POLICY BRIEF

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Avenues of Alignment between Sustainable Development Goals and the Paris Agreement in India

Key Messages

- Policy integration is the first step to implementing either of the two international agreements in India. Studying the interlinkages within the agreements would reinforce integration while breaking down vertical silos that is currently the norm in approaching them.
- India in its NDC demonstrates potential synergies with 60 of the 169 SDG targets. These give direction to areas of integration.
- Strongest alignment is seen in energy, climate-change adaptation, cities, forests, water related goals. These are a reflection of India's development paradigm
- Major gaps lay in Gender and Climate justice for other less developed nations. The NDC also misses out on addressing domestic emission inequalities.

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1. Why Interlinking and Alignment is Necessary

Nearly after a year of signing the UN's Sustainable Development Goal Agenda and the Paris Agreement on climate change, countries are now moving from commitment to implementation. Even though both are different in legal terms, they are strongly connected in terms of targets. The Paris Agreement is enforceable upon signing and ratifying unlike the SDGs that are just a part of the global Agenda (Nkusi, 2016).Both the international agreements have been ratified by India. However, the SDGs act as a guiding framework for a comprehensive, systematic and coherent approach to development that focusses on poverty eradication

and climate change as a challenge. It is pragmatic and imperative that the implementation pathways for both the agendas must adopt a cross domain approach. In order to strengthen the rationale for policy integration, this paper aims to understand the degree and avenues of alignment between the two multilateral commitments in India. The starting point is understanding the ministerial responsibility regarding the agreements (O'Connor, 2015). The analysis of interlinkages between the two can be explored to complement the fact that there are strong avenues for policy integration. The current study limits itself to highlighting alignment and showing where these can be mutually supportive. However, it must not be overlooked that the interactions and linkages between targets and goals can be counter-acting each other. An example of a negative correlation would be to increase human habitation in flood-prone areas which may alleviate poverty and provide economic benefits on other targets in the SDGs but, it could lead to decrease in resilience against climate impacts (Nilsson et.al, 2016). A detailed study of the interlinkages could then be utilised to maximize the potential co-benefits that arise from such an integrated approach.

The degree of interconnectedness between both the multilateral commitments isn't surprising. Climate impacts can slow, halt or even reverse the progress on SDGs. SDG targets on energy, transport, forests and industrial development are important for mitigation and low-carbon development measures. While water management, health, disaster risk reduction and poverty alleviation are equally important for adaptation and creating climate resilience, there are SDG targets in agriculture and rural development, infrastructure, and urban planning that can be crucial for both climate change mitigation and adaptation. The SDGs with their 17 goals have brought forward the fact that solutions and approaches to developmental issues have to acknowledge the interlinkages between different dimensions of sustainable development. Studying the interlinkages within the agreements would reinforce integration while breaking down vertical silos that are currently the norm in approaching them.

Another interesting aspect is the alignment of both the issues as put forward by the nations. WRI's study on the alignment of Intended Nationally Determined

