

INDIA'S SUBMISSION ON PRE-2020 ACTION

India is pleased to make this submission in relation to enhancing climate action prior to the year 2020 (pre-2020), and welcomes this opportunity to provide its views on this subject matter in furtherance to the Fiji Momentum for Implementation, Decision 1/CP.23, Para III (14).

Para III (14) of Decision 1/CP.23 reads as follows –

“Invites Parties to submit via the submission portal by 1 May 2018 additional information on progress in implementing decision 1/CP.21, Section IV: enhanced action prior to 2020”.

The submissions have been made under the following heads –

1. Background
2. Requirements
3. India's Views
4. India's actions towards Pre-2020 Ambition
5. Way Forward

1. Background –

- 1.1 Under the Convention, it was agreed that all Annex-I Country Parties will work towards stabilizing the greenhouse gas concentrations in the atmosphere to keep average global temperatures from rising above the pre-industrial level, while at the same time preserving the Developing Country Parties' right to sustainable development by providing means of implementation and support, especially towards adaptation.
- 1.2 The Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP), was established by Decision 1/CP.17 in December 2011, established a Workstream 2 mandating a workplan on enhancing ambition and assess and bridge the ambition gap prior to 2020 by the Country Parties (Workstream 2). The ADP also established a process to usher in a new multilateral agreement to deal with climate change actions beyond 2020 (i.e. the Paris Agreement), to be adopted in COP-21 (Workstream 1).
- 1.3 Vide the ADP process the Annex-I countries were to commit to the Kyoto Protocol's second commitment period.
- 1.4 In a nutshell, Pre 2020 actions generally refer to the range of actions under mitigation, adaptation, finance, technology development and transfer, and capacity building to be taken before 2020. COP-17 at Durban unfolded a process to make a *new and universal climate agreement* which will enter into force in 2020. The new agreement will come into force post 2020, and the parties underscored the need for action before 2020. Therefore, COP-18 at Doha in 2012 adopted an amendment in the Kyoto Protocol, making provision for the second commitment period of the Kyoto protocol valid from 2013 to 2020. The Parties agreed to revisit the second commitment period by 2014, to raise it from to meet the objectives of the Convention.
- 1.5 Currently, the second commitment period covers less than 15% of the global GHG emissions. Country Parties have been in ratifying the Doha Amendments. The developed countries have been repeatedly asked to declare their enhanced pre-2020 ambition as early as possible. As of 15 March 2018, 111 Parties have deposited their instrument of acceptance of Doha Amendments.

2. Requirements –

2.1 Implementation and Ambition –

- 2.1.1 Developing Countries have been stressing upon the importance of pre-2020 action under the ADP as a strong foundation for the post-2020 Paris agreement. To this effect, it was suggested that Pre-2020 action be made a formal Agenda Item for COP23, and a roadmap be formalised. After much initial resistance from several developed countries, and due to the persistent efforts of the Like Minded Developing Countries (LMDC) group and other developing countries, it became a part of the decision in COP23.
- 2.1.2 The Decision 1/CP.23 of COP-23, on the Pre-2020 actions are focused on implementation and ambition including:
- a) A high-level focus to expedite the ratification of the Doha Amendment to Kyoto Protocol including UN, Secretary General's involvement. (Para III (12) and (13))
 - b) Submissions to be made by parties on enhanced pre-2020 action by May 2018. (Para III (14))
 - c) Preparation of synthesis report on the above submissions by the UNFCCC Secretariat. (Para III (15))
 - d) The synthesis report prepared by the UNFCCC will serve as an input to the stock take to be convened on the Pre-2020 implementation and ambition at COP24. (Para III (17))

2.2 Key areas for increasing pre-2020 ambition – Raising the ambition level before 2020 requires:

- 2.2.1 **Increasing the current 2020 mitigation pledges / targets of Annex-1 countries –** Most developed countries have demonstrated low ambition in their current 2020 pledges. Developed countries' collective (as well as individual) pledged effort is inadequate to cover the emission gap.
- 2.2.2 **Enabling new or enhanced 2020 pledges / NAMAs by developing countries –** Closing the ambition gap will also require adequate additional efforts from the group of developing countries while respecting the principles of the UNFCCC. There is a need to identify what additional efforts are possible and what additional support would be required to enable developing countries to step up their efforts. Parties should also make progress linking scaling up finance more transparently with enhancing ambition in developing countries. Developing countries that have already made voluntary pledges or announced NAMAs expecting support, including information on what additional support would be provided to enhance ambition even further.
- 2.2.3 **Finance (Revisiting Targets) –** A climate finance scale up for 2013 – 2020 is a key precondition to increase climate actions in developing countries. Parties should also use the ADP Workstream 2 work to explore options to improve the interplay between the provision of means of implementation and the level of ambition in developing countries made possible by such means of implementation. For instance, adequate financial support for climate actions will ensure that highest possible ambition in all climate actions occur in developing countries. The aim of this work should be to simultaneously increase ambition and support to the highest possible levels. It must be noted that Country Parties must not defer "*enhancing ambition*" to post 2020, and leave the current pre-2020 ambition gap untouched. It is stated that raising the ambition level of *action before 2020* is a pre-requisite to stay below the 1.5/2°C threshold. **[EMPHASIS SUPPLIED]**

