
15th Meeting of the Partnership Assembly (PA15)

Hanoi, Vietnam

20th October, 2016

India's Market Readiness Proposal (MRP)



सत्यमेव जयते

**Ministry of Environment, Forests and Climate Change
Government of India**

OUTLINE

1. India's Policy Context

2. Summary of Market Readiness Proposal

- MRP Development Process
- MRP Objective(s) and Focus
- MRP Summary

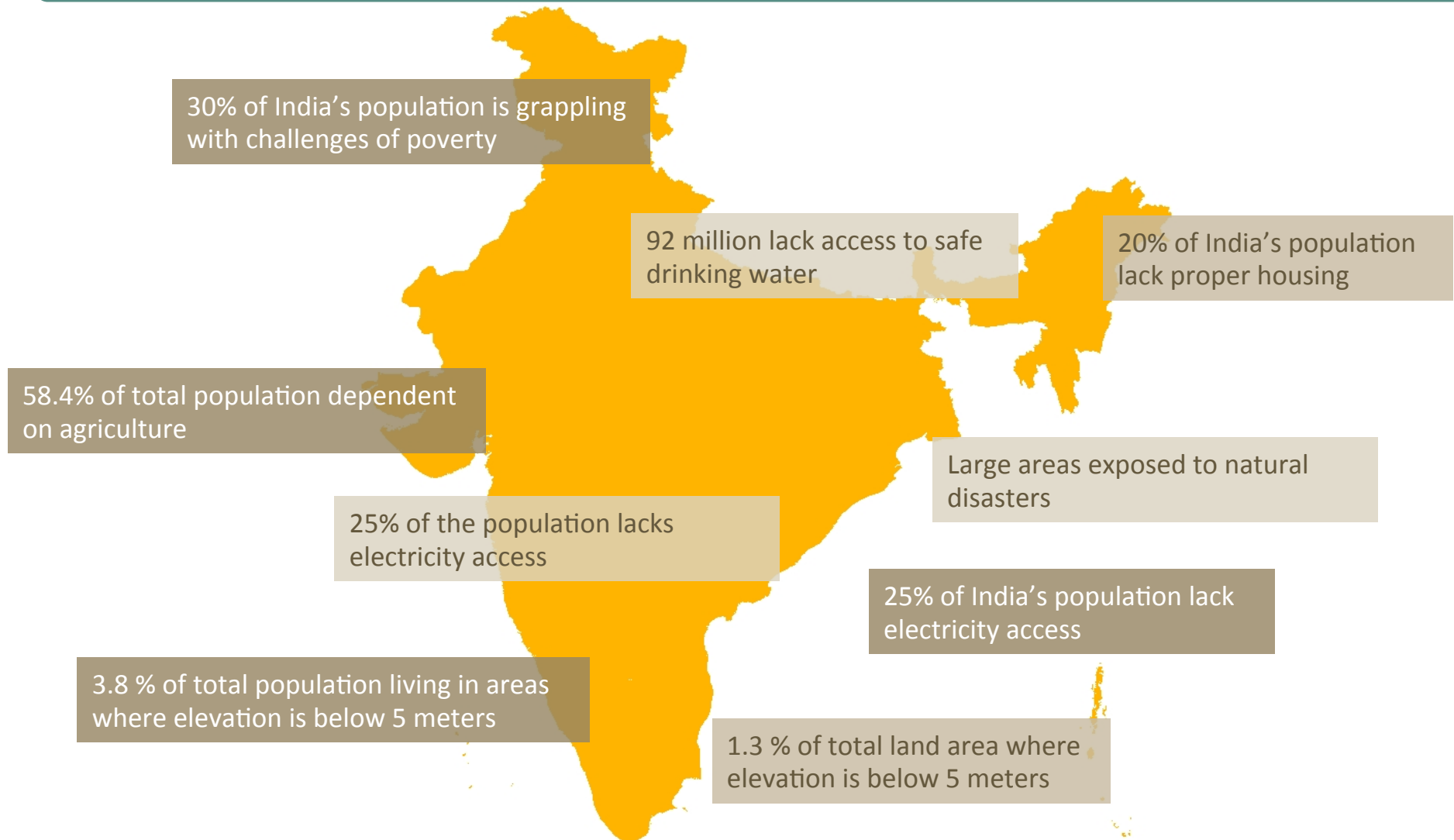
3. Details of Market Readiness Proposal

- BB 2: Preparatory Work to Support and Inform Policy Decisions
 - BB 3: Core Readiness Component: National Registry
 - BB 4: Planning for a New Market Based Mechanism
 - BB 5: Project Management and Outreach
 - BB 6: Schedule and Budget
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INDIA'S POLICY CONTEXT

INDIA: DEVELOPMENT CHALLENGES

India accounts for 17.5% of world's total population and 2.4% of the total surface area



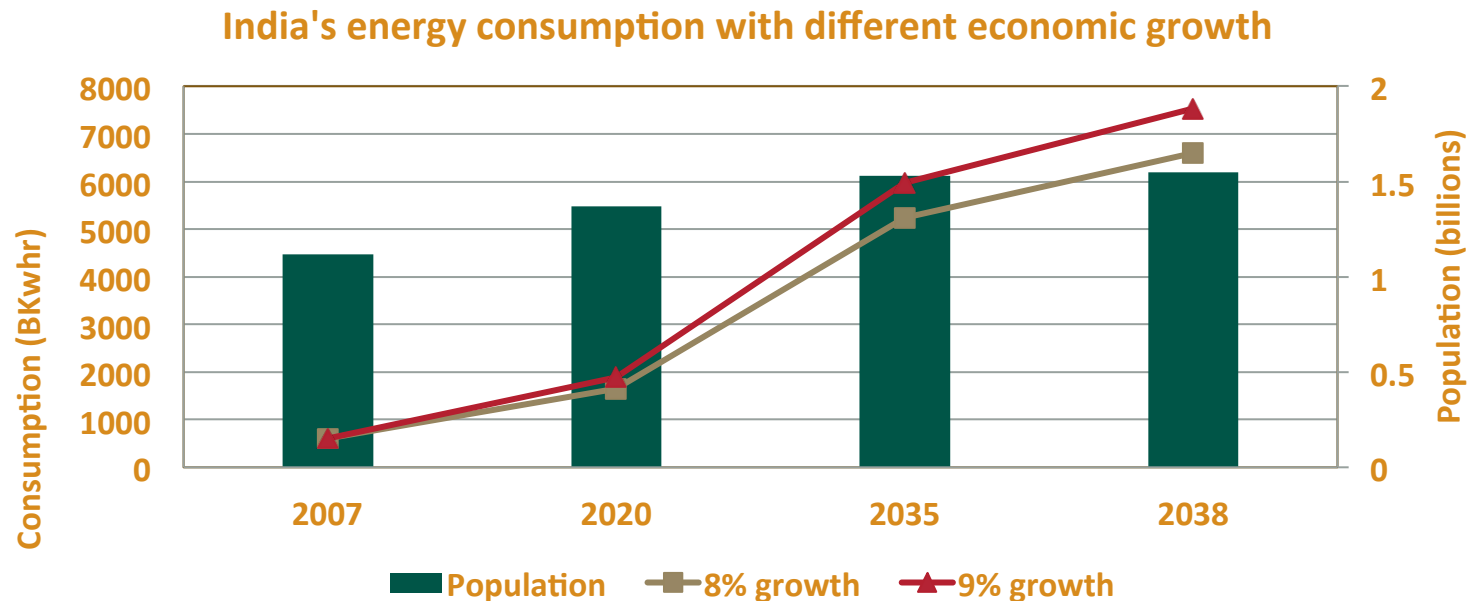
India aspires to raise its HDI from 0.586 to 0.9 with only 1.5 – 2 toe/capita/year