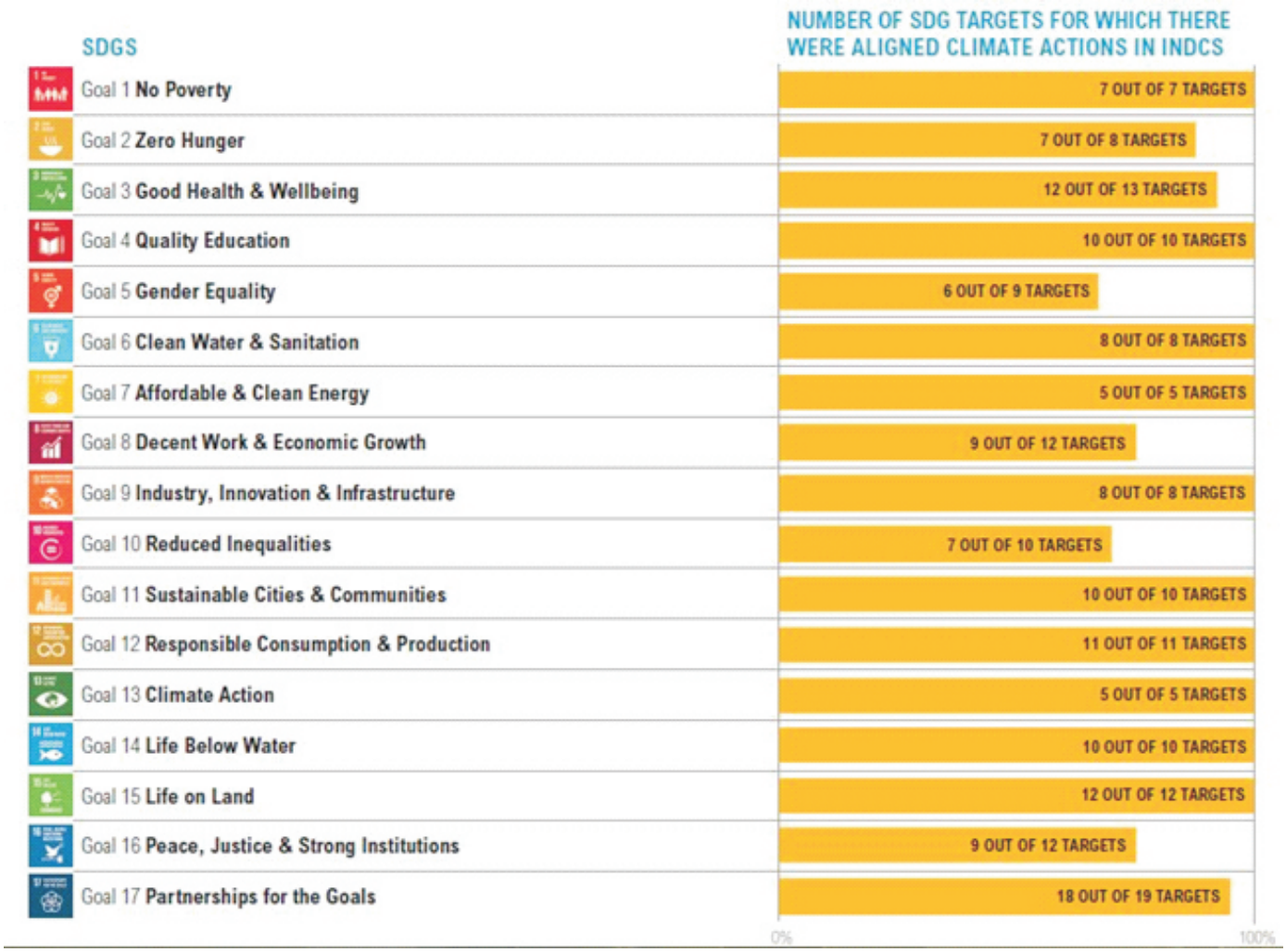

Figure 1: Global Alignment between SDGs and INDCs (Source: WRI, 2016)

Contributions and the Sustainable Development Goals observed that INDCs align with at least 154 of the 169 targets at a global level (WRI, 2016). This shows the vastness of the climate action targets in terms of mitigation and adaptation to cover the SDGs by providing enormous support. In particular, poverty alleviation, energy, agriculture and land use, forestry, infrastructure and cities and human settlements are among the closest in terms of alignment between the INDCs and SDG targets (Figure 1).

The indicators of SDGs can also help measure the progress on the climate report card. As suggested by David Waskow and Leo Horn-Phathanothai (2016) the "indicators on integrating climate action across sectors are of particular relevance to linking climate and sustainable development objectives"(WRI, 2016).

Climate change itself as an SDG would include and interlink sustainable agriculture, food security and nutrition, health and population dynamics, education, gender equality and women's empowerment, water and sanitation, energy, promote sustainable consumption and production, sustainable cities and human settlements, conservation and sustainable use of marine resources, oceans and seas, ecosystems and biodiversity as focus areas. Just achieving the climate goal can either give multiple mutual benefits or provide co-benefits. However, a comprehensive study may be required for some goals in order to see if they counter-act the actions of other goals.

Besides the financial and substance interdependency, solutions for both of these are also common. For example, environmental concerns such as biodiversity loss, climate change and desertification are interlinked closely, both in their causes and their solutions. Synergised solutions will enhance effectiveness and value, while reducing conflicts. Therefore, the programmatic and financing strategy should target and deliver multiple objectives. Development strategies need to integrate adaptation and mitigation approaches such that climate risks are integrated within development action while building resilience for impeding climate shifts. Climate change adaptation and mitigation actions such as management and protection of natural ecosystem and, affordable climate friendly technology for infrastructure and livelihoods need to be seen as opportunities to meet development targets. Investment in such areas can greatly benefit both climate and sustainable development objectives.