There is also a huge gap in the expectations of the developing countries and delivery of the promised pre-2020 finance and other means of implementation by the

developed countries. There is a need for new and additional finances provided by Annex II countries. The self declaration by the developed countries and the OECD data states that the promised amount of financial assistance is being mobilized. However, it is an incorrect projection and if there is in fact new and additional finances provided over and above what is already promised i.e. beyond the ODA and other humanitarian assistance needs to be established. There is double counting, miscounting and other errors, and therefore more transparency and accountability in financial assistance should be provided.

Furthermore, although mitigation action in developing countries would be accelerated by increasing new and additional climate finance, there is a need of a plan on how to scale up finance commitments and to mobilise further resources to reach US \$100 billion per year by 2020, committed by developed countries. Para III of Decision 1/CP.23 also recognized the USD 100 billion committed annually by the developed countries towards all climate actions to the developing countries.

2.2.4 **Technology** – Parties need to recognise the importance and complexity of Environmentally Sound Technologies (ESTs), and their development and transfer without barrier to achieve the objectives of the Convention, finance for costly technology is a must. To leverage technology to make the low carbon development pathways available to developing countries, the Technology Mechanism should be tasked to set a plan to determine how technology can address the goal. Furthermore, facilitate innovation and diffusion of ESTs, and optimise the integration of these actions. The Technology Executive Committee (TEC) and Climate Technology Centre & Network (CTCN) could be asked to bring together a plan of action, *inter alia*, existing Technology Needs Assessments, additional research and development initiatives of Parties. The involvement of the private sector may also be explored. IPR regions need to be made need to be made friendlier.

2.2.5 **Capacity Building** – Consistent with the principle of equitable access to sustainable development, a specific sub-workstream may be developed, which is capable of delivering the institutional arrangements required to ensure that all developing countries receive the capacity building support for the design or operationalization of their low carbon development plans and NAMAs. The developed countries must ensure that the developing countries are fully and adequately supported within a clear, transparent, coherent and predictable framework for capacity building and capability enhancement.

2.3 Focus of Pre-2020 Works –

2.3.1 It is an iterative process. There is a need to reaffirm the objectives, principles, and provisions of the Convention, in particular the principles of Equity and CBDR, keeping in view the process of enhanced action in the pre-2020 period (which is also covered under the Convention).

2.3.2 Given the background above, Parties need to recall the relevant COP decisions (namely 1/CP.17, 1/CP.18, 1/CP.19, and 1/CP.20), recognizing the need to operationalize paragraphs 3 and 4 of Decision 1/CP.19, and paragraphs 17 and 18 of Decision 1/CP.20. In fact, for this purpose, at COP21, the need to conduct a Facilitated Dialogue (Paragraph 115, Decision 1/CP.21) was also recognized, to be held in COP22. These past decisions have been urging Parties to enhance their ambition, with Developed Country Parties taking the lead, and providing the required means of implementation and support to the Developing Countries Parties.

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- 2.3.3 Affirmatively, the work under the ADP Workstream 2 is the foundation for post-2020 actions. Therefore, certain indicators need to be recognized to set the tone for what is to come such as –
- equitable access to sustainable development;
 - assessing the implementation gap;
 - parity between mitigation gap and adaptation needs and finance;
 - greater multilateral cooperation under the principles and provisions of the Convention;

2.4 Facilitative Dialogue (FD 2018) –

- 2.4.1 FD 2018 is to be used by the Parties. It is reiterated that to enhance Pre-2020 action, the past commitments need to be addressed by the Parties. For this purpose, the Facilitated Dialogue due in COP24 will provide an opportunity to the Parties to reinforce and assess the foundations of Pre-2020 actions. After much effort, the due importance has been given to the revival of the lingering Pre-2020 issues. Therefore, it is crucial that a “stock take” it be conducted in a manner fitting its significance.
- 2.4.2 In this respect, and to ensure effectiveness, the dialogue should cover all climate actions i.e. mitigation, adaptation, and means of implementation and support towards finance, technology transfer and development, and capacity building, with a thorough exploration of all issues. This will bolster the convening of the subsequent dialogue, recurring in 2019 at COP25.
- 2.4.3 There should be linkage with other agenda items and processes under the CMP and other subsidiary bodies related to the pre-2020 implementation and ambition. Accordingly, the Subsidiary Body for Implementation (SBI) and Subsidiary Body for Scientific and Technological Advice (SBSTA) should assist the Parties in the facilitative dialogue by assessing, and reporting the progress in implementing past decisions (as a part of the synthesis report to be prepared by the UNFCCC Secretariat on the submissions made by the Parties); and evaluating the needs of Developing Country Parties in terms of finance, technology transfer and development, and capacity-building support required to achieve the pre-2020 ambition.
- 2.4.4 The Standing Committee on Finance should lend its support during the facilitative dialogue by engaging with the Parties on developing a concrete road map to achieve the goal of mobilizing and providing of USD 100 billion annually by 2020 with a view to enhancing the pre-2020 ambition of the Developing Country Parties.

