

PMR PROJECT IMPLEMENTATION STATUS REPORT (ISR)

1. SUMMARY INFORMATION

Implementing Country/Technical Partner:	India
Reporting Period:	From 05/09/2017 to 09/30/2018
Report Date:	30/09/2018
Implementing Agency:	Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India and The World Bank
Contact Person:	WB: Mr. Keisuke Iyadomi Mr. Harikumar Gadde MoEFCC: Mr. Ravi S. Prasad, Joint Secretary (Climate Change)

Grant Executed By:	MoEFCC & WB
Grant Effectiveness and Closing Dates:	05/09/2017- 06/30/2020
Grant Amount (USD):	USD 8,000,000
Funding Mobilized (USD):	USD 115,965
Funding Committed (USD)	USD 912,467

2. OVERVIEW

Objective

The Project Development Objective (PDO) is to assist the Government of India in exploring and piloting new market based mechanisms, the development of market linkages and synergies among the existing and future market-based mechanisms, and the establishment of an integrated data management and registry for India's GHG emissions as per need. It is envisaged that the project would also help India plan achievement of its Nationally Determined Contributions (NDC) targets.

For the purposes of the PDO, key project outputs include: (i) A prioritized list of policy instruments in key sectors and selected optimum policy packages by analyzing policy interactions (ii) Needs assessment for implementation of Market Based Mechanisms (MBM) by improvement of the existing MBMs and exploring new MBMs (iii) An integrated data management and registry for India's GHG emissions by performing systems need assessment, functional system specification and technical system assessment of the national meta-registry system, (iv) Exploring and developing market linkages

and synergies among the existing and future market-based mechanisms and (v) Designing and piloting a new MBM.

Indicators

PDO level results indicators are as follows:

- i. Identification of new market-based mechanism in the Indian context
- ii. Design of an infrastructure set-up in the form of a national registry to support data collection and management efforts as per needs

The India PMR project has been structured into the following components based on the Building Blocks of the Market Readiness Proposal (MRP):

Component 1: Mitigation Policy Landscape

Component 1 corresponds to Building Block 1 (BB 1) and BB2 in the MRP and provides an overview of the country's development objectives along with an introduction to its key national policies and plans focusing on climate change mitigation. India's climate actions are synchronized with its development goals and simultaneously reflect its bold vision for combatting climate change. India has undertaken ambitious mitigation actions in the field of clean energy, especially renewable energy, enhancement of energy efficiency, development of less carbon intensive and resilient urban centres, promotion of waste to wealth, safe, smart and sustainable green transportation network, abatement of pollution and efforts to enhance carbon sink through creation of forest and tree cover. Planned actions and economic reforms have contributed positively to the rapidly declining growth rate of energy intensity in India and steps are being undertaken to de-couple the Indian energy system from carbon in the long run.

The domestic efforts to achieve its broad objectives are outlined in the National Action Plan on Climate Change (NAPCC) with 8 missions spearheading the governments' thrust. In the international context, India has developed a comprehensive and balanced set of actions for its Nationally Determined Contributions (NDCs) for the period of 2021-2030 to both address mitigation as well as adaptation components. India's NDC has eight goals and three of these having quantitative targets are as follows:

- a. Reducing carbon intensity of its GDP by 33 to 35 percent from 2005 levels by 2030
- b. Increasing the share of non-fossil fuel based electricity to 40% by 2030
- c. Accelerating afforestation efforts to create additional carbon sinks of 2.5 to 3 billion tonnes of CO₂ equivalent

Other 5 NDC goals are on (i) sustainable lifestyles (ii) climate friendly growth path (iii) climate change adaptation (iv) climate change finance (v) capacity building and technology

