



# India's INDCs

Reference Questions & Answers

The following document summarises India’s position on questions surrounding the Intended Nationally Determined Contributions (INDCs) that the nation submitted to UNFCCC, and on the associated issues on the climate change discussion.

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## A. INDIA'S INDCs

### **Question 1. What are the key elements and focus areas of India's INDCs?**

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India's INDCs centre around the country's policies and programmes for:

- a. Sustainable Lifestyles
- b. Cleaner Economic Development
- c. Reducing Emission intensity of Gross Domestic Product (GDP)
- d. Increasing the Share of Non Fossil Fuel Based Electricity
- e. Enhancing Carbon Sink (Forests)
- f. Adaptation
- g. Mobilizing Finance
- h. Technology Transfer and Capacity Building

The INDCs also capture citizens' and private sector's contributions to combatting climate change. Accordingly, India has developed a comprehensive and balanced set of actions for its INDCs for the period of 2021-2030 to comprehensively address mitigation as well as adaptation components. These include:

- 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 CO<sub>2</sub> equivalent
- d. Making concerted efforts toward adapting to climate change by enhancing investments in development programmes in various vulnerable sectors, including agriculture, water resources, forestry, health and disaster management
- e. Building capacities while adopting and deploying new energy efficient technology, and other technologies to reduce carbon emissions
- f. Mobilise resources to execute our plans for combatting climate change across sectors
- g. Adopt and promote low carbon-intensive lifestyles on a mass scale through sustainable living based on traditions and values of conservation and moderation

### **Question 2. How will the revised renewable energy mix affect India's residents and citizens?**

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The revised renewable energy mix will benefit India's residents. India is working to ensure that each Indian household has access to electricity by 2030.

India's climate change actions will not impede its overall development ambitions, but will enable the individual growth aspirations of its citizens. Renewable energy will play a central role in bridging the supply and demand gaps in its current energy landscape.

We are even working towards achieving economies of scale in renewable energy production to this effect. The success of these efforts are evident in the near 100% reduction in costs for producing solar energy over time.

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**Question 3. Will India's INDCs affect the poor?**

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India's actions towards addressing climate change will have a strong development impact. We believe that efforts towards enabling the growth of the poor out of poverty trap is an important part of tackling climate change, and the opportunities for the two efforts to complement each other are significant.

To that effect, all the efforts outlined in our INDCs - increasing clean energy production and access, deploying new energy efficient technologies, and adapting to low carbon-intensive lifestyles - are targeted at creating opportunities for sustainable livelihoods, and sustainable development for the poor throughout India.

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**Question 4. Why has India not specified any targets for the agriculture sector in its INDCs?**

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India's INDCs do not bind it to any sector-specific mitigation obligations or actions. However, specifically for the agriculture sector, India's INDCs aim to transform this sector into an ecologically-sustainable climate-resilient production system that is able to overcome issues of food security while harnessing its fullest potential. The National Mission on Sustainable Agriculture, which is part of our National Action Plan on Climate Change, will focus on developing rainfed areas, enhance efficient water consumption on farms, promote sustainable soil health management, and disseminate climate-change related monitoring and modelling information and knowledge to the country's agricultural producers.

Developing an ecosystem for sustainable agriculture is a core part of the adaptation efforts included in the INDCs.

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**Question 5. How are India's INDCs different from other countries'?**

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India's INDCs have a strong focus on climate change adaptation. Of the 8 missions outlined in India's National Action Plan on Climate Change, 4 efforts are focused on adaptation efforts –sustainable agriculture, increasing water use efficiency, sustaining the Himalayan ecosystem and creating sustainable habitats. No other country has been able to dedicate the same level of focus and effort on adaptation on as large a scale as India.

Furthermore, India has also outlined the financial implications of the climate change goals, in addition to outlining its plan for developing and enabling technology transfers to facilitate INDC achievement.