INDIA'S DEVELOPMENT AND CLIMATE OBJECTIVES

- ◆ Despite these challenges, India has consistently shown **leadership in global efforts** to limit climate change.
 - ◆ While absolute GHG emissions show a rising trend, India's **per capita emissions continue to be one of the lowest** in the world.
 - ◆ India submitted **ambitious Nationally Determined Contributions (NDCs)** and recently **ratified the Paris Agreement**.
 - ◆ To achieve this, **India needs ambitious and aggressive** domestic policies that facilitate a shift to a low carbon growth trajectory and at the same time ensure India's developmental priorities are met.
 - In addition to regulations and policies, instruments like Market Based Mechanisms and Carbon Pricing may be implemented.
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INDIA: ECONOMIC GROWTH AND DEVELOPMENT

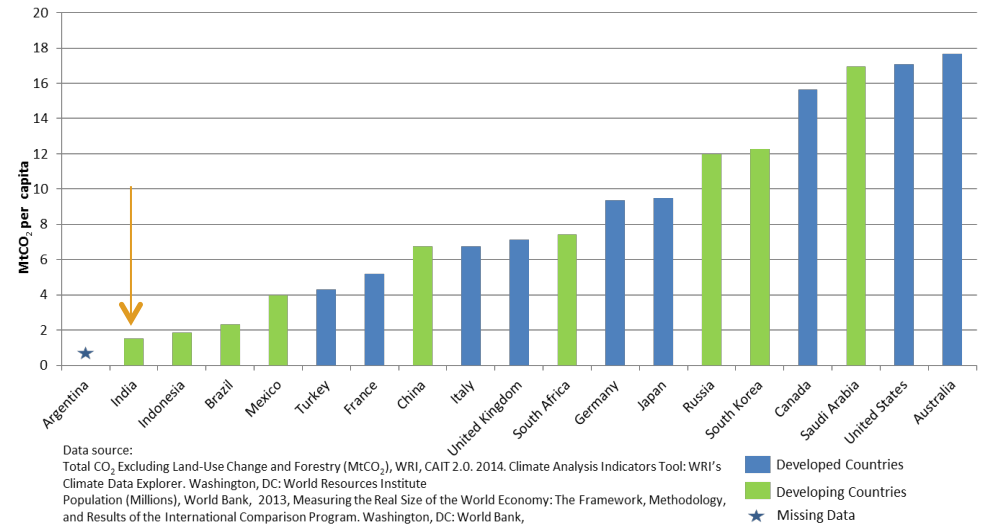
- ◆ In the 2000-2013 period
 - GDP of the Indian economy grew at 7.3% p.a.,
 - Total primary energy supply grew at 5.8% p.a., and electricity supply grew at 5.6% p.a.
- ◆ In the period up to 2030, the economy is expected to grow at 8-10% due to the growth in manufacturing, which would result in a greater demand for energy
 - Per capita electricity supply expected to be more than 2,500 kWh per year, compared to 1010 kWh per year in 2014
 - GHG emissions from industry are expected to grow to 448 mtCO₂ in 2020 and to 806 mtCO₂ in 2030



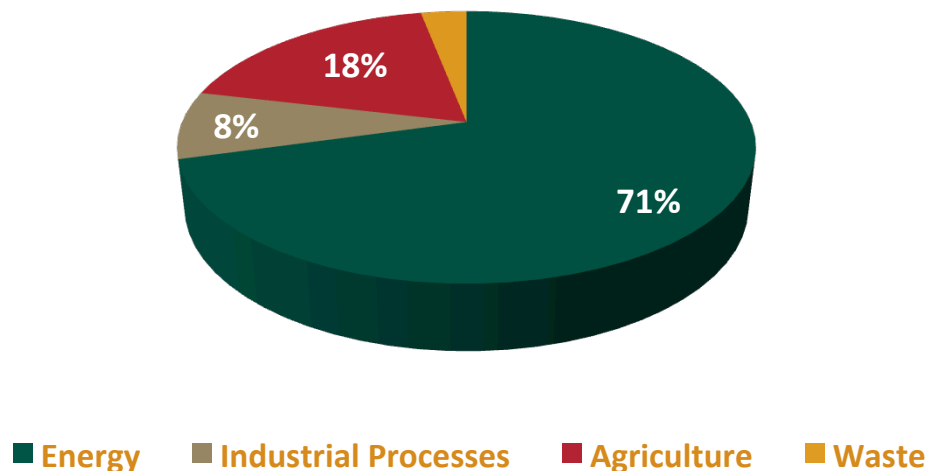
INDIA: GHG EMISSIONS

- ◆ India constitutes only **3%** of global cumulative energy-related emissions
- ◆ India's per capita emissions are **one-third** of the global average and lowest amongst G20 countries
- ◆ In 2010, more than two-thirds of the GHG emissions in India were from the **energy sector**

Emissions per Capita (2011) of G20 Countries

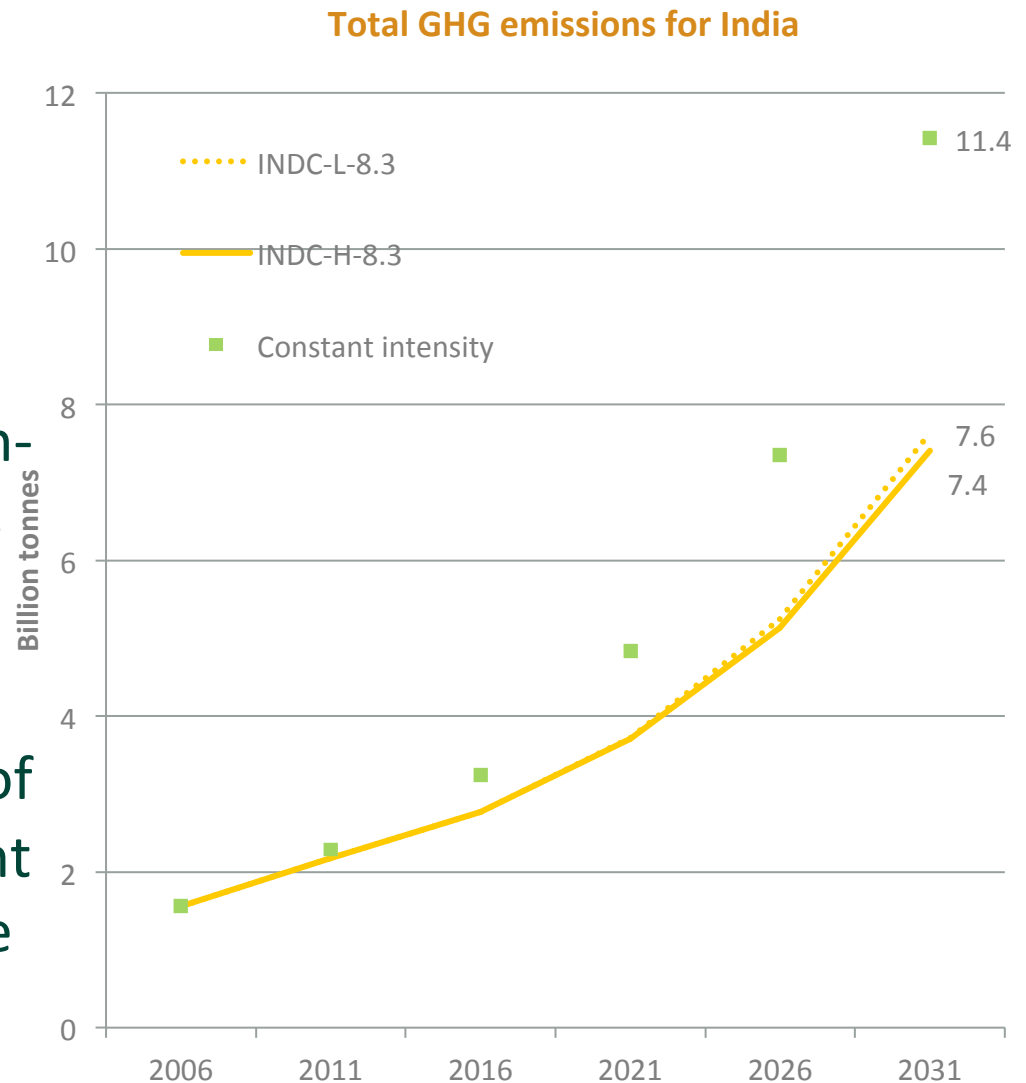


GHG Emissions by Sector (2010)



INTENDED NATIONALLY DETERMINED CONTRIBUTIONS

- ◆ Reduce the emissions intensity of its GDP by 33-35% by 2030 from 2005 levels.
- ◆ Achieve 40% cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030.*
- ◆ Create an additional carbon sink of 2.5-3 billion tons of CO₂ equivalent through additional forest and tree cover by 2030.