Micro, Small, and Medium Enterprise (MSME) and Municipal Solid Waste (MSW) are the chosen sectors to be covered under India's MRP as these are key priorities sectors offering opportunity for significant GHG emissions reduction. MSME sector consumes about 20-25 per cent of the energy consumption by large industries, depend on obsolete, low efficiency technologies that result in wasteful energy consumption are not covered under the Perform Achieve, and Trade (PAT) scheme. As per the National Sample Survey (NSS) 73rd round, conducted by National Sample Survey Office, Ministry of Statistics & Programme Implementation during the period 2015-16, there were 633.88 lakh unincorporated non-

agriculture MSMEs in the country engaged in different economic activities. The sector has been creating approx. 110 million jobs across the country and contributes approx. 29 % to India's GDP. Thus, it significantly contributes to employment generation and poverty alleviation. MSMEs have also been pivotal in taking industrialization to the rural masses which would be important to ensure equitable growth of all regions and impede rural-urban migration. Similarly, sectors, such as solid waste, which is high on the national priority, offer immense opportunities for emission reductions. Most MSW is disposed at landfills or unmanaged dumpsites causing GHG emissions and other environmental, social and economic problems GoI (2010). Developing more sustainable practices in the MSW sector in India, thus, directly relates to the NDC goals of India and overall policy framework. The waste sector can be tapped significantly for GHG emission reductions and sustainable development co-benefits such as such as improved sanitation, environment and health.

In the realm of carbon markets, India has experience in implemented two types of policy instruments namely: i) Domestic market mechanisms such as the renewable energy certificates markets (REC) and energy efficiency certificate markets (PAT), and; ii) Carbon pricing policies, such as carbon tax in the form of coal cess (clean environment cess). India's participation in the Clean Development Mechanism (CDM) of the Kyoto Protocol since 2005 has also demonstrated India's interest in MBMs for climate action, and the large number of CDM projects indicates interest from the private sector in capitalizing on this opportunity. Carbon finance through CDM was successful in providing the right incentives to the private sector to enter MSW management. Of around 3000 plus projects in India, around 5 % were in the waste sector. However, this momentum is losing ground due to recent downturn of the carbon market and lack of other sources of finance to be leveraged for sustainable MSW management.

In view of the evolving climate realities and the changed context in the post 2020 period wherein all countries have submitted their NDCs, the features of the New Market Mechanisms (NMM) are being negotiated that would support NDC implementation as per country priorities in a cost-effective manner.

Harnessing the untapped mitigation potential in sector like MSME and Waste could help India not only achieve its targets under the NDC but also meet the broad policy objectives outlined in various Government of India schemes.

Component 1 focuses on analytical work for development of a roadmap to design a new MBM in the MSW and MSME sectors. The task also includes modeling resulting in prioritized list of policy instruments in key sectors and analyzing policy interactions to develop an optimum policy package.

The key tasks include:

1. **Assess the readiness** of the MSW and MSMEs sector for MBMs including policy and regulatory frameworks
2. **Develop an optimum policy package to support scaling up of existing policies & programs**
3. **Design an MBM** for GHG reduction
4. Develop a **roadmap** for **piloting** the new MBM

(Estimated Budget: \$ 1.24 M)

Component 2: Core Market Readiness Component

Component 2 corresponds to BB3 'Core Market Readiness Component' in the MRP and outlines the required framework for the development of a National Meta-registry, which will form the backbone of inter-linking new and existing MBMs by synthesizing all the relevant information from the registries of individual MBMs (both existing and future) and developing platform to facilitate inter-linking of various MBMs. A study to carry out system assessment and design of a national Meta-registry has been launched. It will provide the broad design requirements for development of a centralized data management and Meta-registry platform for India. It is envisaged that a national Meta-registry will be designed as a win-win 'future proof' registry with the possibility of interlinking various MBMs which might also be necessary for making existing MBMs more effective. Activities under this building block will help to develop technical infrastructure to integrate existing MBMs. Thus, this core infrastructure will form the foundation for capturing the country's action on climate change mitigation. A robust data management and registry framework will help incorporate international best practices and take into consideration of future trends as per needs. A phased and integrated approach will allow for flexibility and scalability.