2.5 High-Level Event –

- 2.5.1 Currently, the focus of this engagement the technical examination process and the involvement of non-Party stakeholders (Paras 120 and 121, Decision 1/CP.21). However, the focus should be expanded to include a high-level focus to expedite the ratification of the Doha Amendment to Kyoto Protocol including UN, Secretary General’s involvement.
- 2.5.2 Other concrete issues addressed in the facilitative dialogue may also be included in the high-level event for effectively implementation of the Pre-2020 actions. The conclusions may thereafter be reported.

2.6 Roadmap between now and COP24 –

- 2.6.1 Parties have decided to take stock of what has been achieved and implementations of actions during COP-24 at Poland in December 2018, including –
- a)** details of mitigation actions that have been taken in the Pre-2020 period;

- b) the provision of support to developing countries during the period,
 - c) summaries for policymakers (providing policy options and recommendations to accelerate climate action) that have come as a result of the Marrakesh Partnership for Global Climate Action initiated during COP22 in Marrakesh to mobilise immediate climate action.
- 2.6.2 During COP25 in 2019, further submissions will be made including on the inputs of all meetings that have been held on the matter till then, outcomes of 2018 ministerial dialogues on finance, the ‘stocktake’ from 2018, and the outcomes of the Marrakesh Partnership for Global Climate Action.
- 2.6.3 A joint stocktake of all relevant bodies covering pre-2020 actions – including the SBI, SBSTA, and CMP will be done in 2018 and again in 2019.
- 2.6.4 Para III of Decision 1/CP.23 recognized the USD 100 billion committed annually by the developed countries towards all climate actions. Therefore, the developed countries have been requested to prepare their next round of updated biennial submissions on strategies and approaches for scaling up climate finance for 2018-2020, with a view to updating information available on a pathway towards the goal of jointly mobilizing USD 100 billion per year by 2020.
- 2.6.5 Pre-2020 is the foundation upon which climate action will be built after the year 2020. As such, pre-2020 gaps should be addressed as a matter of priority with a view to advancing long-term climate action and protecting the integrity of the Paris Agreement. The questions that require answering are –
- How to achieve urgent and time bound actions?
 - How will Annex-I countries scale up ambition – keeping both mitigation and adaptation on parity?
 - What actions to be taken with immediate effect and eventually?
 - How should developing countries be enabled to enhance their ambition in the pre-2020 period?
 - How will Annex-I countries meet their financial obligations of mobilizing USD 100 billion p.a. by 2020?
 - How will Annex-I countries deliver other means of implementation and support?

3. India's Views–

- 3.1 India views Pre-2020 as an issue of enhancement of ambition and better implementation of the existing provisions of the Convention. The countries must show willingness to bridge the gaps in mitigation, and there should be an evaluation mechanism of the quantified emissions reduction targets. In addition to addressing emissions gaps, equal emphasis should be placed on gaps in actions towards adaptation enhanced means of implementation and support, which would enable developing countries to enhance their levels of ambition.
- 3.2 There should be parity between Mitigation and Adaptation – Assessment of gaps in all climate actions is of utmost importance. Gaps in mitigation, along with gaps in adaptation, and means of implementation and support in terms of finance, technology transfer and technology and capacity building must be assessed, and whether Parties need a course correction in this regard.
- 3.3 There has to be a clear component on how the USD 100 billion per year will be made available for the Pre-2020 period by the Developed Country Parties. Fulfilling the commitment of developed countries to achieve the goal of mobilizing USD 100 billion annually by 2020 is important and further scaling it up thereafter.