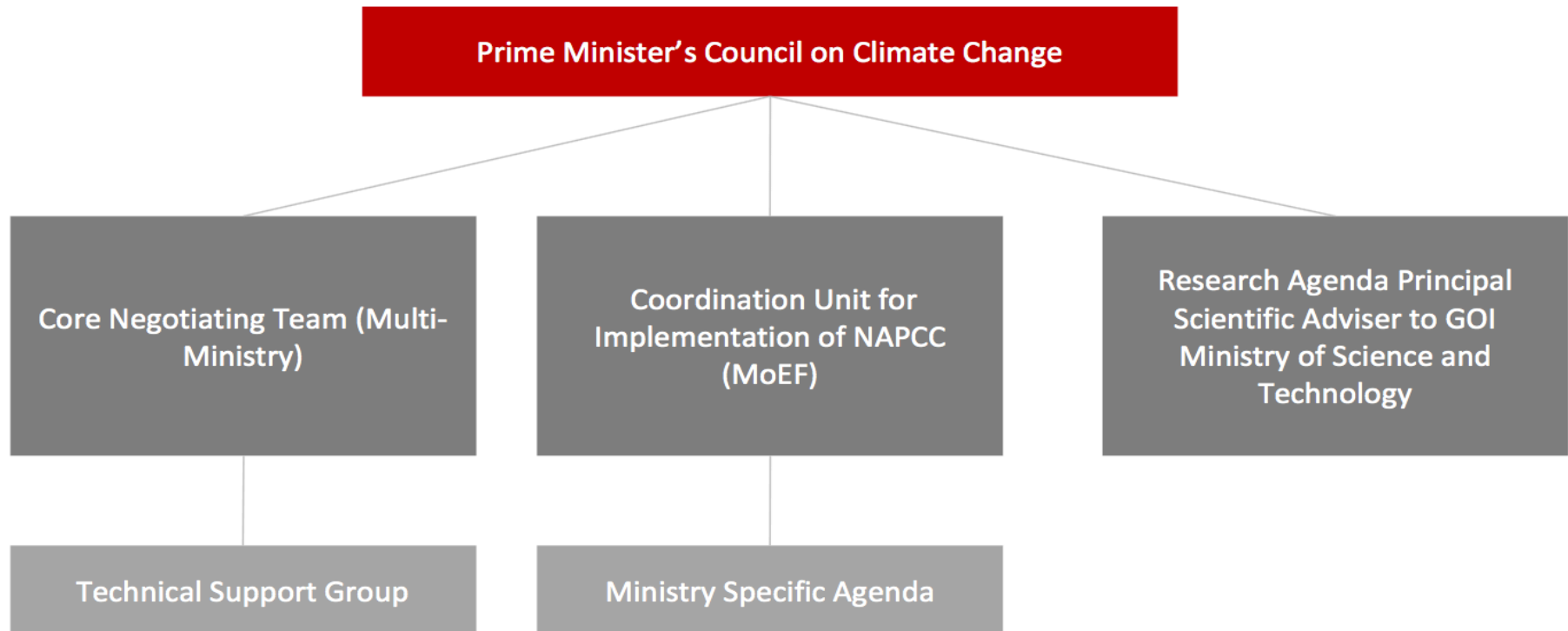
** with the help of transfer of technology and low cost international finance including from Green Climate Fund (GCF)*

EXPERIENCE WITH MARKET AND PRICING INSTRUMENTS

National Clean Energy Fund

- India shifted from a carbon subsidization regime to one of significant carbon taxation regime
 - India has increased the coal cess from Rs. 50 per ton (80 cents) to Rs. 400 per ton, which is equivalent to a carbon tax of about US\$ 6 per ton.
 - The corpus as on July, 2015 was over INR 165 billion (USD 2.5 billion) and is expected to rise up to INR 260 billion (USD 3.89 billion) per year from 2017 onwards.
 - Projects on renewables, water resources, clean power, environment & climate change, drinking water & sanitation, heavy industries have been approved for funding through the fund
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ROBUST INSTITUTIONAL FRAMEWORK

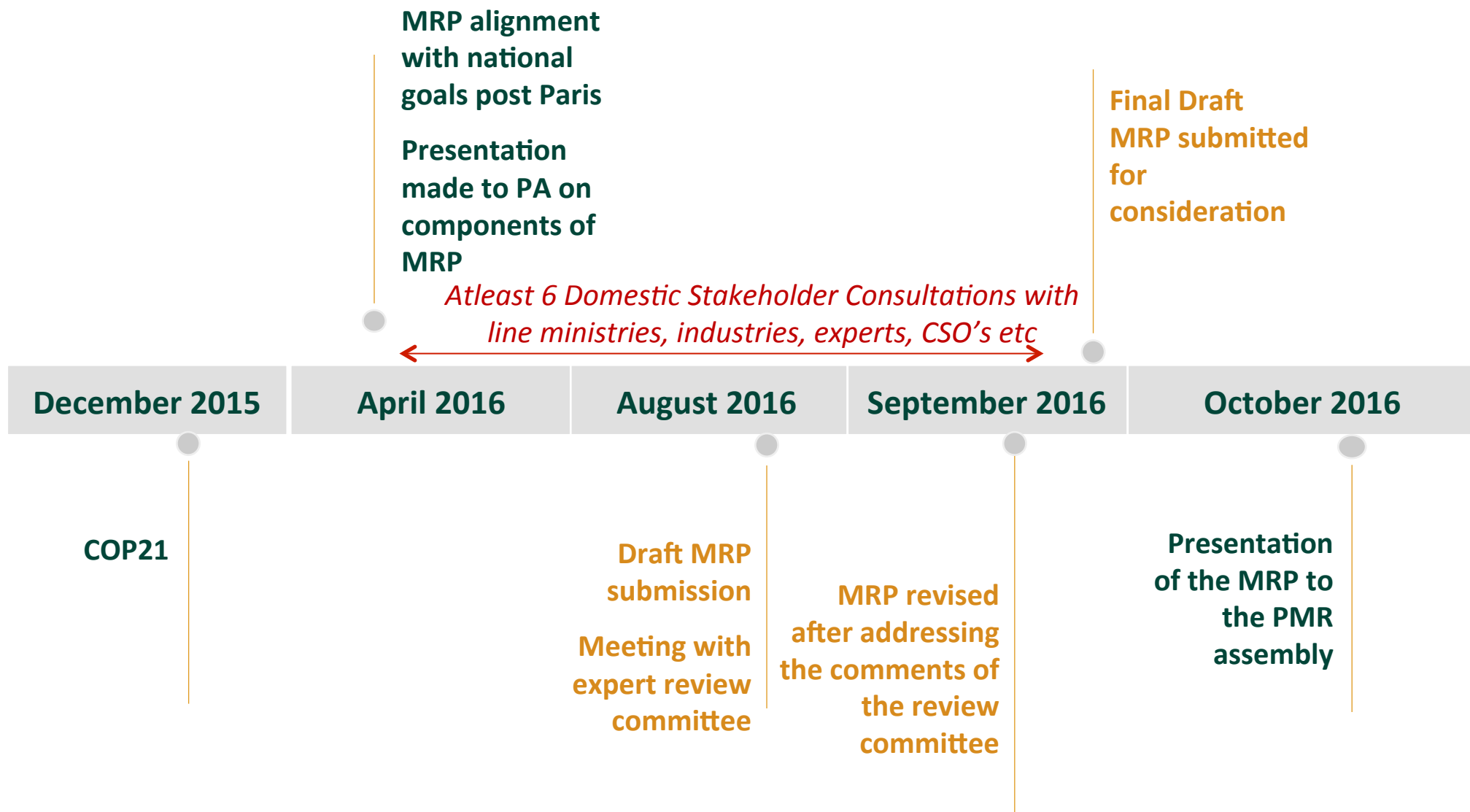


Source: NAPCC, MoEF

There is a well-designed policy formulation process for climate change in India. The cabinet is responsible for approving all climate policies and actions, while the Prime Minister's Council on Climate Change (or PM's council) provides guidance and advice.