Key tasks include:

- **Needs Assessment for the Meta-Registry:** to help enable design of functional and technical specifications
- **Define functional and technical requirements for the Meta-Registry:** Specifications of the registry accounting for pre-existing MBMs and domestic registry architecture; IT infrastructure, hosting, and capacity; Security, data management and data confidentiality; Interlinking between registries; communications protocol

(Estimated Budget: \$ 2.4 M)

Component 3: Framework for Designing New MBMs

Component 3 corresponds to BB4 'Framework for Designing New MBMs' in the MRP and focuses on designing and piloting new MBM(s) and linking various domestic carbon markets. The MBM will comprise four key components, namely (i) institutional, (ii) legal and regulatory, (iii) operational, and (iv) data management and registry. After the selection and design of a new MBM, pilots will be undertaken in select geographical locations.

(Estimated Budget: \$ 3 M)

Component 4: Project Management and Outreach

Component 4 corresponds to BB5 'Project Management and Outreach' in the MRP. The MRP is country driven with full ownership of the project with the Government of India. To facilitate an early start to project activities, it was decided to split the grant between The World Bank (WB) and the Government of India, whereby MoEFCC implements the US\$ 5 million PMR grant while the WB executes the US\$ 3 million grant in consultation with and under guidance from MoEFCC. To ensure full client ownership and engagement, currently one short term consultant (STC) has been engaged to

provide full support to MoEFCC in view of the time needed to set up Project Management Structures in the Ministry.

A Project Management Unit will be set-up at MoEFCC comprising of a national project coordinator, theme leaders and project support officers. The Terms of Reference for engagement of the above consultants are being prepared and the positions would be advertised shortly.

An inter-ministerial Project Steering Committee (PSC) has been constituted under the Chairmanship of Additional Secretary, MoEFCC to oversee project implementation. The PSC has representation from Ministry of Finance, Ministry of Power, Ministry of New and Renewable Energy, Ministry of Housing and Urban Affairs, Ministry of Medium and Small Enterprises, Bureau of Energy Efficiency, Power System Operation Corporation Limited. Additional experts may be nominated by the Chairman as per the requirement. See further information regarding the institutional arrangement on Section 5.

(Estimated Budget: \$ 1.36 M)

3. IMPLEMENTATION REPORT BY COMPONENT

Differences between the Objectives/Activities in the Market Readiness Proposal and the Implementation Plan

<p>Are there any important and material differences between the objectives/activities proposed in the Market Readiness Proposal and endorsed by the Partnership Assembly of the PMR and those agreed to in the Grant Agreement with the Delivery Partner and described in the Project's Results Framework?</p>	<p>The Government of India (GoI) decided to execute US\$ 8 million PMR grant jointly between GoI and the World Bank for faster and coordinated execution, which was endorsed and confirmed by the Department of Economic Affairs on September 5, 2017.</p> <p>US\$ 3 million is being implemented by the World Bank as Bank Executed Trust Fund (BETF).</p> <p>US\$ 5 million will be executed by GoI as Recipient Executed Trust Fund (RETF) once the Grant Agreement for implementing US\$5million is signed. The agreement is expected to be signed by the end of 2018.</p>
<p>There are no substantive differences between the objectives/activities proposed in the MRP and endorsed by the PA of the PMR and the implementation plan. However, a few modifications have been made to reflect the recent development on the climate agenda in India and, as a result, the allocation to activities have been changed, as outlined below. Further details are provided in the later sections:</p> <ol style="list-style-type: none"> 1. India's MRP proposal provided an indicative list of activities to be undertaken as part of the project. However, in view of evolving climate change realities and national priorities some activities have become redundant and new ones are being proposed in the priority waste sector such as use of green credits concept in the overall waste sector. 	