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**Question 6. Why did India choose to release its INDCs on Gandhi Jayanti?**

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India's approach to INDCs has been anchored in the vision of equity inspired by the Father of our Nation Mahatma Gandhi's famous exhortation, "Earth has enough resources to meet people's needs, but will never have enough to satisfy people's greed," The release of India's INDCs on his birth date commemorates not only his vision for India's development, but also his principles for sustainable living. Formulated under the leadership and guidance of Hon'ble Prime Minister, Shri Narendra Modi, India's INDCs encapsulate the importance of sustainable living.

## B. INDIA'S CAPABILITIES FOR ACHIEVING INDCS & CLIMATE CHANGE TARGETS

### **Question 7. Are India's INDCs ambitious enough?**

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India has significantly scaled up its emissions reductions targets to 33-35% by 2030, amongst the highest across developing countries. India is running one of the largest renewable capacity expansion programs in the world. The share of non-fossil fuels in India's total installed capacity is projected to increase from 30% in 2015 to about 40% by 2030. Additionally, the ratio of India's per capita greenhouse gas emissions to GDP will be significantly smaller than other nations'.

India's INDCs are synchronised with its development goals and simultaneously reflect its bold vision for combatting climate change. India's contribution also helps in meeting its commitment towards conserving nature, and to the imperatives of meeting competing demands for the sustainable development goals for its 1.2 billion people. These goals include poverty eradication, food and nutrition security, universal access to education and health, gender equality and women empowerment, water and sanitation, energy, employment, and sustainable habitats.

The INDCs are indicative of our foremost composite efforts, given the resources and capacities towards this endeavour in the face of climate change.

### **Question 8. Are India's INDCs achievable?**

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Hon'ble Prime Minister Modi has a galvanising vision that provides a robust force for achieving India's INDCs. India will showcase its leadership and resolve in combating climate change through the achievement of its past, present, and future ambitions in this arena.

India has developed its INDCs in accordance with its existing resources and capabilities and expedite international support. India's plans for achieving these INDCs take into account the decreasing costs of renewable energy and enhanced action. International technology partnerships and support from the UNFCCC financial mechanisms are also important pillars in this effort.

### **Question 9. What will it cost India to implement the INDCs in its totality? Does India have the resources to implement its INDCs? How does India plan to mobilise necessary resources?**

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Preliminary assessment indicates the fund requirement for implementing INDC's to be approximately USD 2.5 trillion between 2015 and 2030. The costs for achieving India's INDCs is difficult to estimate at this juncture, and even eminent think tanks have given significantly large ranges for costs of India's mitigation and adaptation needs. Nonetheless, India's INDCs have been developed based on its existing resource and capacity base, and with due consideration to its growth and development plans.

India plans to mobilise necessary resources through various domestic budgetary, private, institutional and international sources. The majority of the share of India's current climate finance comes from budgetary sources, as most of the resources for adaptation and mitigation are built into the ongoing sectoral programmes. The availability of funds for climate change actions is largely guided by the overall resources available with and the requirements of different sectors.

Additionally, India is experimenting with a careful mix of market mechanisms, together with fiscal instruments and regulatory interventions to mobilise finance for climate change. The Government of India has set up two dedicated funds at the national level – National Clean Environment Fund financed by a carbon tax equivalent cess of INR 200 (USD 3.2) on each tonne of coal, and a National Adaptation Fund on Climate Change. The National Clean Environment Fund, with a collection of INR 170.84 billion

(USD 2.7 billion) is being used for 46 clean energy projects worth INR 165.11 billion (USD 2.6 billion), while the National Adaptation Fund is being used to address adaptation needs in sectors like agriculture, water, forestry etc., with an initial allocation of INR 3,500 million (USD 55.6 million).

India has allocated significant resources to the cause of climate change in spite of its competing needs. In its quest for development, India will not pursue the developmental paradigm followed by the developed countries in the past which is resource and energy intensive. India is willing to consider adopting models of development alternative to these - to the best of its capabilities - in the interest of the global movement of climate change action. However, India's transition should also be viewed and adequately supported as a collective enterprise by other nations.