MARKET READINESS PROPOSAL

MRP DEVELOPMENT PROCESS



MRP OBJECTIVES AND FOCUS

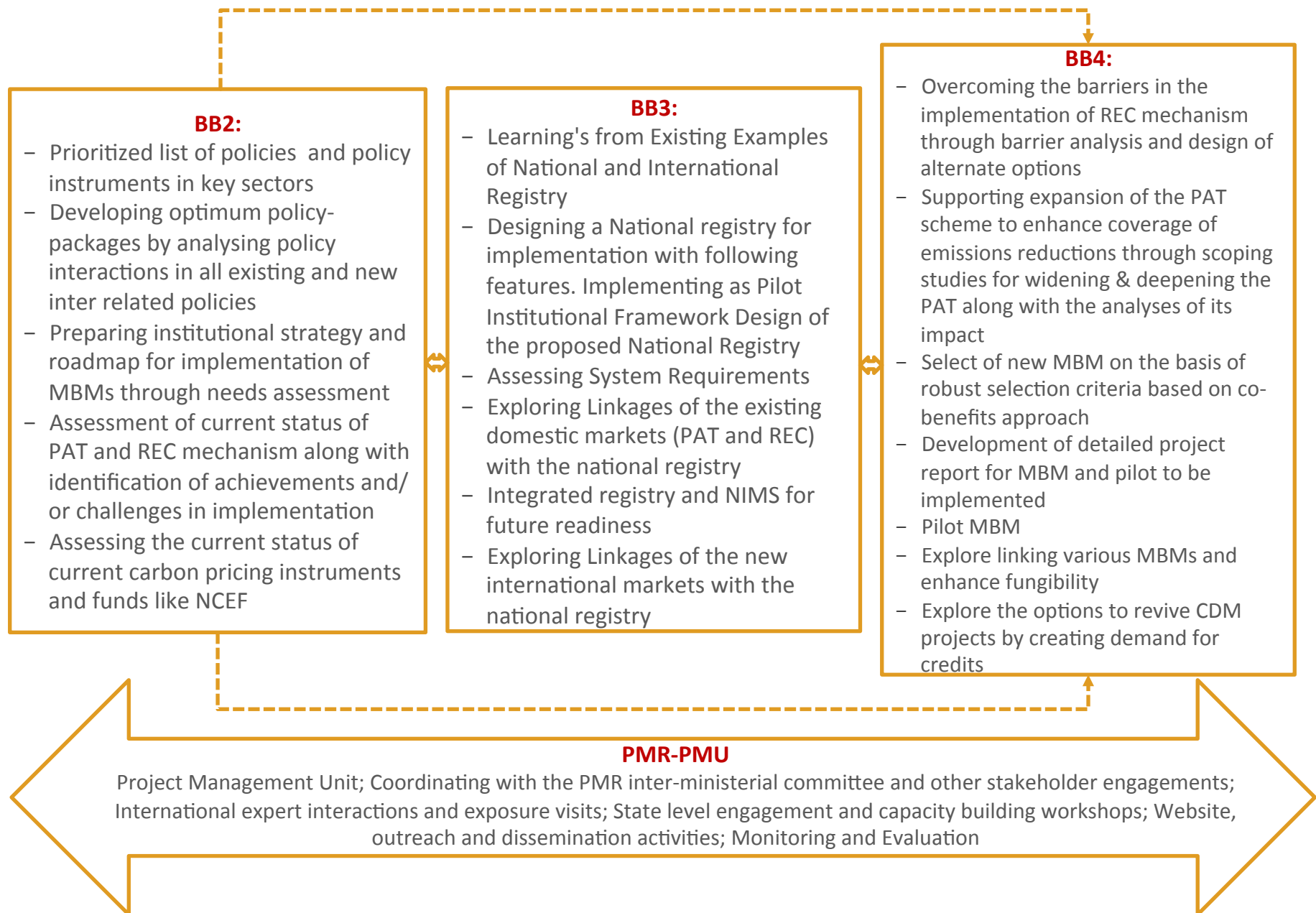
- ◆ Enhance **Market Readiness activities** in India to facilitate implementation of **Market Based Mechanism (MBM)** in line with broader development and climate change goals

 - ◆ Three Key Components of MRP:
 1. **Creation of an integrated National Registry**

 2. **Framework for MBMs activities**
 - Scaling up of existing MBMs
 - Revive CDM projects in India through creation of demand
 - New MBMs: Select, design, pilot
 - Fungibility of MBMs

 3. **Explore interlinking of new MBMs to existing MBMs, the registry and the NIMS**
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SUMMARY OF ACTIVITIES



BB 2: MITIGATION POLICY LANDSCAPE

MRP TARGET AREAS: ASSESSMENT AND RATIONALE

- ◆ Mitigation policy landscape
 - National Action Plan on Climate Change
 - Existing Instruments: PAT, REC, NCEF amongst others
 - Low Carbon Committee Report provides a number of policy options to be implemented by 2030
 - ◆ These needs to be revisited in light of India's INDC
 - ◆ India's ambitious INDCs can be achieved through a combination of SMART (Specific, Measurable, Assignable, Realistic and Time-related) policies
 - ◆ New Studies to identify
 - What will be the role of market instruments in achieving INDC targets?
 - What will be the GHG mitigation potential of such market instruments?
 - What is the link between sectoral mitigation policies and achievement of future NDCs ?
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LIST OF KEY ACTIVITIES

1. Prioritize list of policy instruments in key sectors
 2. Develop and select optimum policy-packages by analysing policy interactions
 3. Assessment of technological, infrastructural, legal and regulatory needs at the national level
 4. Assessment of current status of the PAT scheme, the REC scheme and the NCEF in order to
 - Share learnings with other countries
 - Scale-up and/or improvise existing schemes
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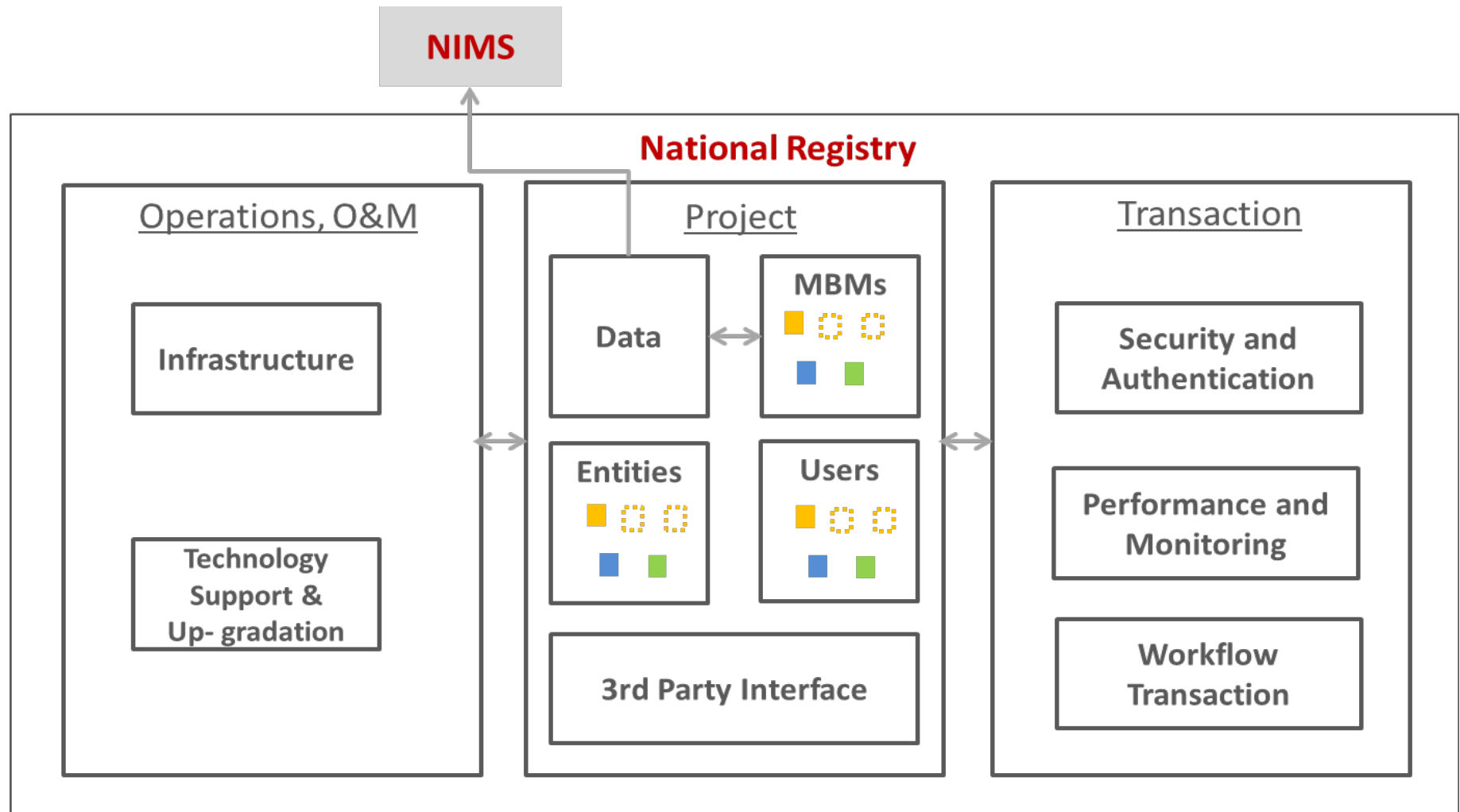
BB 3: CORE MARKET READINESS COMPONENTS