- 3.4 With regard to technology development and transfer, a collaborative mechanism needs to ensure that barriers such as intellectual property rights are removed for ease of transfer of technology from Developed to Developing countries.
- 3.5 Conclusions on negotiations for Pre-2020 issues should be drawn in text form, comprising all elements discussed. Views of all Parties must be captured to pave the way for COP-24, and further actions.
- 3.6 Commitments identified under the Doha Amendments to the Kyoto Protocol should be fulfilled by the developed countries to ensure no undue burden overflows on to the developing countries in the post-2020 period.
- 3.7 Enhanced pre-2020 action by developed countries should form an important pillar of FD 2018. FD 2018 should be informed by the developed countries' Pre-2020 action and commitments in terms of enhanced mitigation actions, and provision of finance, technology transfer and development, and capacity building support to developing countries. An aggregate assessment of the means of implementation and support provided to the developing countries should be done in FD 2018, to identify the gaps in the pre-2020 period.
- 3.8 There is a need for revisiting targets, scaling-up, removal of conditionalities under the Kyoto Protocol second commitment period based on the principles identified under the Convention – Equity and CBDR with Developed Country Parties taking the lead in addressing all climate change actions in mitigation, adaptation, and means of implementation and support (in terms of finance, technology transfer and development, and capacity building).
- 3.9 The UNFCCC Secretariat must report on the progress made by developed countries in meeting their pre-2020 commitments, the ambition gap, and the measures taken to scale-up actions in the Pre-2020 period.

4. India's Actions towards Pre-2020 Ambition –

- 4.1 Even though no obligation exists on the developing countries, including India. India has voluntarily declared a goal of reducing its emissions intensity of GDP by 20–25%, over 2005 levels, by 2020
- 4.2 A large number of policy measures to promote sustainable development has resulted in the decline of emission intensity of India's GDP by 12% between 2005 and 2010. The United Nations Environment Programme (UNEP) in its Emissions Gap Report 2017 has recognized India as one of the countries on track to achieving its voluntary goal for the pre-2020 period.
- 4.3 India, despite being confronted with development challenges and pressure of inclusive and high economic growth, has made serious interventions to address climate change and is consciously taking a path towards decoupling of economic development and GHG emissions. India's emissions are low compared to those of other major contributing economies. The per capita emissions are only at 1.8 tonnes of CO₂, which is much lower than the world average of 4.2 tonnes. Several factors have contributed to the decline in energy intensity include improved energy efficiency, increased use of renewable and nuclear power, expanded public transport, and energy pricing reform.¹
- 4.4 India focuses on low carbon strategies for major potential carbon mitigation sectors along with adaptation measures. A range of policies and programmes have been

¹ Reference may be had to the National Action Plan on Climate Change (NAPCC); Government of India, June 2008

initiated to respond to the challenge of climate change, in the areas of renewable energy, energy efficiency, afforestation, planned urban development etc.²

4.4.1 Renewable Energy and Energy Efficiency –

- (i) **Promotion of Clean Energy:** India announced more than five times increase in the installed capacity of renewable energy generation from 4 GW in 2002 to 32 GW in 2009, and from 35 GW up to March 2015 to 175 GW by 2022. By November 2017, a total of 62 GW Renewable Power has been installed, of which 27 GW was installed since May 2014 and 11.79 GW since January 2017. A capacity addition of 27.07 GW of renewable energy has been reported during the last 3.5 years under Grid Connected Renewable Power, which include 12.87 GW from Solar Power, 11.70 GW from Wind Power, 0.59 from Small Hydro Power and 0.79 from Bio-power. As on 30.11.2017, Solar Energy Projects with an aggregate capacity of over 16611.73 MW including 863.92 MW from Solar Roof Top projects has been installed in India. India targets to install 100GW of solar power across the country by 2022, and provide electricity to 400 million people who lack it by 2019.
- (ii) Largest ever Wind Power capacity addition of 5502.39 MW in 2016-17 exceeding target by 38%. During 2017-18, a total 467.11 MW capacity has been added till 30.11.2017, making cumulative achievement 32746.87 MW. In terms of wind power installed capacity India is globally placed at 4th position after China, USA and Germany.
- (iii) India has been on international forefront for its pledges on carbon intensity reduction and ambitious renewable energy goals. According to a report from the International Renewable Energy Agency (IRENA), India has some of the lowest costs worldwide for developing renewable technology, in comparison to EU, and falling prices are driving renewable energy investment in India. In fact, statistics show that India's renewable energy targets are ambitious but achievable. With market forces set into action by a clear policy intent, India is expected to comfortably achieve its climate targets.
- (iv) In 2016, in India, the renewable energy sector contributed 15% to the total installed capacity for electricity; thermal power contributed 69%, hydropower 14%, other renewable power 15% and nuclear energy 2%. With a target of achieving 40% of cumulative electric power from non-fossil fuel by 2030, increases in the share of clean energy are expected in the future.
- (v) Several projects suitably aligned with the goals of the national mission on energy efficiency that aims to expand market for energy-efficient technologies and reduce GHG emissions, such as –

² India launched the National Action Plan on Climate Change (NAPCC) in 2008 with eight missions 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., for tackling issues arising out of and / or pertaining to climate change. It outlines a number of steps to simultaneously advance India's development and climate change related-objectives of adaptation and mitigation.