Substantial scaling up of India's plans for climate change action would also require more resources. Developing countries like India are resource-constrained and are already spending enormous amounts on climate change. Implementing climate change actions would require developed countries to fulfill their pledges and obligations in view of existing resource gaps. The international community must fulfill their commitment of collectively contributing USD 100 billion annually by 2020 towards the Green Climate Fund and then suitably scale it up beyond 2020

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**Question 10. Will India's INDCs be implemented only by the government?**

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A wide variety of stakeholders need to contribute towards achievement of India's voluntary pledge. Indian citizens and industry will play a central role by adopting less carbon-intensive lifestyles, and energy efficient technologies and practices. An enabling policy environment and leadership from the energy industry will help further increase the share of renewables in the energy mix, and mobilize new and additional resources for combatting climate change.

We hope that each individual in India will partner with the government towards reducing our carbon intensity, and to limiting our carbon footprint, in our efforts towards holistic sustainable development and growth.

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**Question 11. What is the role of the State machinery in implementing the INDC?**

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The broad policy initiatives of the Central government are supplemented by actions of the State Governments, Non-governmental Organisations (NGOs), initiatives of the private sector and other stakeholders. The Centre has consistently encouraged the state governments to develop and submit individual State Action Plans - 32 States and Union Territories have put in place the State Action Plan on Climate Change (SAPCC) to mainstream climate change concerns in their planning process. A competitive environment and guidelines for advancing mitigation and adaptation efforts have also been introduced and supplied to the state governments.

Even though India has not indicated any subnational targets, we encourage the states to initiate independent action, with the Central government providing precedent conditions for programmes. A collective effort from all corners of the country will enable States to become players in not only a national, but a truly global effort towards combatting climate change.

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**Question 12. What is the institutional arrangement for implementing INDCs?**

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A series of measures have been undertaken by the government to drive domestic action on climate change including reconstitution of the Prime Minister's Council on Climate Change (PMCCC). Taking into account the need of the hour, PMCCC decided to enhance the ambition of all national missions under NAPCC with respect to adaptation, mitigation and capacity building. An Executive Council on Climate Change has also been set to support PMCCC. In addition, the government has set-up a

National Steering Committee for Climate Change Adaptation Programme. Different departments have established their own mechanisms for implementing and monitoring climate change action.

To augment the availability of assured targeted resources, Government of India has set up two dedicated funds at the national level for mobilising financing for mitigation and adaptation respectively viz. National Clean Environment Fund and the National Adaptation Fund on Climate Change. Multilateral institutions like the World Bank, ADB etc will also play a prominent role in implementation of India's INDCs.

**Question 13. How does India plan to achieve its target for achieving its renewable energy capacity?**

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Renewable energy sources are a strategic national resource. Harnessing these sources will put India on the path to a cleaner environment, energy independence, and a stronger economy. The renewable energy technologies contribute to better air quality, reduce reliance on fossil fuels, curb global warming, add jobs to the economy and, protect environmental values such as habitat and water quality. Over the years, India has successfully created a positive outlook necessary to promote investment in, demand for, and supply of, renewable energy. India's strategy on renewable energy is driven by the objectives of achieving energy security, increasing energy access and reducing the carbon footprint of the national energy systems. It has evolved over the years through increasingly stronger commitment at federal level.

The institutional arrangement for offtake of renewable energy power will be further strengthened by Renewable Purchase Obligations and Renewable Generation Obligations.

India's share of non-fossil fuel in the total installed capacity is projected to increase from 30% in 2015 to about 40 % by 2030. India is running one of the largest renewable capacity expansion programmes in the world. Between 2002 and 2015, the share of renewable grid capacity has increased by over 6 times - from 2% (3.9 GW) to around 13% (36 GW) - from a mix of sources including Wind Power, Small Hydro Power, Biomass Power / Cogeneration, Waste to Power and Solar Power. In normative terms, the CO<sub>2</sub> emission abatement achieved from the renewable power installed capacity was 84.92 million tons CO<sub>2</sub> equivalent per year as of 30 June 2015.