NATIONAL REGISTRY: OBJECTIVES

- ◆ Develop **systems and processes** to collect, organize, report, and analyze the necessary data to support the MBMs
- ◆ Implement **hosting infrastructure** with specific functional and non-functional requirements including adequate security controls
- ◆ Provide **adequate flexibility provisions** to support future MBMs, link various MBMs together, and to link the registry with the NIMS.

Proposal is designed to build a robust system and 'future-proof' the system in a phased approach, comprising of 1) design, 2) prototype and 3) pilot phase

NATIONAL REGISTRY: COMPONENTS



Infrastructure creation: No-Regrets Approach

LIST OF KEY ACTIVITIES

1. Institutional Framework Design of the proposed National Registry
 2. Assessing and Implementing System Requirements for registry
 3. Exploring Linkages of the existing domestic markets (PAT and REC) with registry
 4. Exploring Linkages with NIMS through Database Management System of registry
 5. Exploring Linkages with the new international markets
-

BB 4: FRAMEWORK FOR DESIGNING NEW MBM

PLANNING FOR A MARKET-BASED INSTRUMENT

- ◆ Expanding the scope of existing MBMs
 - Future PAT Cycle (Deepening and Broadening of PAT)
 - Scale-up REC mechanism (Off-grid REC Mechanism)
 - Reviving CDM projects and creating new demand

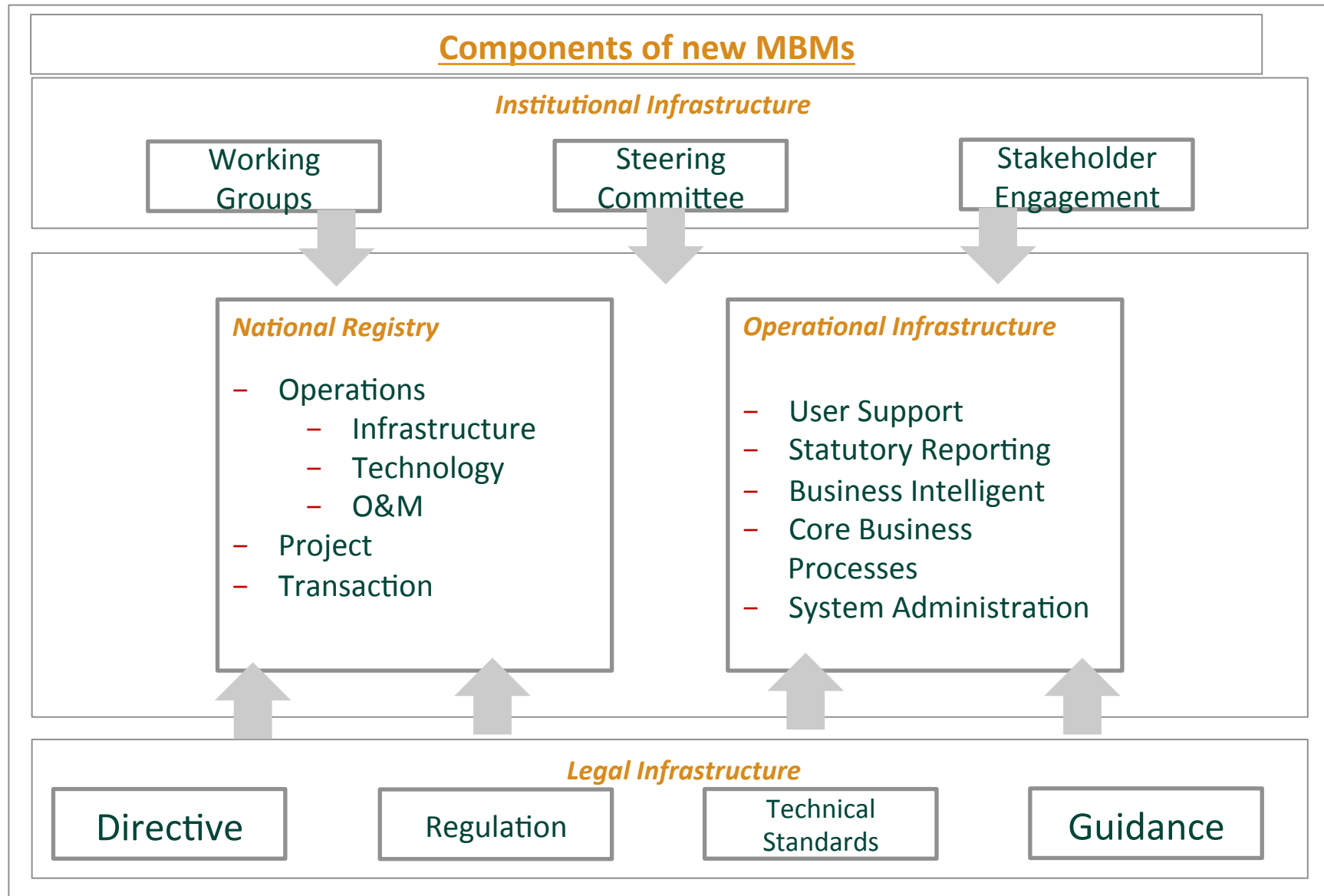
 - ◆ Framework of designing Market-Based Mechanisms
 - Selection of a new MBM
 - Design of a new MBM
 - Piloting new MBM

 - ◆ Linking of domestic MBMs
 - Co-benefits approach to link carbon market
 - Linking the PAT scheme with carbon market
 - Linking the REC scheme with carbon market
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SELECTION CRITERIA FOR NEW MBMS