2. Paris Agreement and the 2030 Agenda for Sustainable Development in India

India has signed and ratified the Paris Agreement making it obligatory for it to reach its commitments. The MoEFCC has designed the Nationally Determined Contributions with consultations from state governments, ministries and civil society.[1] The NDC takes into account India's historical commitment to conservation of nature as well as the imperatives of meeting the competing demand of resources for addressing the challenges of poverty eradication, food security and nutrition, universal access to education and health, gender equality and women empowerment, water and sanitation, energy, employment and sustainable Urbanisation. This makes it among the most over-arching NDCs in the world. However, there is some lack of clarity in terms of how the NDC targets were arrived at and how the domestic actions needed to achieve them will take place.

India is also a signatory among 192 nations to the 2030 Global agenda for Sustainable Development. The Government of India has entrusted NITI Aayog, with coordinating the SDG Agenda in India. NITI Aayog has carried out draft mapping of goals and targets against existing schemes-- these goals have been assigned to respective ministries. There is also action at the state level, with states asked to put forward their plans for implementing the SDGs to NITI Aayog, looking at the SDGs as a guiding framework for their long term development strategy. This includes a proposal to introduce an SDG charter for each government ministry. The MoEFCC has been assigned the responsibility of three goals (Goal 12, 13 and 15) directly where they need to coordinate with different ministries on individual targets. Further, they have partial responsibility of another seven Goals for which they will engage with other ministries (Figure 1).

The MoEFCC framed the NDCs based on consultations with Ministries, NITI Aayog, State governments, Industry Associations, Civil Society Groups, Academic Institutions and Think tanks. However, the implementation would rest with different ministries. There is a possibility that this approach could create silos and prevent a combined outcome as required for implementation of these agreements.

The Interdependency in India

India is confronted with the challenge of ensuring and sustaining equitable economic prosperity, basic needs

[1]As India has ratified the Paris Agreement, NDC instead of INDC will be used throughout the paper to represent India's submission to UNFCCC.