To accelerate development and deployment of renewable energy in the country, the Government is taking a number of initiatives like up-scaling of targets for renewable energy capacity addition from 30GW by 2016-17 to 175 GW by 2021-22. The renewable power target of 175 GW by 2022 will result in abatement of 326.22 million tons of CO<sub>2</sub> equivalent per year. The ambitious solar expansion programme seeks to enhance the capacity to 100 GW by 2022, which is expected to be scaled up further thereafter. Efforts will include scaling up efforts to increase the share of non-fossil fuel based energy resources in total electricity mix including wind power, solar, hydropower, biomass, waste to energy and nuclear power.

- Wind power installed capacity to 60-GW by 2022
- Solar power installed capacity to 100-GW by 2022
- Biomass installed capacity to 10-GW by 2022
- Harness hydropower potential of over 100-GW
- Nuclear power installed capacity to 63-GW by 2032

India has also decided to anchor a global solar alliance, International Agency for Solar Policy & Application (InSPA), of all countries located between Tropic of Cancer and Tropic of Capricorn. Solar power in India is poised to grow significantly with Solar Mission as a major initiative of the Government of India. A scheme for developing 25 Solar Parks, Ultra Mega Solar Power Projects, canal top solar



projects and one hundred thousand solar pumps for farmers is at different stages of implementation. The Government's goal of 'Electricity for All' is sought to be achieved by the above programs, which would require huge investments, infusion of new technology, availability of nuclear fuel and international support.

## C. INDIA'S OVERALL APPROACH AND TARGETS FOR CLIMATE CHANGE ACTION

### **Question 14. What are India's plans for climate change mitigation?**

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India plans to reduce its emissions intensity by 33-35% between 2005 and 2030. However, India's actions towards climate change mitigation have a strong development impact. To this effect, it is focusing on accelerating the use of clean and renewable energy by 40% by 2030, and on promoting efficient use of energy. By 2030, we also intend to increase our carbon sinks by creating an additional capacity equivalent to 2.5 to 3 billion tonnes of CO<sub>2</sub> through significant afforestation efforts.

To achieve its targets for increasing reliance on renewable energy, India is running one of the largest renewable capacity expansion programs in world. The efforts feature establishment of solar parks and power projects, anchoring a global solar alliance (InSPA), creation of Green Energy Corridors to ensure evacuation from renewable energy plants, implementation of the National Smart Grid Mission along with new programmes for increasing energy capacities from wind and waste conversion.

India is building its capacity to develop technology that will effectively combat climate change. India is promoting energy efficient technologies, as well as technologies driven by renewable and hybrid energy. Along with the National Mission for Enhanced Energy Efficiency, India's Zero Defect, Zero Effect policy also aims to enhance energy and resource efficiency.

India is also advocating for IPR regimes that will enable global R&D collaborations for development and transfer of clean technologies. India is also looking to develop technologies to enable low carbon growth with special focus on technologies for clean generation from fossil fuels, energy management and storage systems for renewable energy.

India is clear that mitigation efforts should not inhibit growth aspirations. India is focusing on bending the emissions trajectory without compromising the energy requirements that will enable the nation's collective and holistic growth.

### **Question 15. What are India's plans for adapting to climate change?**

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Adaptation measures feature prominently in India's framework for climate change action, and are a part of Indian lifestyles. India's heritage embraces nature, and environmental consciousness is deeply rooted in its traditions. People here have learnt to live in harmony with nature. India has made lifestyle changes an integral part of its solution to climate change in cognisance with its population and economic growth.

Furthermore, India is one of the nations to have implemented measures to adapt to climate change on a large scale. Already, 32 of India's 29 states and 7 union territories have submitted respective State Action Plans on Climate Change, which complement India's National Action Plan on Climate Change (NAPCC). In its NAPCC, the nation has focused 4 of its 8 missions on adaptation efforts, including: a) sustainable habitats; b) optimising water use efficiency; c) creating ecologically sustainable climate resilient agricultural production systems; and, d) safeguarding the Himalayan glaciers and mountain ecosystem.

India's adaptation efforts include initiatives in agriculture, water, health, coastal region & islands,

disaster management, biodiversity and ecosystem protection, and securing rural livelihoods. India is implementing national schemes to promote organic farming, efficient irrigation systems, watershed management, improving soil health and climate resilient agriculture. India has set up the National Adaptation Fund with a corpus of INR 350 Crores (USD 55.6 million) to enable these efforts.

