



# India's Climate Policy Progress since the Paris Agreement

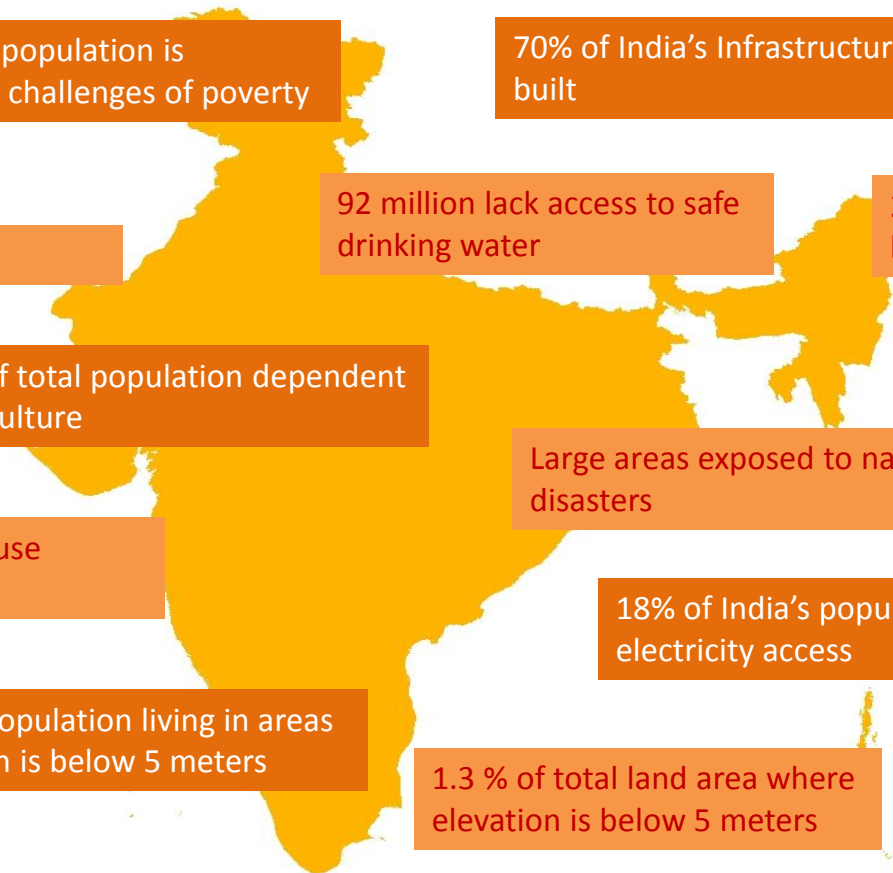
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# India's Development Challenges and National Circumstance

India constitutes of about 17.5% of world's total population over 2.4% of total surface



30% of India's population is grappling with challenges of poverty

70% of India's Infrastructure is yet to built

India's HDI at only 0.6

92 million lack access to safe drinking water

20% of India's population lack proper housing

58.4% of total population dependent on agriculture

Large areas exposed to natural disasters

49% of households still use firewood for cooking

18% of India's population lack electricity access

3.8 % of total population living in areas where elevation is below 5 meters

1.3 % of total land area where elevation is below 5 meters



# India's INDC Commitment

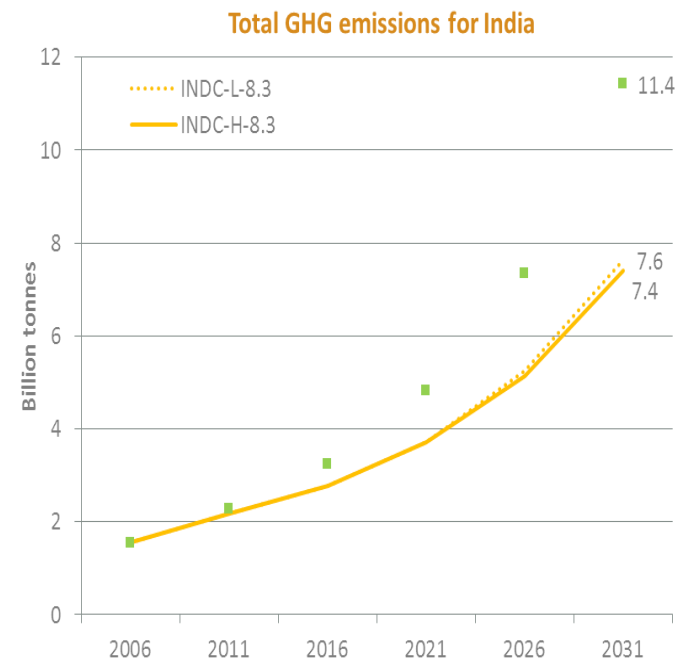
## Goal:

To reduce the emission intensity of its GDP by 33 – 35% by 2030 over 2005 levels

A jump of 75% in ambition over 2020

Avoided emissions of approx 3.59 billion tonnes of CO<sub>2</sub> eq over BAU

- Massive Renewable Energy Programme
- Decarbonize transportation sector (Hybrid Vehicle Policy)
- Maximize energy efficiency benefits
- Phasing down of HFCs by 85% by 2047
- Promoting Climate Actions by Businesses
- Greener Buildings and Climate Resilient Urban Centers
- Swachh Bharat Mission, Cleaning of rivers, Zero Effect Zero Defect, Make in India
- Domestic market based schemes – PAT and REC





# Increase share of non-fossil fuel based electricity

## Goal:

To achieve 40% of electric power installed capacity from non-fossil fuel by 2030

A jump of 33% over non-fossil fuel capacity share of 2015

- Largest renewable capacity addition programme in the world - The 175 GW target by 2022 will result in abatement of 326 million tons of CO<sub>2</sub> equivalent/year. More progress after 2022 – Currently at 58.3 GW
- Solarization of all petrol pumps, toll plazas across country - By March 2017, rooftop solar units had been installed in 1,001 of IOCL's retail outlets – More to come
- Ongoing scheme for development of Solar Parks, Ultra Mega Solar Power Projects, Canal top solar projects, 100,000 Solar Pumps for farmers
- India to anchor a **Global Solar Alliance**
- New missions on wind energy and waste to energy
- Green Energy Corridor projects being rolled out to ensure evacuation from renewable energy plants – Collaboration with German Government
- Policy and regulatory incentives provided to accelerate RE deployment



# Enhancing Forest Carbon Sink

## Goal:

To Create additional carbon sink of 2.5 -3 billion tons of CO<sub>2</sub> equivalent through additional forest and tree cover (increase of about 680 - 817 million ton of carbon stock)

- Full implementation of Green India Mission - Increased forest/tree cover on 5 MHA of forest/non-forest lands and improved quality of forest cover on another 5 MHA (totalling 10 MHA).
- Launched Green Highways Policy: 140,000 km long “tree-line” along both sides of national highways -1% of project cost to be earmarked for plantation
- Plantation along Rivers: part of the Namami Gange Mission
- Finance Commission (FC) Incentive for creation of carbon sink: devolution of funds to states from federal pool (attaches 7.5 % weight to area under forest).
- Reduction in consumption of wood/ biomass as fuel – **Government’s Ujjwala Scheme**
- Funds from Compensatory Afforestation Fund Management and Planning Authority (CAMPA): USD 6 billion proposed to be given to States
- Other Policies including: REDD-plus, National Agro-forestry Policy (NAP), Joint Forest Management, National Afforestation Programme
- E- green watch scheme - A web portal has been put in place to monitor plantation and the growth of seedlings

# Climate Change Adaptation



## Goal:

To better adapt to climate change by enhancing investments in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources, Himalayan region, coastal regions, health and disaster management

- Strategies and initiatives include actions in agriculture, water, health, coastal region & islands, disaster management, protecting biodiversity and Himalayan ecosystem and securing rural livelihood
- New missions on Health and Coastal Areas. Redesigning National Water Mission & National Mission on Sustainable Agriculture
- India has set up a INR 350 Crores (USD 55.6 million) National Adaptation Fund- Rs. 212.29 Crores sanctioned so far for 21 projects.
- To strengthen agricultural insurance – Pradhan Mantri Fasal Bima Yojana has been introduced
- Coastal region- early warning systems, vulnerability studies for infrastructure and communities



# Mobilizing Finance

## Goal:

To Mobilize Domestic and New & additional funds from developed countries to implement the above mitigation and adaptation actions in view of the resource required and the resource gap.