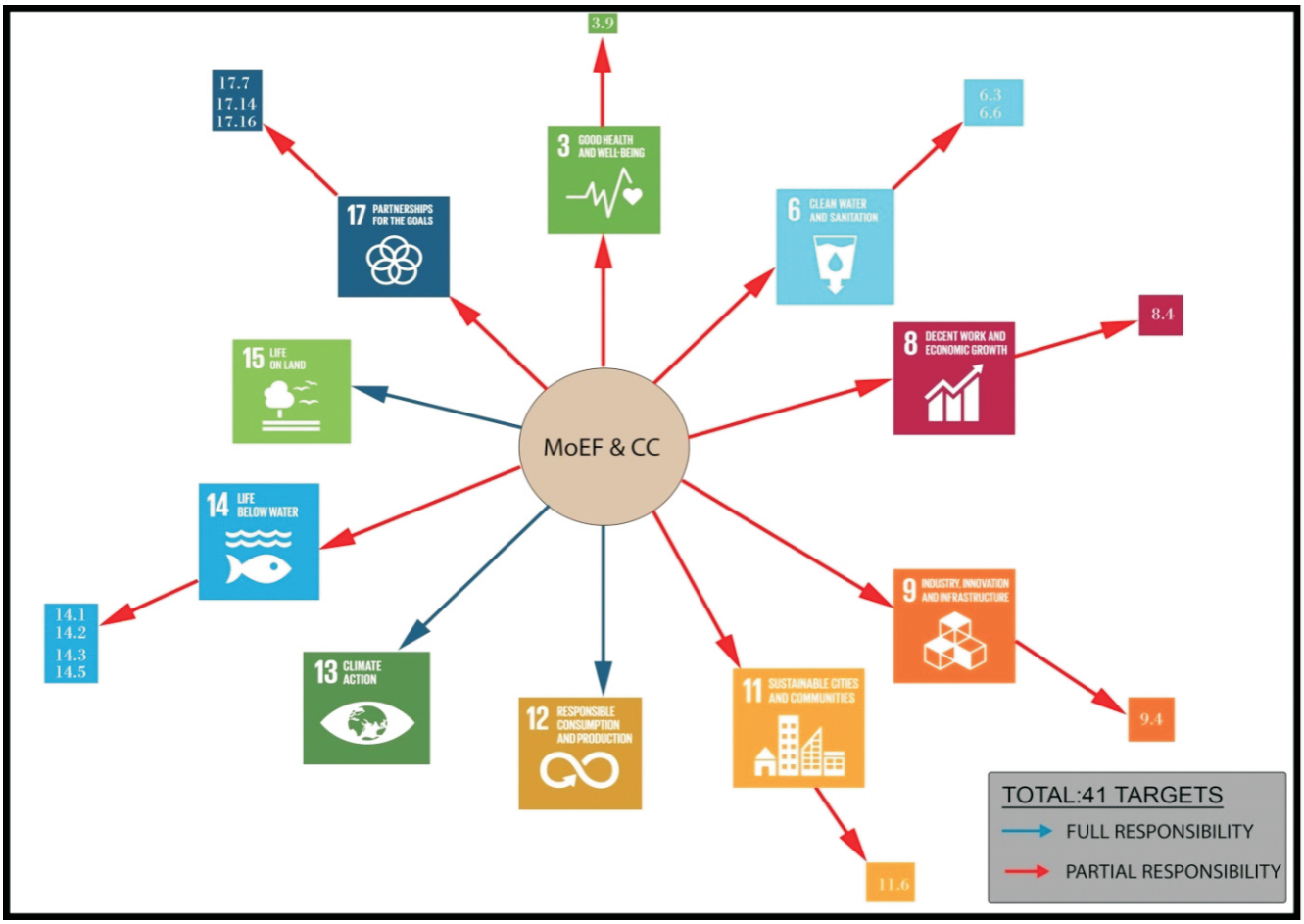

Figure 2: SDG Goals alotted to MoEFCC by NITI Aayog

such as food, energy and livelihoods security, health and education for all, regenerating and maintaining the health of natural eco-systems amidst the increasing threat of climate change. Evidence has shown that impacts of climate change will be felt most acutely by the people whose livelihoods are most dependent on natural systems, around 700 million in India (Satapathy, 2011). The UNHDR (2014) cites some studies that predict crop yields up to 30 per cent lower over the next decades. Water availability and changing cropping zones may further raise concerns regarding India's food and water security.

For a geographically and economically diverse country such as India, achievement of vital national development goals related to other systems such as human settlements, health, energy demand and infrastructure would also be adversely affected by impacts of changing climate (Planning Commission, 2011). The WHO warns that the risk of death and disease from climate change will double in the next 20 years. Furthermore, being the third largest carbon emitter in the world, India will also have to devise ways to reduce its carbon emissions while choosing its development trajectory.

The processes for implementing the NDCs in India includes amongst other mechanisms, states to review and revise their SAPCC documents and set in place policy and programme interventions along with resource generation and capacity development strategies from local to sub-national levels. The central government processes that includes national initiatives for energy planning, technology missions, Himalayan programmes and human settlements and disaster risk reduction initiatives will be required to (as they already are) take cognizance of and mainstreaming climate mitigation, risk reduction adaptation and resilience factors. The SDGs, although designed separately by an international process have been done in consultations with national governments and major stakeholder groups, need to be localised to the Indian context. The national, ministerial and state development planning processes are currently addressing these by using the SDG frame for a 15 year perspective planning with 3 and 7 year short and mid-term plan targets. Annual national and state budgets will need to be aligned to these plans going forward. The Global framework has not mandated any binding commitments and has provided a frame with aspirational targets. These targets have to be prioritized in time and space according to local, sub-national and national contexts.

To explore the linkages in SDGs and climate targets and

their effect on each other we will examine the link between SDG 7 (Energy) and the mitigation target of India's NDCs. India's nationally determined contribution has set itself a target of 40% non-fossil-based power capacity by 2030 which would result in at least 200 GW of new renewable power capacity by 2030. With approximately 900 GW of estimated renewable energy potential from commercially exploitable sources and favourable economic conditions, these targets can be met as long as financing and policy barriers and demand-side challenges are overcome. The choice of energy mix will decide the extent to which India achieves its climate targets. The choice of energy mix and the transition of the current energy production will also impact the estimated 300 million Indians who do not have adequate power supply, which is one of the focuses of SDG 7. The choices of industries in their power generation and efficiency will impact the use and source of electricity. Similarly, fostering innovations and greening our industries (SDG 9) and the production choices (scale, technology) will impact the production and use of energy and hence, impact our climate targets.