Hon'ble Prime Minister Modi recently stated, "We can achieve the same level of development, prosperity and wellbeing without necessarily going down the path of reckless consumption. It doesn't mean that economies will suffer; it will mean that our economies will take on a different character. It is not about exercise but to discover the sense of oneness with yourself, the world and the nature. By changing our lifestyle and creating consciousness, it can help us deal with climate change."

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**Question 16. Why has India not indicated its peaking year for GHG emissions?**

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Among developing nations, only China has been able to give a peaking year for its emissions, because it has achieved a stage of development that is conducive for making such a commitment. On the other hand, many developing nations, including India, are still in various phases of acceleration in their respective trajectories for economic development, and hence not in an optimal stage of development to formalize a peaking year for carbon emissions.

Additionally, India also needs to balance its development needs with climate change actions. India has pledged to curtail emissions intensity as per its existing resources, capabilities and policies. Developing nations like India need to industrialize and develop to meet the growth aspirations of its people.

As Hon'ble Prime Minister Modi stated in his recent address to the UN General Assembly, "Each country must, of course, take its own national measures; each government must fulfil its responsibility to support growth and development. When we think of the scale of needs in the world - 2.5 billion people without access to basic sanitation; 1.3 billion people without access to electricity; or 1.1 billion people without access to drinking water, we need a more comprehensive and concerted direct international action. In India, the most important aspects of my development agenda are precisely to focus on these issues. The eradication of poverty must remain at the core of the Development Agenda and command our fullest attention."

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**Question 17. Why has India established its targets for reducing emissions intensity, but not its emissions?**

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India accounts for 2.4% of the world surface area, but supports around 17.5% of the world population. It houses the largest proportion of global poor (30%), nearly a quarter of the global population that lacks access to electricity (304 million), and about a third of the global population relying on solid biomass for cooking. Over 90 million of its population lacks access to safe drinking water.

Furthermore, it is expected that about 40% of India's population in 2030 would be urban, as against 30% currently. As population expands and incomes grow, this shift will likely be realised alongside demographic changes that will exponentially increase the demand for urban amenities like housing, energy, transport, water, waste disposal. It is estimated that more than half of India of 2030 is yet to be built.

India's development process is hence doubly challenging, as it not only has to complete the current unfinished development agenda, but also strategise for future pressures that may increase the magnitude of this development gap. India will need to continue increasing its energy consumption to address these development needs. Thus, given its development pressures, India cannot target emissions reductions in absolute terms, but as proportions to its population and economic growth.

However, India's economic growth is guided by a key concern for balancing overall holistic development with sustainability. The average annual energy consumption in India in 2011 was only 0.6 tonnes of oil equivalent (toe) per capita as compared to global average of 1.88 toe per capita. It may also be noted that no country in the world has been able to achieve a Human Development Index of 0.9 or more without an annual energy availability of at least 4 toe per capita. With a HDI of 0.586 and global rank of 135, India has a lot to do to provide a dignified life to its population and meet their rightful aspirations.

Furthermore, even without its targets for emissions reduction, India's per capita emissions in 2030, estimated to be between 4-5.2 metric tonnes of CO<sub>2</sub> equivalent, will still be lower than the current global averages of developed nations, estimated to be 8.98 metric tonnes of CO<sub>2</sub> equivalent.

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**Question 18. What role does India envisage for itself in the global climate change effort?**

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India has been addressing climate change as one of its key national priorities, and has voluntarily taken responsibility to respond to this challenge. India is reducing its emissions intensity through voluntary domestic mitigation and adaptation efforts. Along with stronger commitments to increasing the composition of non fossil fuel in the total installed capacity to 40% by 2030, enhancing energy efficiency and through its 8 missions against climate change, the country has also introduced mechanisms for monitoring air quality and pollution growth. In addition to the eight missions of the NAPCC, the government is also setting up new missions to in the light of new scientific evidence and technological advances on Wind Energy, Health, Waste-to -Energy conversion and Coastal management.