2. Activities 2.1, 2.2 and 2.3 of BB 2 on 'Mitigation Policy Landscape' are no longer relevant and can be dropped as mentioned above as the priority sectors are narrowed down in the MSME and waste sectors as also described in this ISR as well as MRP.
3. Similarly, Activities 4.1, 4.2 and 4.3 of BB 4 on 'Framework for Designing New MBMs' are not required in the current context, as the Ministry currently focuses on exploring an opportunity in the MSME and waste sectors.
4. Studies/activities, such as green credits, carbon pricing instruments, creation on an online platform etc are proposed to be undertaken by the Ministry. These activities are aligned with the approved MRP document.

Implementation Progress by Component

A. Component 1: Mitigation Policy Landscape	
Status:	<p>Under implementation.</p> <p>This component has three major outcomes:</p> <ol style="list-style-type: none"> 1. Development of a Roadmap and Action Plan for Implementation of the Market-Based Mechanism for GHG reduction in MSME sector 2. Development of a Roadmap to Design a Market-Based Mechanism for the Waste Sector in India 3. Development of an optimum policy package for launch of MBMs <p>These outcomes will be achieved through the following activities, that also serve as key milestones for the project</p> <p>Activity 2.4 Modeling resulting in prioritized list of policy instruments in key sectors</p> <p>Activity 2.5 Develop and select optimum policy packages by analyzing policy interactions</p> <p>Activity 2.6 Needs assessment for implementation of MBMs</p> <p>Development of roadmap and action plan to design MBMs in MSME and waste sectors is currently under implementation through the Bank execution. There were two stakeholder consultations already undertaken in the MSW sector while the consultants are about to finalize the needs assessment report for both MSME and waste sectors. It is expected to complete in December 2018 and inform the subsequent works. It is also proposed to undertake a supplemental study for the use of green credits for incentivizing waste sector and develop a rating/certification system for MSME.</p>
Comments:	N/A
B. Component 2: Core Market Readiness Component	
Status:	Under implementation.

	<p>A national Meta-registry is to be designed to serve dual purposes of data management and transaction registry in India. Thus, the Meta-registry will have two components: 1) will serves as a data management system: which implies that it will collect, control, process, and analyze bottom-up data from various MBIs and regulatory sources. This would mean that the Meta-registry will control and consolidate the major chunk of GHG emissions data from all the sectors under various MBMs. 2) will serve as transaction registry: which implies that the Meta-registry will host and link infrastructure of the existing and upcoming MBM transaction registries making inter-linking possible.</p> <p>The activities include:</p> <ul style="list-style-type: none"> Activity 3.1 Systems Need Assessment Activity 3.2 Functional System Specification Activity 3.3 Technical System Assessment Activity 3.4 Software development Activity 3.5 Systems deployment and capacity building <p>This component is being co-led by WB and MoEFCC. The WB has commissioned a study on System Assessment and Design of a National Meta Registry to Support Cost-Effective GHG Reduction in India. The first multi-stakeholder consultation meeting was organized in August 2018 and the study is expected to be completed by December 2018. The consultant is currently finalizing the needs assessment report based on the literature review as well as outcome from the consultation and interviews. A costing plan for the development of meta-registry will also be provided.</p>
Comments:	N/A
C. Component 3: Framework for Designing New MBMs	
Status:	<p>To be initiated by December 2018.</p> <p>Outputs from the ongoing work under the Component 2 will be considered.</p> <ul style="list-style-type: none"> Activity 4.4 Designing new MBM taking cognizance of the existing regulatory framework and laws and proposing amendments. Activity 4.5 Piloting the new MBM in select geographical locations Activity 4.6 Linking of various domestic markets such as PAT and REC
Comments:	N/A
D. Component 4: Project Management and Outreach	

Status:	<p>Project management is an ongoing activity. A WB STC has been hired to directly support the Ministry of Environment, Forest and Climate Change in everyday coordination of the project.</p> <p>A PMU is being constituted to provide technical support, coordinate and implement activities.</p> <p>A project Steering Committee has been constituted</p> <p>Awareness creation and capacity building would be integral to project implementation and an action plan for undertaking these activities is being prepared.</p>
Comments:	N/A