All the missions are anchored in the respective nodal ministries and/or departments and are under various stages of implementation, overseen by the respective ministries and / or departments i.e. Ministry of New and Renewable Energy (MNRE) (responsible for the National Solar Mission (NSM)); Ministry of Power & Bureau of Energy Efficiency (BEE) (responsible for National Mission for Enhanced Energy Efficiency (NMEEE)); Ministry of Urban Development (MOUD) (responsible for the National Mission on Sustainable Habitat (NMSH)); Department of Science and Technology (DST) (responsible for the National Mission for Sustaining the Himalayan Ecosystem (NMSHE) and the National Mission on Strategic Knowledge for Climate Change (NMSKCC)); Ministry of Water Resources, River Development and Ganga Rejuvenation (MOW) (responsible for the National Water Mission (NWM)); Ministry of Agriculture (responsible for the National Mission for Sustainable Agriculture (NMSA)); Ministry of Environment, Forests & Climate Change (MoEFCC) (responsible for National Mission for a "Green India" (GIM)).

- a. Initiatives to enhance energy efficiency in energy intensive businesses have already been launched with an aim to unlock the market for energy efficiency projects that is estimated at over USD 1 billion.
 - b. The national missions on solar energy (National Solar Mission / NSM) and energy efficiency (National Mission on Enhanced Energy Efficiency/ NMEEE), under the NAPCC relate to mitigation of emissions and include ambitious programmes aimed at generating solar power and conserving energy.
 - c. India aims at installation of millions of energy-efficient lights in streets and homes as well as energy-efficient water pumps across India that will lead to energy savings of around 3,800 gigawatt-hours annually. It is aimed to install 1.5 million LED street lamps, 42 million LED household lamps, ceiling fans and LED tube lights, and 225,000 new pumps.
 - d. A similar programme is under works which will sell on EMI energy-efficient appliances at prices much lower than market rates.
 - e. A nationwide campaign has been launched for Energy Conservation with the target to save 10% of current energy consumption by the year 2018-19.
 - f. Feed-in tariffs (a fixed amount per unit paid to organisations or individuals who generate clean energy) have been offered – For wind power projects a 10-year tax holiday for projects registered before 01.04.2017, and accelerated depreciation (which expedites the loss of book value of companies engaged in renewable projects, so that the amount taxable reduces in the early years itself).
 - g. Under the Ethanol Blending Programme, India has scaled up blending targets from 5% to 10% to promote blending of ethanol with petrol and its use as an alternative fuel.
 - h. To ensure rational consumption of fossil fuels, petroleum subsidy has been cut down by about 26 per cent.
 - i. To increase energy generation through cleaner sources and to fund renewable energy projects, tax-free infrastructure bonds of INR 50 billion (USD 794 million) was introduced for the year 2015-16.
 - j. Iron and steel and cement sectors in India adopt best available technology; existing plants, particularly small and medium ones, modernize and adopt green technology at an accelerated pace, with transparent financing mechanisms.
- (vi) The **Perform Achieve and Trade Scheme (PAT)** scheme under the NMEEE is an instrument to reduce specific energy consumption in energy intensive industries in association with market based mechanism to enhance cost effectiveness through certification of excess energy saving, which can be traded. PAT Cycle-I (2012-13 to 2014-15) was completed on 31st March, 2015, aimed at reducing specific energy consumption (SEC), i.e., energy used per unit of production of 478 industrial units / Designated Consumers (DC) in 8 energy intensive sectors, viz. Aluminum, Cement, Chlor- Alkali, Fertilizer, Iron & Steel, Paper & Pulp, Thermal Power Plant and Textile. The achievement in respect of 427 DCs, who have submitted the performance, assessment documents after conducting Monitoring and Verification (M&V), comes out to be 8.67 Million Tonnes of Oil (MTOE) equivalent to avoiding of about 5,635 MW demand and about 31 million tonne of CO₂ emissions. PAT Cycle II (2016-17 to 2018-19), commenced from 1st April, 2016. “Deepening” and “Widening” of PAT had been carried out under its second cycle. It covers

621 Designated Customers (DCs) (448 existing, 89 additional DCs from existing sectors and 84 DCs from new sectors viz. Railways, Electricity DISCOMs and Refineries). The aim is to achieve an overall energy consumption reduction of 8.869 MTOE. This energy saving will translate in to avoiding of about 5,764 MW of demand. PAT Cycle -III in its third cycle will seek to achieve an overall energy consumption reduction of 1.06 MTOE for which SEC reduction targets would be assigned to 116 Designated Consumers from six sectors viz. Thermal Power Plant, Cement, Aluminum, Pulp & Paper, Iron & Steel and Textile. The energy consumption of these DCs is 35.00 MTOE.