USD 2.5 Tr (at 2014-15 prices) required for meeting India's CC actions between now and 2030

- RBI introduced priority sector requirements for banks to allocate 40% of lending to key socially important sectors to which lending to social infrastructure and small RE projects were included in 2015.
- SEBI introduced framework for issuance of green bonds – Currently market stands at 5 bn USD
- BSE Developed Green Indices for integrating sustainability in business operations – GREENEX and CARBONEX – 25 large companies
- Odisha state water sector adaptation project sanctioned by Green Climate Fund with a total grant of USD 34.4 million benefitting about 52 lakh vulnerable people – overall project outlay is 166.29 mn USD
- 6 projects submitted by NABARD have been approved by Adaptation Fund board with an outlay of 9.8mn USD – to benefit 77,225 vulnerable people over 6 states



# Technology Development and Transfer

## Goal:

To build capacities, create domestic framework and international architecture for quick diffusion of cutting edge climate technology in India and for joint collaborative R&D for such future technologies.

- Critical technologies need to be facilitated via GCF
- Global collaboration in R&D and Role of Networks
- Preliminary and Illustrative list of select technologies given in India's INDC
- As part of mission on strategic knowledge on climate change, India has established 8 Global Technology Watch Groups in the areas of RE Technology, Advance Coal Technology, Enhanced EE, Green Forest, Sustainable Habitat, Water, Sustainable Agriculture and Manuf.
- EV policy is a strong signal to promote R&D in storage technology,
- Technology Vision 2035
- Business models for super efficient technologies (LEDs, Super efficient Acs, Fans etc.)
- Coal Cess Fund set up to promote uptake of technologies



# Cleaner Economic Development and Sustainable Lifestyle

## Goal:

To adopt a climate friendly and a cleaner path than the one followed hitherto by others at corresponding level of economic development

To put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation



- At comparable levels of income, India's Growth Path much more cleaner and greener & will continue to be so
- India's current per capita GDP in PPP terms (Purchasing Power Parity) achieved at a substantially lower level of emissions compared to developed countries
- Draft electricity policy identified more than 30GW of coal based power plant to be retired/retrofitted
- Emission Intensity of **Developed countries at similar economic level** as India's today was approx. **0.9 kgCO2/\$ while India is at 0.36 KgCO2/\$** (about 60% lesser)
- Promote "Sustainable Lifestyles" based on needs based consumption.
- Thirty-two States and Union Territories have put in place the State Action Plan on Climate Change attempting to mainstream climate change concerns in their planning process.

# Other Cross Cutting policies

- Under the new GST Tax regime, renewable energy sector- particularly solar equipments- panels, modules, inverters have been incentivized – GST has been set at the lowest rate of 5%
- The government has launched “Skill India” with the target to provide skill training in various sectors including sustainable development to about 400 million people by 2022.
- Zero Effect, Zero Defect is a policy initiative to enhance energy efficiency and resources efficiency in Medium & Small Industries.
- India led successful negotiations of Kigali amendments in the Montreal Protocol for phasing down of HFCs. These provide enough carbon space and time for growth of various sectors. India led successful negotiations of Kigali amendments in the Montreal Protocol for phasing down of HFCs. These provide enough carbon space and time for growth of various sectors – National Cooling Action Plan
- Recent policy initiatives of the government include, 5-10% Ethanol blending in petrol,
- increasing efficiency of coal power plants, and more efficient public transport. We are leapfrogging from Bharat Stage IV (Euro IV) to Bharat Stage VI (Euro VI) standards for vehicular emissions by 2020.
- 100 smart cities are being designed to capture recent innovations in climate resilient infrastructure including digitizing India

Thank you