4. PROGRESS, CHALLENGES, AND LESSONS LEARNED

Important policy or regulatory developments related to the Grant's objectives and activities:
<p>Developments:</p> <ol style="list-style-type: none"> <li data-bbox="250 919 505 951"> 1. Paris Agreement <li data-bbox="203 993 1419 1094"> <p>Paris Agreement on climate change was adopted under United Nations Convention on Climate Change (UNFCCC) at Conference of Parties (COP-21) held in Paris in December 2015. India ratified the Paris Agreement on 2nd October 2016 and it entered into force on 4th November 2016.</p> <li data-bbox="250 1115 902 1146"> 2. India's Nationally Determined Contribution (NDC) <li data-bbox="203 1173 1419 1383"> <p>India submitted its Nationally Determined Contribution (NDC) on 2nd October 2015. India's NDC articulates its ambitious sustainable development agenda and reflects its bold vision for combating climate change by making utmost efforts to deal with it. India's NDC is balanced and comprehensive and includes all elements like mitigation, adaptation, finance, technology development & transfer and capacity building. It has eight goals covering all elements like mitigation, adaptation, finance, technology development & transfer and capacity building.</p> <li data-bbox="250 1425 513 1457"> 3. Domestic Policies <li data-bbox="203 1461 1419 1633"> <p>The National Action Plan on Climate Change (NAPCC) was released on June 30, 2008 with a view to enhance the ecological sustainability of India's development path and address the issues of climate change. NAPCC identifies measures that promote development objectives while yielding co-benefits. It outlines a number of steps to simultaneously advance India's development and climate change related objectives of adaptation and mitigation.</p>

The National Missions are in specific areas of Solar Energy, Enhanced Energy Efficiency, Sustainable Habitat, Water, Sustaining the Himalayan Eco-system, Green India, Sustainable Agriculture and Strategic knowledge for Climate Change. Solar Mission, Enhanced Energy Efficiency and Green India Mission are primarily on mitigation of Greenhouse Gases. Considering the need of the hour, Prime Minister's Council on Climate Change (PMCCC) decided to enhance the ambition of all national missions under National Action Plan on Climate Change (NAPCC) in respect of Adaptation, Mitigation and Capacity building. The PMCCC has recommended development of new missions to in the light of new scientific evidence and technological advances on Wind Energy, Health, Waste-to -Energy conversion and Coastal management. The waste-to-energy mission will incentivize efforts towards harnessing energy from waste and is again aimed at lowering India's dependence on coal, oil and gas, for power production.

The National Mission on Enhance Energy Efficiency (NMEEE) and National Mission on Sustainable Habitat under India's NAPCC address the issue of emission reduction of the MSME and Waste sectors respectively. The Solid Waste Management (SWM) Rules 2016 aim to promote low carbon integrated waste management systems in line with the waste hierarchy and the 3R's concept. The Government of India has also prioritized effective MSW management on the national level with the Swachh Bharat Mission (SBM). The Indian government, through the SBM, under the Ministry of Urban Development, has provided support for up to 20 percent of project costs linked Viability Gap Funding for waste processing technologies. The Swachh Bharat Cess is collected in the Consolidated Fund of India and is proposed to be used for financing and promoting Swachh Bharat initiatives of the government.

Important changes in the technical design or approach related to the Grant's activities:

Please see Section 3

Key capacity issues (implementation, technical, financial management, procurement) related to the Grant's activities:

In March 2017, India received the approval of US\$ 8 million grant from the Partnership Assembly (PA) of the Partnership for Market Readiness (PMR) on India's Market Readiness Proposal (MRP). The activities under the MRP project are to be completed by 2020. To facilitate an early start to project activities, it was decided to split the grant between The World Bank (WB) and the Government of India, whereby MoEFCC implements the US\$ 5 million PMR grant while the WB executes the US\$ 3 million grant in consultation with and under guidance from MoEFCC in view of the time needed to set up Project Management Structures in the Ministry. The MRP is country driven and Department of Economic Affairs (DEA), Ministry of Finance gave clearance and authorization for the grant agreement in September 2017.