(vii) **Market Transformation for Energy Efficiency (MTEE)** scheme involved two programmes function –

- a. Bachat Lamp Yojna (BLY): BLY program involves support for technical assistance to partner agencies such as EESL and REC for market transformation in efficient lighting. Under BLY, about 29 million CFLs were distributed. So far, 216 million LED lights to domestic consumers and 1.720 million LED street lights have been deployed.
- b. Under Super-Efficient Equipment Program (SEEP) for ceiling fans, targeted deployment is 2 million super-efficient fans with an outlay of INR 1 billion till 2017. Seven Super-Efficient fan manufactures have been selected by BEE under the SEEP program for manufacturing of super-efficient fans for sale in the Indian market. The programme for ceiling fans is currently being revisited in light of the demand aggregation model for LEDs. EESL has floated a RfP for procurement of 1 million super-efficient (SE) fans.

(viii) **Small and medium-sized enterprises (SME) Cluster Programs for Energy Efficiency** scheme covers more than 150 clusters all over the country and has resulted in substantial energy saving, quality improvement and improved competitiveness. Another initiative by SIDBI (Small Industry Development Bank of India) in 500 SMEs spread over 40 industrial clusters is expected to save annually 30,000 tonnes of GHG emissions.

4.3.2 **Clean Coal policies –**

India has taken several initiatives to improve the efficiency of coal based power plants. All new, large coal-based generating stations have been mandated to use the highly efficient supercritical technology.

- (i) There is intensified thrust on shutting down older, inefficient and highly polluting power plants. Renovation and Modernization (R&M) and Life Extension (LE) of existing old power stations is being undertaken in a phased manner.
- (ii) Coal beneficiation has been made mandatory. The cess is a staggering INR 400 per tonne, i.e. about 40% of the average coal price.

4.3.3 **Power and Electricity –**

- (i) India is promoting a dual approach – On the supply side, adoption of super-critical technologies in coal-based thermal power plants; use of gas in combined heat and power systems; investment in renewable technologies; and development of hydropower in a sustainable manner. On the demand side, accelerated adoption of super-efficient electrical appliances through

market and regulatory mechanisms; enhanced efficiency of agricultural pump sets and industrial equipment with better technology; modernized transmission and distribution to bring down technical and commercial losses; universal access to electricity; and accelerate power-sector reforms.

- (ii) **National Electricity Plan** – A draft National Electricity Plan (NEP) has been released by the Central Electricity Authority (CEA). The NEP states that the coal based capacity of 50GW is already under construction, which is likely to yield benefits during the years 2017-22. This coal based capacity would fulfil the capacity requirement for the years 2022-27, beyond which the CEA is planning for zero new thermal power generation.
- (iii) **Action Agenda by the National Institution for Transforming India (i.e. the NITI Aayog or the Policy Commission) in India** – the NITI Aayog published the three year Action Agenda (2017-18 to 2019-20) in August 2017. It –
 - a. advocates reduced reliance on imports of coal, oil and gas;
 - b. mentions measures to achieve the 2022 renewable energy targets;
 - c. reaffirms various energy efficiency measures, such as the Perform Achieve Trade (PAT) I and II industrial energy efficiency programmes as well as the National Mission for Enhanced Energy Efficiency (NMEEE).
 - d. sets short term targets to increase the efficiency of fossil fuel generation, e.g. through renovation and modernization of existing thermal plants and by setting a requirement for new coal power projects to be based on ultra-super critical technology.

4.3.4 **Transport –**

India is aggressively pushing towards adoption of clean energy, even in the transport sector, targeting that no diesel or petrol-powered vehicle should be sold in India by 2030.

- (i) As per the Bharat Stage (BS) Emission Norms, India would be leapfrogging from Bharat IV to Bharat VI norms. The implementation of the BS V & VI, have been advanced to keep the deadline of April 2020 to implement the BS VI norms.
- (ii) Dedicated rail freight corridor; and improving share and efficiency of public transport system are being undertaken.
- (iii) Promotion of electric vehicles (EVs) and improving fuel efficiency of vehicles through both market-based and regulatory mechanisms. India aspires to go to 100% EVs by 2030. Major oil producers like The Indian Oil Corporation (IOC), are considering investment in lithium-ion battery production. The goal is 6-7 million EVs by 2020, up from 130,000 registered today under the Faster Adoption and Manufacturing of Hybrid & Electric Vehicles (FAME India) scheme.

4.3.5 **Sustainable Habitat and Urban Development –**

Under the National Mission on Sustainable Habitat (NMSH) – Smart Cities, Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Swachh Bharat Mission are schemes which have climate change impact.