As a result of all of its efforts, the emission intensity of our GDP has decreased by 12% between 2005 and 2010. The energy intensity of the economy has decreased from 18.16 goe (grams of oil equivalent) per Rupee of GDP in 2005 to 15.02 goe per Rupee GDP in 2012 at an annual rate of over 2.5%. In its Emission Gap Report 2014, the United Nations Environment Programme (UNEP) has hence recognised India amongst the countries on track to achieve its voluntary pledges for emission reduction.

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**Question 19. What are the MRV mechanisms for India's INDCs? Is there any new regulatory mechanism in addition to the Environmental Protection Act?**

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India is part of the MRV framework developed by the UNFCCC. Reporting for developing countries is implemented through national communications (NATCOMs) and biennial update reports (BURs). India submitted its Initial NATCOM to the UNFCCC in 2004. India's second NATCOM to the UNFCCC was submitted in 2012. India is going to submit its first Biennial Update Report (BUR) to UNFCCC in 2015. BURs provide an update of the information presented in NATCOMs, in particular on national GHG inventories, mitigation actions, constraints and gaps, including support needed and received. Verification of reports is addressed at the international level through the process of international consultation and analysis of BURs. This is to increase the transparency of mitigation actions and their effects as well as support needed and received.

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**Question 20. Would India adopt a domestic cap and trade mechanism for meeting mitigation objectives?**

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Under its National Mission for Enhanced Energy Efficiency, India completed the first phase of a market-based system, Perform Achieve Trade (PAT), to enhance energy efficiency in energy intensive industries. Industries that surpass their Specific Energy Consumption (SEC) targets that qualify for tradable earning Energy Saving Certificates (eSCert). Through efforts between 2012 and 2015 alone, 4.05% reduction in average SEC or savings of 6.7 Mtoe per year are expected.

Additionally, India has been a forerunner in the international Clean Development Mechanism (CDM), and has achieved significant progress in the initial phase of implementation. As of April 2015, India has registered 1,564 of total 7,629 projects with the CDM Executive Board, so far the second highest in the world. Nearly 14% of the total Certified Emission Reductions globally have been accorded to Indian projects in the sectors of energy efficiency, fuel switching, industrial processes, municipal solid waste, renewable energy and forestry.

Even investors have recognised such potential in India, as the country's CDM projects have attracted private sector investments of about Rs. 579,306 crores (US\$ 87.77 billion), constituting 90-95% of all CDM projects in the country.

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**Question 21. What are the lifestyle changes that India would be advocating? Are there any incentives for low-carbon/carbon-friendly lifestyles?**

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India wishes to propagate a sustainable lifestyle which is based on the principle of 'needs based consumption'. Environmental sustainability, which involves both intra-generational and inter-generational equity, has been the approach of Indians for very long. Indian traditional lifestyle discourages extravagant and wasteful consumption. India advocates that as the world puts together its action to maintain and limit the rise in global temperature, there is an equally pressing need to address the issues of global temperament so that mankind can move towards a life of moderation and respect for natural resources.

At his recent address to the UN General Assembly, Hon'ble Prime Minister Modi stated that, "we must look for changes in our lifestyles that would make us less dependent on energy and more sustainable in our consumption." In line with his statement, India is encouraging sustainable living as a concept and a practice at the heart of its climate change efforts. India is emphasising experimentation with civil society at a micro level, and facilitating institutional strengthening at macro level, to motivate a sharing economy and other collaborative consumption models. Indian society already demonstrates several examples of sustainable models of living at the local level.

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**Question 22. India plans to ramp up its use of coal in the coming decade. Is India concerned that this will exasperate an already serious problem of air pollution in its major cities?**

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In order to achieve its development goals, India will need to secure reliable, adequate and affordable supply of electricity. Coal will continue to feature prominently in the energy mix, as India hopes to achieve its development goals through its ample, inherent resource base.