Coordination with other carbon pricing initiatives, including those funded by other donors:

Through Finance Bill 2010-11 a corpus called National Clean Energy Fund (NCEF) was created out of cess on coal produced / imported ("polluter pays" principle) for the purposes of financing and promoting clean energy initiatives, funding research in clean energy or for any other purpose relating thereto. Subsequently, the scope of the fund has been expanded to include clean environment

initiatives also. An Inter-Ministerial Group (IMG) chaired by Finance Secretary approves the projects/schemes eligible for financing under the NCEF. These projects include innovative schemes like Green Energy Corridor for boosting up the transmission sector, Namami Gange, Green India Mission, Jawaharlal Nehru National Solar Mission (JNNSM)'s installation of solar photovoltaic (SPV) lights and small capacity lights, installation of SPV water pumping systems, SPV Power Plants, Grid Connected Rooftop SPV Power Plants, pilot project to assess wind power potential etc.

Till date IMG has recommended 55 projects with total VGF of Rs. 34811.19 crore spread over years. For BE 2017-18, Rs.8703 crore have been provided for in the Budget for NCEF projects. The coal cess was collected at Rs. 50.00 per tonne of coal since June 22, 2010 which was extended in Budget 2014-15 to Rs. 100.00 per tonne of coal w.e.f. 11.07.2014. The same was increased to Rs. 200.00 per tonne w.e.f. 01.03.2015 in the 2015-16 Budget. Further, the coal cess has been increased to Rs. 400 per tonne in the Union budget 2016-17 and the same has been renamed as "Clean Environment Cess". Accordingly, the name of NCEF has been changed to National Clean Energy and Environment Fund (NCEEF). However, the Goods and Services Tax (Compensation to States) Act, 2017 which has been notified on 12.04.2017, provides that coal cess, along with some other cess would constitute GST Compensation Fund and the same would be utilized to compensate the States for five years to compensate them for potential losses because of GST implementation. After five years any amount left would be shared on 50% basis between Centre and States.

Stakeholder engagement related to the Grant's activities:

The MoEFCC is responsible for oversight of the entire activities as well as coordination with the line Ministries, agencies, the consultants, and other stakeholders on regular basis. Once the PMU is set up, the PMU will continuously engage with relevant stakeholders, including the private sector, think tanks, government departments, civil society organizations, etc. In addition, need-based engagement and regular dialogue through round table discussions, etc. will be carried out by the Ministry.