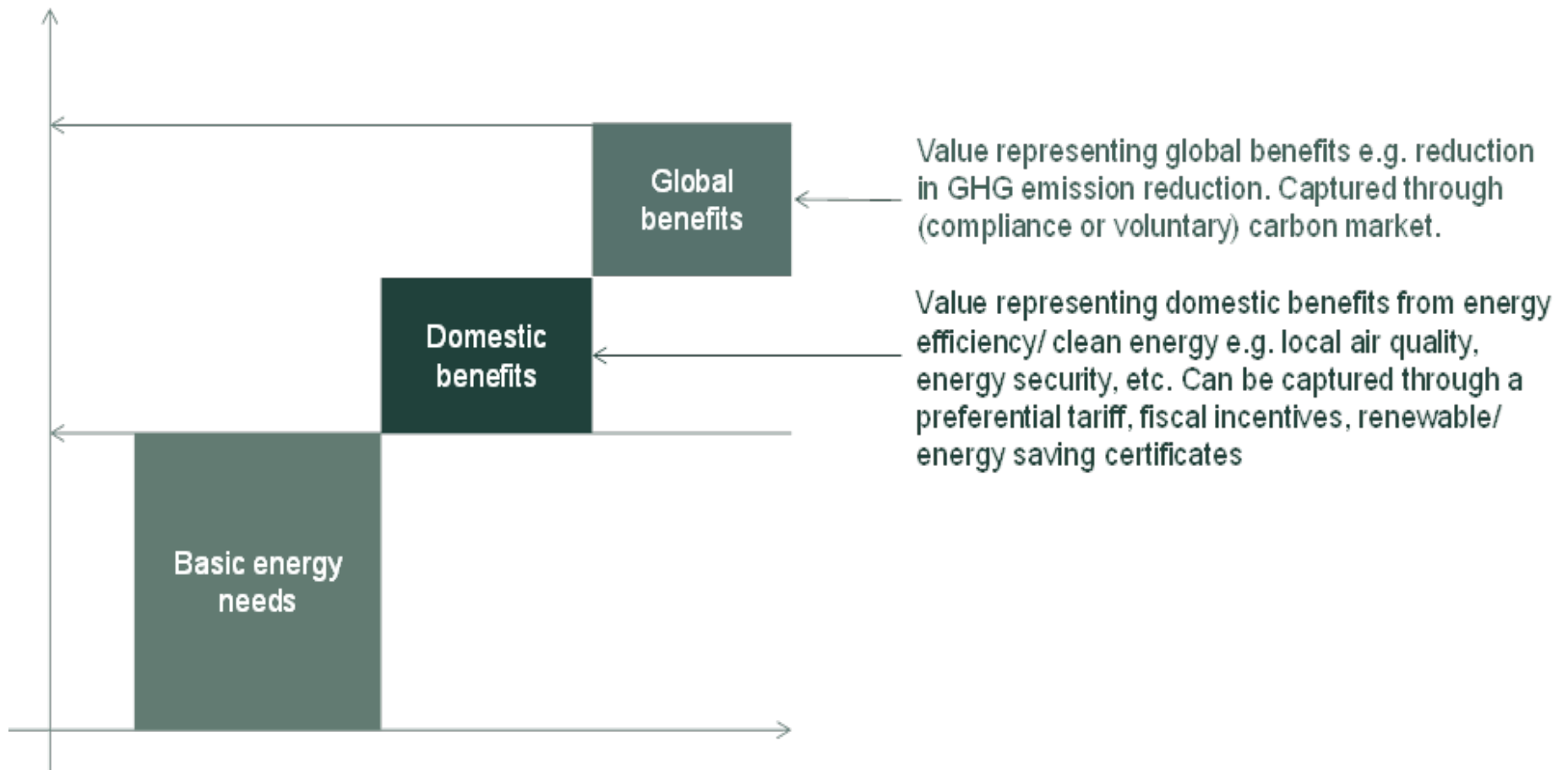
- ◆ **Ease of Implementation:** including issues such as availability of data in the sector and MRV ability, determination of baseline, etc.
 - ◆ **Political and social acceptance:** Acceptance by all relevant stakeholders, including the private sector.
 - ◆ **GHG mitigation potential, Other SD and environmental benefits:** Potential to mitigate GHG emissions from the MBM and achieve other co-benefits is important.
 - ◆ **Cost Effectiveness:** The MBM should impose the least possible burden on the economy.
 - ◆ **Policy interaction:** It is important to assess if there are possible trade-offs and complementarities with other policies.
 - ◆ **Alignment with national targets:** The MBM must contribute towards fulfilment of national objectives and priorities.
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COMPONENTS OF NEW MBM



CO-BENEFITS APPROACH TO LINK MARKETS

- ◆ Unbundle co-benefits (environmental and developmental) and monetize the value of these benefits at the domestic and global level



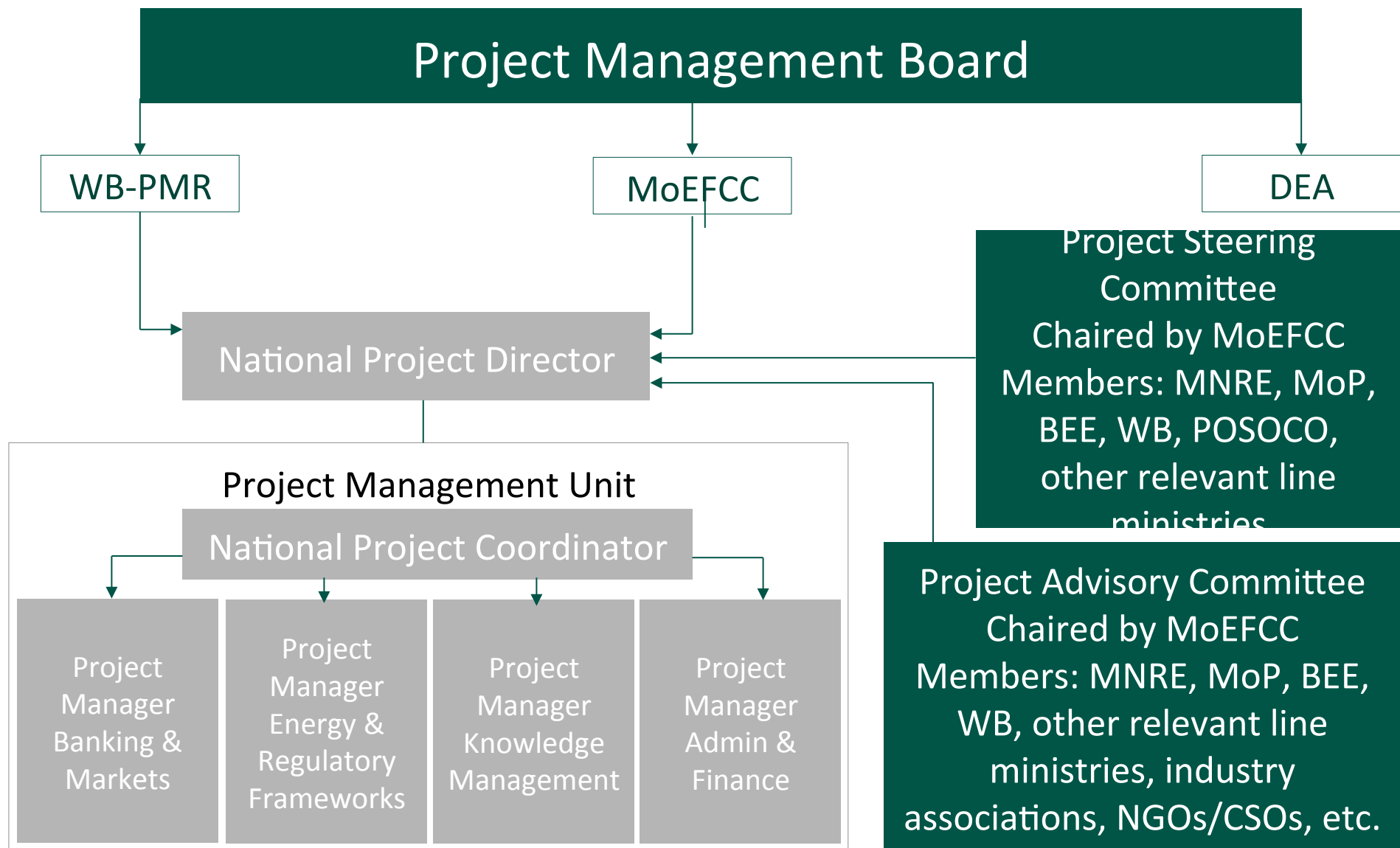
LIST OF KEY ACTIVITIES

1. Overcoming the barriers in the current schemes
 2. Supporting the expansion of existing mechanisms to enhance coverage & effectiveness
 3. Designing of a new MBM
 4. Piloting the new MBM
 5. Linking of various domestic markets or 'Networking' of various domestic markets
 6. Reviving projects in the CDM pipeline and creation of demand for credits from existing projects
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BB 5: PROJECT MANAGEMENT AND OUTREACH