However, India recognises the need to effectively combat the issue of air pollution. Government of India has already taken several initiatives to improve the efficiency of coal based power plants and to reduce its carbon footprint. All new, large coal-based generating stations have been mandated to use the highly efficient supercritical technology. Renovation and Modernisation (R&M) and Life Extension (LE) of existing old power stations is being undertaken in a phased manner. About 144 old thermal stations have been assigned mandatory targets for improving energy efficiency.

Additionally, coal beneficiation has been made mandatory. Introduction of ultra-supercritical technology, as and when commercially available, is part of future policy. Stringent emission standards are also being contemplated for thermal plants to significantly reduce emissions.

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**Question 23. Despite its major and ambitious target for non-fossil fuels, why is India's future electricity requirement linked to coal?**

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While electricity has been a driving force for modern industrial growth in developed countries, it

continues to drive the engine of economic growth in developing countries; access to electricity is hence also a metric for measuring the holistic development of a nation. However, the world has not yet created a model of per capita economic growth that is independent of electricity growth.

Given its growth aspirations, India's electricity consumption is expected to accelerate. Electricity growth has been generated predominantly through fossil fuels by developed countries, and will continue to be generated through thermal energy sources by developed and developing countries, like India, in the current model for economic development. The capabilities of renewable energy in addressing the world's energy needs are still limited, and the reduced technical and resource capabilities of developing countries to transfer to non-fossil fuel consumption further inhibit efforts to reduce global fossil fuel reliance. Developed countries hence need to accelerate renewable energy generation, not only because of their historical use of carbon space, but also because they are in a much stronger position to do so than their developing counterparts.

On its part, India is looking to reduce the impact of its continued reliance on fossil fuels through development and adoption of technologies that will minimise emissions. India is hence advocating global partnerships for research and development of such technologies to accompany its development trajectory.

## D. INDIA'S PERSPECTIVE ON CLIMATE JUSTICE

### **Question 24. Why is India talking about climate justice?**

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With a significant proportion of its population still below the poverty line, India is well-positioned to understand and balance this demography's needs for upliftment with the global agenda for climate change action. India accounts for 2.4% of the world surface area, but supports around 17.5% of the world population. It houses the largest proportion of global poor (30%, 363 million people), around 24% of the global population without access to electricity (304 million), about 30% of the global population relying on solid biomass for cooking and 92 million without access to safe drinking water. These, geographical and other socio-economic factors make India highly vulnerable to climate change impacts.

The average annual energy consumption in India in 2011 was only 0.6 tonnes of oil equivalent (toe) per capita as compared to global average of 1.88 toe per capita. Additionally, India has been able to achieve an Human Development Index of 0.586 with this significantly lower average annual energy consumption. No country in the world has been able to achieve a HDI of 0.9 or more without an energy availability of 4 toe per capita.

India has a lot to do to provide a dignified life to its population and to meet their rightful aspirations. Given the development agenda in a democratic polity, the infrastructure deficit represented by different indicators, the pressures of urbanisation and industrialisation and the imperative of sustainable growth, India faces a formidable and complex challenge in working for economic progress towards a secure future for its citizens.

Given its experiences in effectively implementing climate change actions, India also knows that current adaptation efforts are not affordable or practical on a universal scale. Current climate change resolution efforts put the burden on the economically disadvantaged of society without accounting for their growth and development aspirations. As a responsible global citizen, India is willing to lead in adaptations efforts that will make lifting the poor across the world out of poverty central to climate change action.

**Question 25. What is the role required of developed nations towards climate change action?**

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The issue of climate change has resulted from the model of economic growth and extravagant consumption by developed countries, who have established a precedent model for economic development which is unsustainable. Thus, as developed nations have done more historical harm to the environment, they have a greater historical responsibility to mitigate climate change, and to support developing countries in mitigation and adaptation efforts, especially as they are to follow a different model of economic growth

Furthermore, developed nations have significantly greater capabilities to address climate change action than developing countries. If measurable and meaningful progress is to be made, developed countries need to extend support to developing countries. The Indian Prime Minister recently stated that, "We must seek a more habitable and sustainable world. This also means that the developed countries must fulfill their commitments for funding and technology transfer. Second, national action is imperative. Technology has made many things possible. We need imagination and commitment. India is prepared to share its technology and capabilities, just as we have announced a free satellite for the SAARC countries."