Other issues related to the Grant's activities

N/A

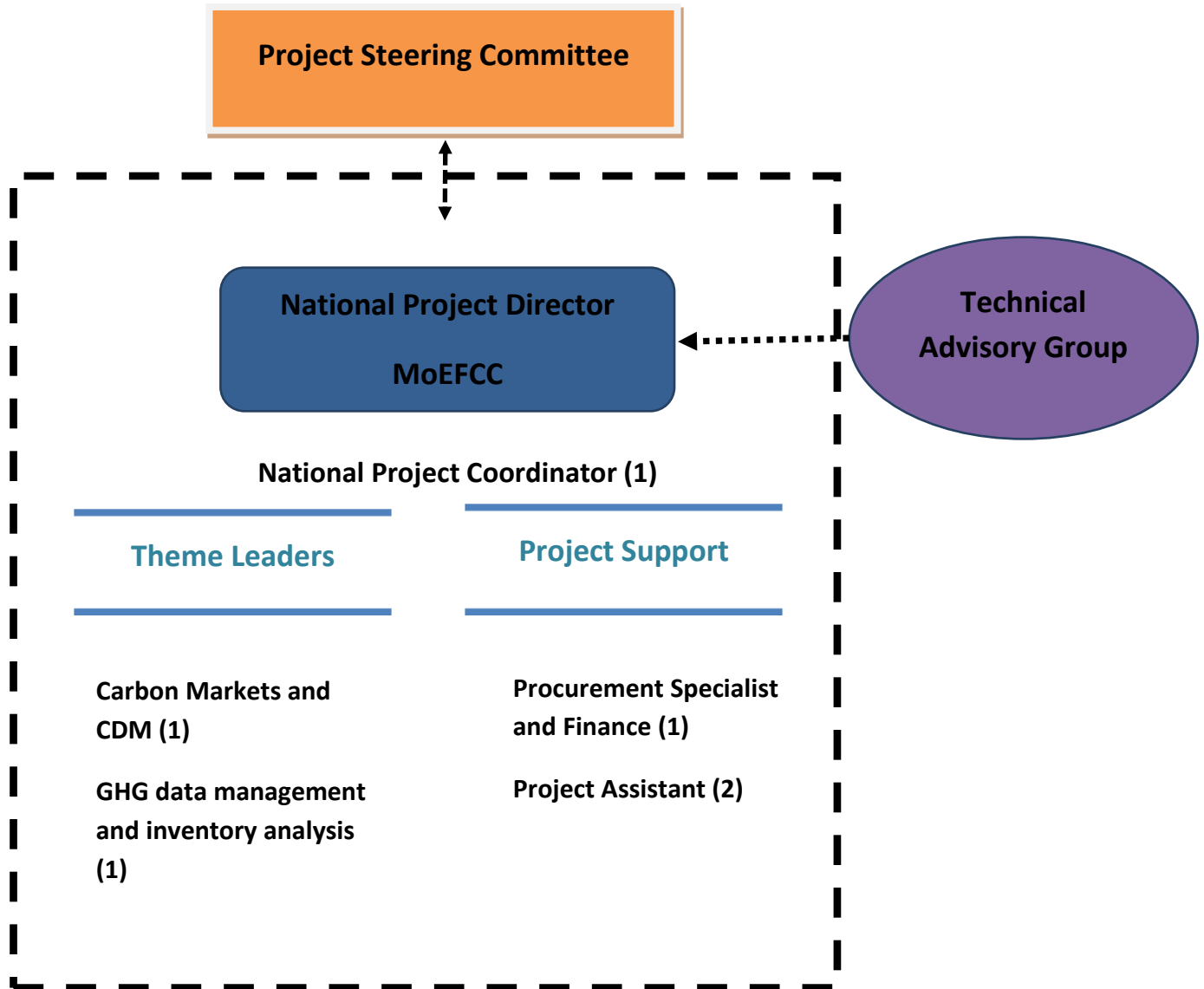
5. ADDITIONAL INFORMATION





In this Section, please provide any additional information that may be relevant for the achievement of the Grant's objectives and/or the implementation of the Grant's activities. Please also provide any relevant information related to carbon pricing and the use of market-based instruments for climate change mitigation.

The Component 5 focuses on setting up an institutional and coordination mechanisms for MRP implementation in including PMU set-up for execution of US\$ 5 million recipient executed fund. The

below is the proposed PMU arrangement which is currently under preparation within the Ministry, followed by the structure, and role of the Steering Committee chaired by the MoEFCC.

The World Bank will interact with MoEFCC through the National Project Director as and when required.



Role		Functions
<p>Project Steering Committee</p>		<p>Oversee and provide directions for project implementation in accordance with national priorities</p> <p>Consider and approve the Annual Operational Plan</p>
<p>National Project Director</p>		<p>Guide and supervise overall project implementation and management</p> <p>Ensure activities are aligned with initiatives of key line ministries and national priorities</p> <p>Monitor and review project activities approved in the Annual Operational Plan</p>
<p>Technical Advisory Group</p>		<p>Provide technical inputs</p> <p>Review reports/deliverables</p> <p>Share best practices and</p>
<p>National Project Coordinator</p>		<p>Overall coordination, implementation and performance measurement</p> <p>Design project activities for Annual Operation Plan</p> <p>Build strategic partnerships</p> <p>Identify experts for need based technical support</p> <p>Liaise with line ministries, experts and stakeholders</p>