The energy mix that India chooses will contribute to the emissions from the country, which the country is going to track on the targets set at the Paris Agreement. But energy production also utilises other natural resources like water, land and material in accordance to the scale and technology used to produce energy. The approach that India takes (life-cycle preferably) will impact the sustainability of production in the long run with respect to these resources. For instance: use of heavy metals for making solar grids and use of water for hydro-electric energy production. The first can come in conflict with the balanced land and terrestrial systems (SDG 15) and the water balance and availability in the country (SDG 6), which indirectly affects other goals like agriculture (SDG 2) and sanitation (SDG 6). Further, the scale and technology of energy production not only impacts the environment but also impacts the jobs created or destroyed in the process (SDG 8). In this way, the choice of renewable energy production will have to measure people's benefits from the new production systems for renewable energy.

Similarly, there are multiple areas of convergences for India as it can use its newly launched and existing schemes such as Skill India, Make in India, MNREGA, RTE etc. to move towards achieving development and climate targets.

For India, progressing towards the two agendas of sustainable development and climate actions cannot be

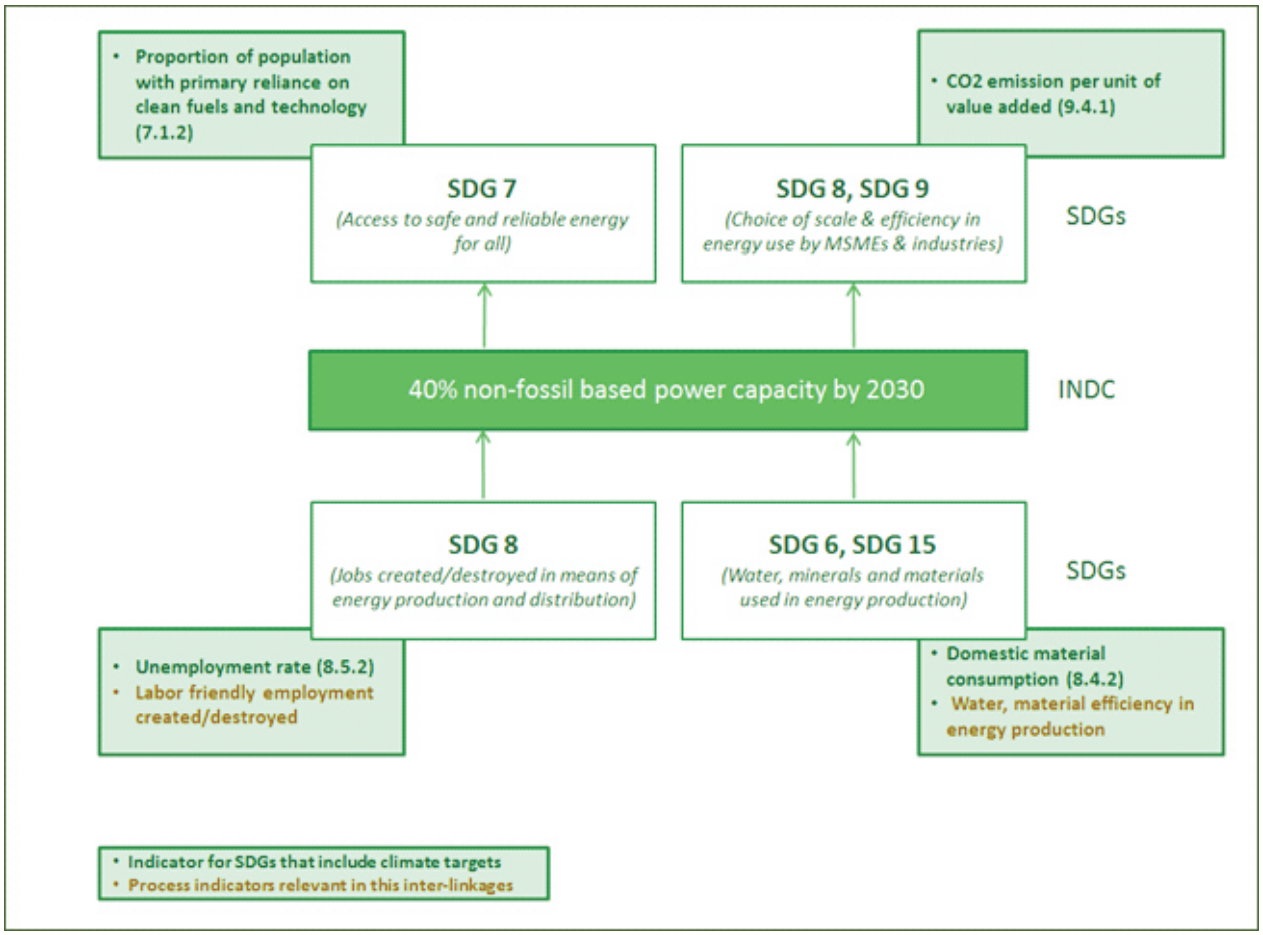

Figure 3: Links between NDC commitment and SDG targets

seen as distinct and in fact would serve as a win-win situation when approached together. Safeguarding its marginalised and vulnerable communities from climate change impacts while simultaneously developing sustainably through minimum carbon emissions is at the center of convergence of two issues for India. The implementation to be effective in India, the government must engage in informed prioritisation. This prioritisation must be backed by clear rationale and evidence. The linkages and alignment of goals and targets would help understand India's relation to them. An integrated approach will help link the domestic-global issues.

3. Methodology

WRI (2016) in its working paper "Examining the Alignment between the Intended Nationally Determined Contributions and Sustainable Development Goals" suggests that interlinking the SDGs and NDCs could be looked at in three ways:

1. Mutual sustainable development and climate benefits
2. Sustainable development co-benefits from climate action
3. Climate co-benefits from sustainable development action

Considering the above interactions we will sift through both the agreements focusing on keywords. Following, Le Blanc's (2015) methodology we are not considering economic or physical links between goal areas rather than focusing on wording of the targets described in the agreements. Annex 1 elaborates the alignment and specific text from the NDC is quoted that correlates a target. As mentioned by earlier studies, there are drawbacks to such an approach that it cannot possibly address all the relevant links among goal areas, as there are too many of them (Le Blanc, 2015). ICSU and ISSC (2015) conducted a science based interlinking which