PROJECT MANAGEMENT AND OUTREACH

PMR-PMU



ACTIVITIES AND SCHEDULE (1/2)

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ACTIVITIES AND SCHEDULE (2/2)

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SUMMARY OF BUDGET

Total PMR Funding request of Eight million US\$

Summary						
Building Block	Estimated Cost (in US\$)				Funding Source (in US\$)	
	Year 1	Year 2	Year 3	Total	PMR	Govt
BB 2	700000	0	0	1211000	700000	511000
BB 3	1200000	950000	250000	3312000	2400000	912000
BB 4	950000	1700000	750000	4702000	3400000	1302000
BB 5	537000	542000	452000	2491230	1531000	960230
Total	3387000	3192000	1452000	11716230	8031000	3685230

Indian government will compliment complement the PMR funding with an in-kind contribution of 3.7 million US\$

Thanks

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Annex

MRP: SUMMARY

MRP

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graph TD; MRP[MRP] --- BB1[BB1. The Big Picture: Policy Context]; MRP --- BB2[BB2. Mitigation Policy Landscape]; MRP --- BB3[BB3. Creation of National Registry]; MRP --- BB4[BB4. Framework for Designing New MBMs]; MRP --- BB5[BB5. Project Management and Outreach]; MRP --- BB6[BB6. Summary of Schedule and Budget];
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BB1.

The Big
Picture:
Policy
Context

BB2.

Mitigation
Policy
Landscape

BB3.

Creation of
National
Registry

BB4.

Framework
for
Designing
New MBMs

BB5.

Project
Manageme
nt and
Outreach

BB6.

Summary
of Schedule
and Budget

NATIONAL ACTION PLAN ON CLIMATE CHANGE



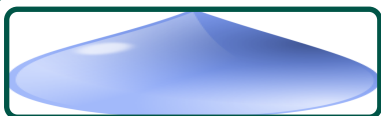
Jawaharlal Nehru National Solar Mission



National Mission for Enhanced Energy Efficiency



National Mission on Sustainable Habitat



National Water Mission



National Mission for Sustaining the Himalayan Ecosystem



National Mission for Green India

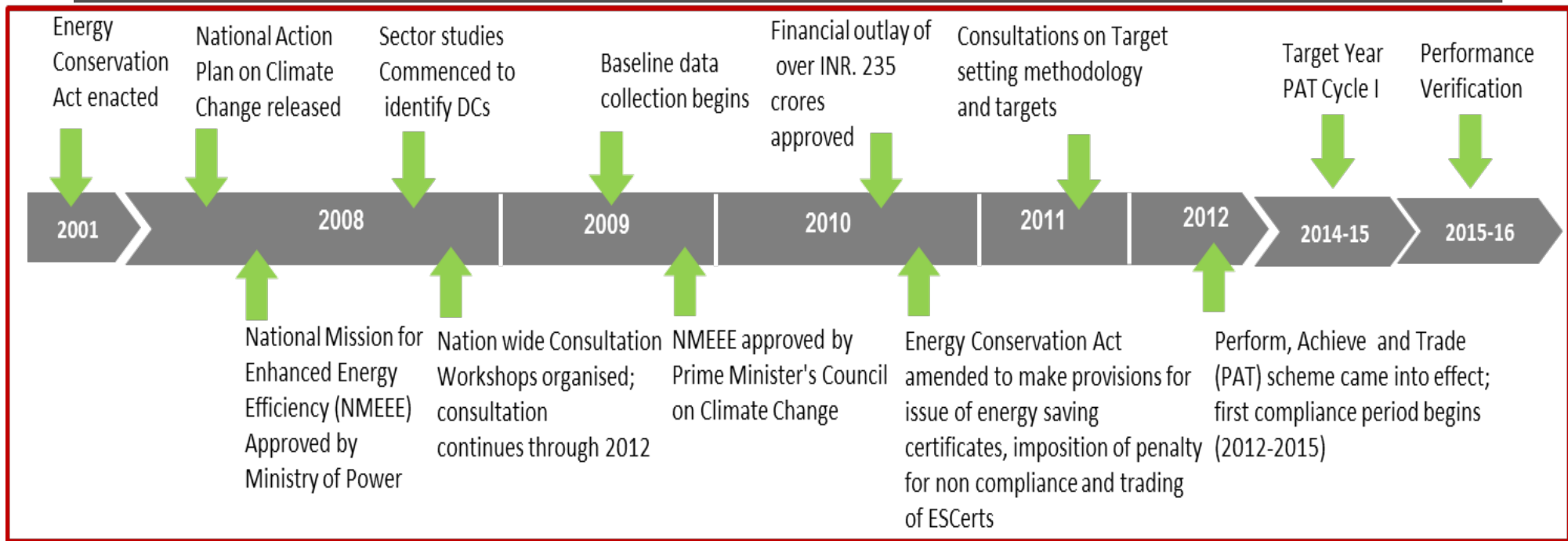


National Mission on Sustainable Agriculture



National Mission on Strategic Knowledge for Climate Change

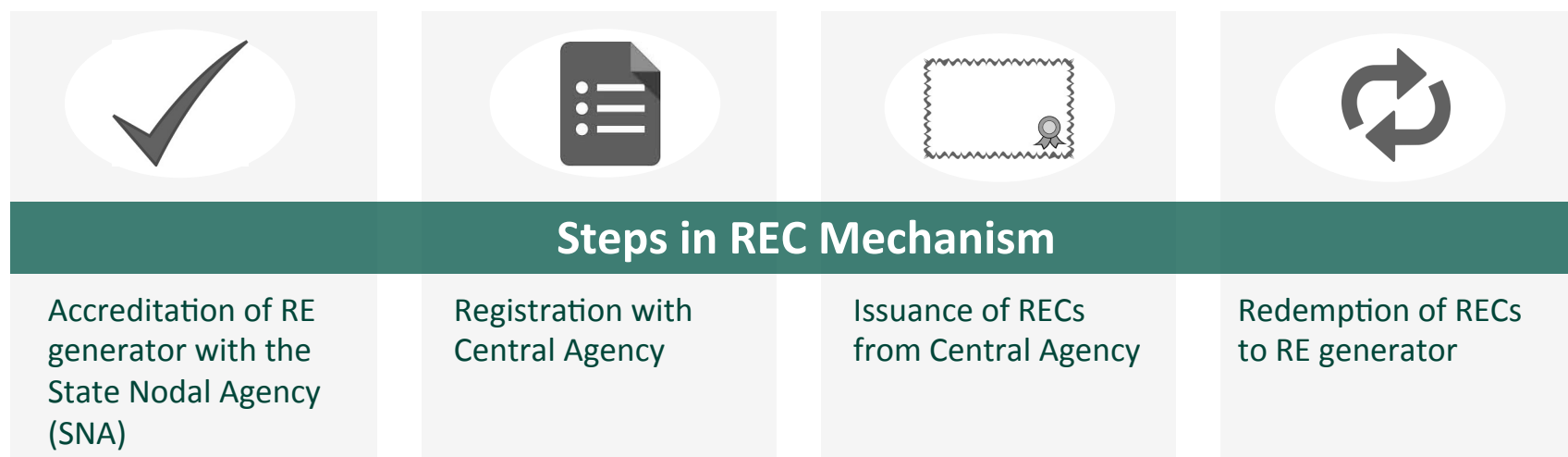
1) PERFORM ACHIEVE AND TRADE (PAT) SCHEME



- ◆ Specific Energy Consumption (SEC) targets mandated for 478 units in 8 energy intensive industries
- ◆ When industrial units achieve and surpass their target, they can sell their excess in the form of ESCerts. If industrial units fail to achieve their targets, they must purchase the appropriate number of ESCerts to 'meet' their target, or pay the penalty
- ◆ The face value of each ESCert is one metric ton of oil equivalent (mtoe)
- ◆ Trading is anticipated to take place in November 2016.