- (i) Energy Conservation Building Code 2007 has been made mandatory for new as well as old buildings; incorporated in Central Public Works Department (CPWD) General Specification for Electrical Works in 2013.
- (ii) Urban Transport modal shift has been undertaken –

- a. Mass Rapid Transit System: 326 km of metro rail is in operation; 620 km is under construction.
- b. Bus Rapid Transit System: 223 kms of BRT corridors operational in 8 cities, 505 kilometres of BRT corridors is under construction in 14 cities.
- c. City Bus Service: 17,000 ITS enabled & fuel efficient buses for 140 cities are on road.
- (iii) Under NMSH, standards have been developed for six sub-sectors namely, solid waste management, water and sanitation, storm water drainage, urban planning, energy efficiency and urban transport for integration in developmental activities in the state.
- (iv) 7 Waste to Energy plants with capacity 88 MW are functional. Another 56 plants with capacity 405 MW are under construction/ tendering stage.
- (v) Under Swachh Bharat Mission (Urban) all 4041 urban local body, with financial outlay of INR 630 billion, are being supported including for SWM. INR 46.94 billion has been released till date to all states.
- (vi) Under AMRUT Mission 500 cities with population of 100,000 and above are covered for water supply, sewerage and sanitation schemes with outlay of INR 500 billion State Annual Action Plan of INR 776.82 billion has been approved and INR 40.74 billion has been released to the various states.
- (vii) Against the financial outlay of Smart city mission INR 500 billion with coverage for 100 cities central assistance, INR 95.58 billion has been released to states.

4.3.6 Private Sector –

India is not only working at the Central Government and State Government level on climate change but has also taken initiatives relating to climate change and resource efficiency in the private sector, involving the private sector to embark on a number of voluntary actions. It plays a key role in sustainable development efforts in the country, some of which are:

- (i) The Indian industry has participated in voluntary carbon disclosure programmes whereby they report their carbon management strategy and GHG emissions. Latest Report by Carbon Disclosure Project, India indicates a reduction of 165 million metric tonnes of CO₂ equivalent by Indian industries.
- (ii) Indian industry has undertaken many initiatives to reduce their water consumption. A study of 100 companies over a 5 year period covering 12 sectors indicate that the Indian companies on an average have been reducing their specific water consumption by 2.8 to 3 % per year. A few companies have achieved 'water positive' status.

4.3.7 Clean Development Mechanism (CDM) –

India is an active participant in the Clean Development Mechanism (CDM) established by the Kyoto Protocol. In terms of the overall volume of CDM reductions India is at 14%. The largest project categories are biomass and wind power.

4.3.8 National Adaptation Fund for Climate Change (NAFCC) –

The NAFCC was set up in 2015-16. The overall aim of NAFCC is to support concrete adaptation activities which alleviate the adverse effects of climate change. The projects related to adaptation in sectors such as agriculture, animal husbandry, water, forestry, etc. are eligible for funding under NAFCC. National Bank for Agriculture and Rural Development (NABARD) is the national implementing entity (NIE). The States/UTs are required to prepare the project proposal in consultation

with NABARD. An initial allocation of INR 3,500 million (US\$ 55.6 million) was made, the approved cost of projects under the NAFCC currently stands at INR 6.74 billion. Currently 27 projects are approved under NAFCC. They prioritize the needs that builds climate resilience in the areas identified under the the respective States' / UTs' State Action Plan on Climate Change (SAPCC) and the relevant Missions under India's National Action Plan on Climate Change (NAPCC), to address the cost of adopting cleaner technology in sectors such as agriculture, fisheries, water and forestry. Number

4.3.9 National Innovations on Climate Resilient Agriculture (NICRA) –

A network project of the Indian Council of Agricultural Research (ICAR).

- (i) The project aims to enhance resilience of Indian agriculture to climate change and climate vulnerability through strategic research and technology demonstration. The research on adaptation and mitigation covers crops, livestock, fisheries and natural resource management.
- (ii) State of the art infrastructure is being built at the major research institutes of the ICAR to take up long term basic and strategic research on the impact of climate change on crops and livestock; modelling future climate impacts on agriculture, water resources, and development of location specific adaptation and mitigation options; initiate large scale screening of crop / horticulture germplasm for heat, drought, and flooding stresses; characterize livestock breeds in relation to climatic stresses; and study the impact of climate variability on marine and freshwater fisheries.
- (iii) To address critical gaps in the initiative, specific additional projects have been sanctioned within the scheme under sponsored/competitive mode from institutions within and outside National Agricultural Research System (NARS). These projects are addressing critical areas like arid zone, hill and mountain eco system, climate impact on pollinators, hail-storm management, and socio-economic impacts of climate change including adaptation financing.
- (iv) Considering that climate variability impact the food production, the scheme is strengthening the theme areas such as phenotyping / breeding programs in crops, horticulture and livestock, simulation modelling to understand the impacts at regional level and national level; address crops and regions earlier not covered; and expand the technology demonstration to more vulnerable districts.

