trust Fund. This is not a physical transfer of money, but achieved through reporting and netting out from disbursement request to Trustee. Please indicate expected date of refund transaction to Trustee.

ANNEX E: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used**)**

NA