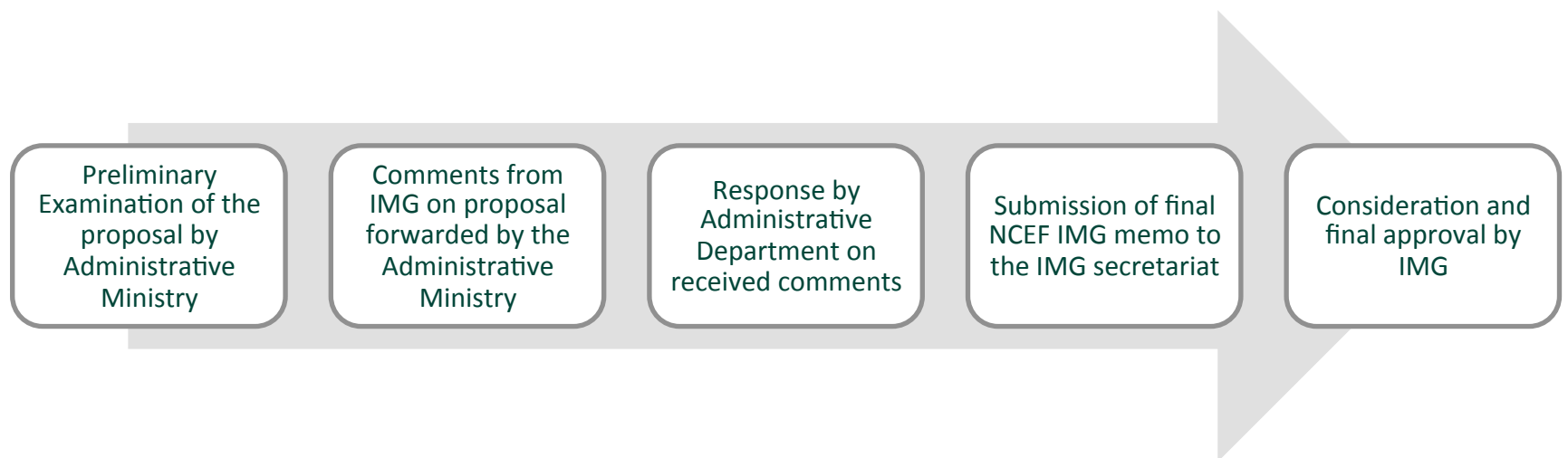
2) RENEWABLE ENERGY CREDIT MECHANISM

- ◆ Market-based instrument which facilitates trading and provides means for fulfilment of Renewable Purchase Obligations (RPO)
 - Effective implementation of RPO in all states in India
 - Increased flexibility for participation to carry out RE transactions
 - Overcoming geographical constraints to harness available RE resources
 - Reduction in transaction costs for RE based power
 - Creation of competition among different RE technologies
- ◆ CERC has designated the National Load Dispatch Center (NLDC) as the Central Agency for implementation of the REC Mechanism in India.

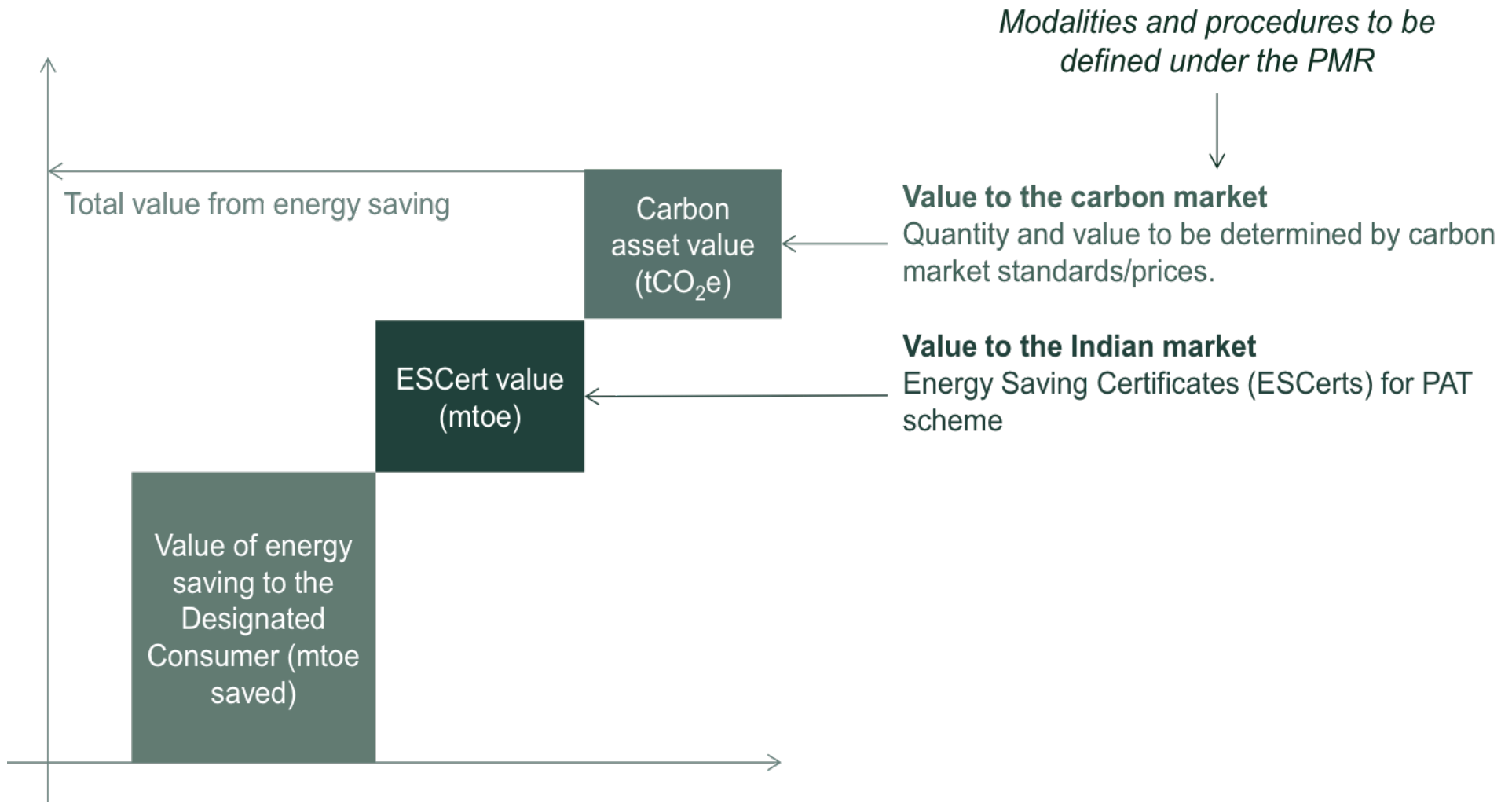


3) NATIONAL CLEAN ENVIRONMENT (ENERGY) FUND

- ◆ Based on the polluter pays principal is a unique mechanism which taxes traditional fossil fuel to put a positive thrust on development of clean energy
- ◆ Proposed in Union Budget 2010-11 for funding research and innovative projects in clean energy technology generated through the levy of a Clean Energy Cess of Rs. 50 per tonne on coal produced domestically and imported to India
- ◆ The cess was further raised twice and now stands at Rs. 400 per ton of coal
- ◆ Ministry of Finance acts as the Secretariat for the NCEF and is the agency responsible for disbursing NCEF funds
- ◆ Proposals are initially appraised by the line ministry, then by the Ministry of Finance, and finally by the Inter Ministerial Group



LINKING THE PAT SCHEME WITH CARBON MARKETS



LINKING THE REC SCHEME WITH CARBON MARKETS