Figure 4: SDG targets aligned with India's NDC

showed that there are even more intricate interdependencies and would require an integrated modelling system to map them. However, for integration in policy making it is important that based on scientific evidence, extensive modelling on direction of causation, strength of linkage and type of relationship would be required (O'Connor, 2015). This would further help in effective planning and prioritized efforts so that the government can deliver on the targets.

4. Localising the Two Agendas

In order to reap significant co-benefits India must first start by fostering coherence and synergy between departments, ministries, and state level governments in a national strategy as implementation begins. It must bring climate action and development together in national implementation. Using the methodology described above we see that the climate actions communicated by India in its NDC demonstrate potential synergies with 60 of the 169 SDG targets.

We see strong alignment in energy, climate change adaptation, cities, forests and water which reflects India's domestic priorities. We see alignment of climate actions with SDG targets in the poverty and agriculture sector, however, the numbers are not quantified and specifics of "leaving no one behind" is missing. There are no tangible targets addressing food security and agricultural which will have a major impact due to climate change. India has currently launched a new mission on addressing climate impacts on health as part of the NAPCC. India aligns this mission to address existing health concerns as well integrating the climate lens into it.

There is also Skill India Mission and National Training Policy that address SDG target 4.4 which is focused on substantially increasing technical and vocational skills. There would be a twofold approach in developing and utilizing the technologies needed to support climate mitigation and adaptation. The Government has focused on cities and renewable energy in a big manner. There are mentions to clean energy, energy infrastructure even improving the energy efficiency. Further, the NDC focuses on highly ambitious mitigation targets and renewable energy. In the urban space a number of schemes for transformation and rejuvenation of urban areas including Smart Cities Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and National Heritage City Development and Augmentation Yojana (HRIDAY) have been created that can find synergies with its corresponding SDG. India has acute deficit in basic infrastructure, such as roads, information and communication, water and sanitation, electricity availability. The development ahead would need to address low-carbon and resilient infrastructure. Target 9.5 on enhancing technology finds alignment in the NDC as it states "in its pursuit of low carbon growth, India would be focusing on technologies that need to be moved from lab to field and those that require targeted global research along with those that are still in the realm of imagination" (NDC, 2015; pg. 32).