4.3.10 Forestry –

- (i) The Forest Conservation Act, 1980 has successfully reduced the average annual rate of diversion of forest land for non-forest purposes. During 2016-17, approvals were accorded under the Act for diversion of 6916.63 hectares of forest land for non-forest purposes with adequate mitigative measures.
- (ii) Compensatory Afforestation Fund Act, 2016 was enacted in 2016 to ensure expeditious and transparent utilization of compensatory levies realized in lieu of forest land diverted for non-forest purpose. The Act, issued guidelines to exempt transmission lines of all capacities from providing non-forest land for compensatory afforestation.
- (iii) The Green India Mission (GIM) under the NAPCC aims at protecting, restoring, and enhancing India's diminishing forest cover and responding to climate change by a combination of adaptation and mitigation measures –

- a. Afforestation activities were carried out in forest and non-forest lands in states, in FY 2015-16, INR 700.909 million were released to seven States; in FY 2016-17, INR 412.5 million were released to six States under GIM.
- b. Afforestation and Tree Plantation activities were carried out in 36 states and UTs of India in the financial years 2015-16 and 2016-2017 covering 1,381,596 hectares area of forest and non-forest lands 973.843 million seedlings were planted and in 1,990,409 hectares area of forest and non-forest lands 1404.288 million seedlings were planted, respectively. For the FY 2017-18, the target is to cover 1,437,590 hectares area of forest and non-forest lands, and plant 934.44 million seedlings.
- c. In the Preparatory Phase of GIM, funds to the tune of INR 626 million were released in FY 2011-12 and 2013-14 to 27 States/UTs for undertaking preparatory activities which included institutional strengthening, training, identification of landscapes and preparation of Perspective Plans.

5. Way Forward –

- 5.1 Call for immediate and early ratification of the Doha Amendments to the Kyoto Protocol for its second commitment period by Parties.
- 5.2 Concrete activities and technical work up to 2020 should be planned to accelerate the pre-2020 implementation and increase the pre-2020 ambition. Concrete activities may include the following –
 - i. Annex I countries should shoulder greater mitigation responsibilities by scaling-up their actions in the pre-2020 period, and revisiting their targets including financial obligation of mobilizing the USD100 billion per year by 2020. This should pave the way to identify Post-2020 climate finance goal.
 - ii. Revisiting the pre-2020 emission reduction targets and evaluating the implementation of the roadmap on achieving emission reduction target of at least 40% below 1990 levels by 2020 by Developed Country Parties.
 - iii. Developed Country Parties to remove conditionality in their Kyoto Protocol 2nd Commitment period pledges.
 - iv. Sharing experiences and taking stock of the progress by institutional arrangements on accelerating the implementation of NAMAs under the past decisions, supported by finance, technology and capacity-building by Developed Country Parties.
 - v. Transfer and deployment of ESTs to developing countries and allocation of resources for the removal of barriers in accessing such technologies.
 - vi. The TEM in various sessions to focus on assessment of the gaps in means of implementation and support provided in both mitigation and adaptation climate actions.
 - vii. Identify options for the sharing of good practices and lessons learned, particularly from actions with the potential to enhance the implementation of adaptation and those with mitigation co-benefits.
 - viii. Assessing the adequacy of finance, technology transfer and development, and capacity-building support to developing countries in a holistic manner, including their sustained implementation, under the existing finance and technology mechanisms.
 - ix. Assessing the adequacy of the commitments of financial and technological support by Developed Country under the existing financial and technology mechanisms.

- x. Establishing linkages and synergy with existing institutional arrangements and subsidiary bodies under the Convention; being informed by the work of the existing subsidiary bodies and processes to avoid duplication.
 - xi. Developing recommendations to the COP on further guidance on the institutional arrangements under the Convention; and improving the scale and delivery of means of implementation.
- 5.3 The Parties need to ensure that the developing countries are not unduly burdened in the event the gap is transferred to the post-2020 period. Therefore, it is important to focus on the existing commitments in the Pre-2020 period rather than introducing new ones.
- 5.4 During FD 2018, an aggregate assessment of the means of implementation and support provided must be done for identifying gaps in Pre-2020 period. Thereafter, Developed Country Parties should be urged to provide enhanced means of implementation support to enable developing countries to enhance their ambition.
- 5.5 UNFCCC Secretariat to report progress and develop a technical synthesis and summary for policy makers of the TEM sessions, including the gaps in means of implementation and support, as assessed.

India reserves the right to make additional submissions and present further views on the relevant issues connected with the Pre-2020 Action, if required.