Similarly, while developed nations should be subjected to pre-2020 emission reduction targets, they should also extend financial support to developing nations, and facilitate technology exchanges and incentives to protect the poor in developing countries from bearing the costs of climate change action. Conducive global IPR regimes will enable developing countries to effectively combat climate change, and to accelerate across their growth trajectories with greener economies.

It is also important for rich nations to ensure that the world's poor do not suffer disproportionate burdens of climate injustice. Poor across the world are the worst effected by climate change, and the principles of equal opportunity dictate that the world looks after their needs. Developed nations need to be cognisant and aware of this responsibility, and help relieve the poor of this unfair burden.

Former President of Ireland, and current U.N. Special Envoy for Climate Change, Mary Robinson has also echoed these sentiments, stating that, "The human rights dimensions, and in particular, the injustice in the fact that the climate impacts are being felt by the poorest countries and the poorest communities. Those in the poorest parts of the country are least responsible because they haven't been using the oil, gas and coal. They have not been omitting, and yet, they are on the front line. It is very much a human rights issue; it is a gender issue; it is a moral issue; it is a political issue and it is a development issue."

**Question 26. What role is the international community expected to play in achieving India's climate change goals?**

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The successful implementation of INDCs is contingent upon an ambitious global agreement that details the additional means of implementation to be provided by developed country parties, including technology transfer and capacity building following Articles 3.1 and 4.7 of the Convention.

A detailed and full scale assessment of international climate finance needs will be finalised at a later stage and would depend on the gap between actual cost of implementation of India's plans and what can be made available from domestic sources. While this would evolve over time, a preliminary estimate suggests that at least USD 2.5 trillion (at 2014-15 prices) will be required for meeting India's climate change actions between now and 2030.

Transfer and grounding of technologies and their knowhow would be key to enhancing adaptation and mitigation measures in developing countries. It also calls for meaningful and adequate financing

for the required cutting edge technologies. It is in this context that India has advocated global collaborations in Research & Development (R&D) and an enabling IPR regime to facilitate technology access and transfers.

India's efforts will also require proper training and upgrading of skills across sectors. While no firm assessments have been made, it is evident that substantial resources will be required to implement capacity building programmes - both at national and sub-national levels - to address climate change challenges. We look forward to an international mechanism will enable such initiatives.

## E. INDIA'S PERSPECTIVE ON THE PARIS TALKS AND A GLOBAL APPROACH TO CLIMATE CHANGE

### **Question 27. What is India's view on a possible agreement in Paris during COP21?**

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India recognises that global commitments and concerted efforts are necessary towards global emissions reduction and reduction of vulnerability arising out of climate change. A durable, comprehensive, balanced, equitable, and pragmatic agreement that encourages countries to commit to climate change action, and to maintain increasingly ambitious targets towards emissions reduction, is necessary and will be key to achievable and sustainable progress. India is ready to offer its support to achieve consensus on this global issue. Such an agreement should address necessary elements, including adaptation, mitigation, finance, technology transfer, capacity building and transparency in action and support.

Thus, India is committed to engaging actively in multilateral negotiations under the UNFCCC in a positive, creative and forward-looking manner. Our objective is to establish an effective, cooperative and equitable global architecture based on climate justice and the principles of Equity and Common But Differentiated Responsibilities and Respective Capabilities, under the UNFCCC.

At the same time, the genuine requirements of developing countries like India for an equitable carbon and development space to achieve sustainable development and eradication of poverty needs to be safeguarded.

Our key expectations from COP 21 are as follows:

- A balanced agreement with all components - mitigation, adaptation, technology, finance and capacity building - consistent with the principles and provisions of the Convention
- New, additional and predictable finances from developed to developing countries for mitigation, adaptation, technology transfer and capacity building
- Provision of technology development, transfer and diffusion
- Paris Agreement must incorporate loss and damage, and make the Warsaw International Mechanism operational

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