The importance of forest ecosystems is reflected in India's NDC and there is a strong alignment between the two. India is a very species rich country and contributes to about 6% of the total biodiversity in the world. The impact of climate change on forest would manifest in the form of shifts in boundary of forest types, change in area etc. The forested grids are assessed to be impacted by at least 45%. Further, vulnerable forests are spread across India (MOSPI, 2015). Forests play an important role in stabilising the climate.

India's NDC highlights the need for international support to reach its commitments. It also highlights the domestic resource mobilisation plans it has. India's response to climate change is to acquire a comprehensive resource package. It is, therefore, committed and reflected in the NDC to mobilise resources that are necessary for both mitigation and adaptation. These include financial resources, technical cooperation and technology transfers.

In terms of major gaps, the NDC misses out on Gender and Climate justice for other less developed nations. Women can be key agents of change in the transformation to a low-carbon and climate-resilient future. India's NDC has a marked absence of initiatives and linkages to climate change and gender. It also does not address domestic inequities in terms of carbon emissions.

5. Areas of Alignment and Recommendations

Addressing the challenge of climate resilient development, ensuring prosperity for all within the planetary boundaries will require a careful factoring in of the climate concerns in all SDGs and ensuring that the NDC commitments are in sync with SDG targets that India is defining for itself. The climate lens has the potential to address the incoherence and trade-offs across policy strategies in the SDGs. Annex 1 elaborates on each target and its complementary text in the NDC. Following possible areas of integration and degrees of alignment for each goal:

Goal 1: End Poverty in All its Forms Everywhere

Numerous studies and reports established that climate change hits the poorest people the hardest, either in the form of disasters or water scarcity or diminishing agricultural yields. It hampers the progress of poverty eradication and economic mobility of the people. 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%), around 24% of the global population without access to electricity and 92 million without access to safe drinking water (INDC, 2015).

India's communication to the Paris Agreement highlighted that no country can achieve a Human Development Index of 0.9 or more without an annual energy availability of at least 4 toes per capita (INDC, 2015). The NDC therefore strongly resonates the need for poverty eradication and closely addresses nearly all the targets of the SD goal on poverty. Three of the seven targets are addressed by India's NDC. Poverty is among India's primary concern. It is important that the correlation of climate and development finance must be understood. Climate finance in the form of GCF and other climate funds is however, growing particularly for mitigation in developing countries, and there is a chance that it will crowd out finance for SDGs (IIED, 2015).

There should be a mechanism to focus international public finance on climate resilient SDGs to enhance resilience rather than only specific adaptation/mitigation programs. To address target 1.4 India's NDC mentions domestic climate justice in the form of improving energy efficiency of its economy over time and at the same time protecting the vulnerable sectors of economy and segments of our society. It can further, specifically target 1.3 by including aspects of disaster risk reduction and climate resilience. Three out of seven SDG targets are currently aligned with the NDC.

Goal 2: End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture

As per the latest Agriculture Census (2016), 67% of India's farmland is held by the marginal farmers with holdings below one hectare. A large proportion of this population is facing severe livelihood stress due to frequent crop failures triggered by erratic weather conditions of excess or scarce rainfall. 54% of the net sown area in India is dependent on rains making it highly vulnerable to the effects associated with climate change. The dependence on rain for irrigation, increase in temperatures, rainfall variation, and the frequency and intensity of extreme weather make adaptation a priority in order to reduce the impacts on agricultural productivity posed by the changing climate in India as in other vulnerable countries.

The NDC has a section on agriculture; this highlights its priority in India's agenda. India has previously recognised in its NAPCC the National Mission on Sustainable Agriculture, in order to address the risks this sector faces. The NDC brings forwards the previous work done in this area and four out of the eights SDG targets are addressed. In promoting sustainable and climate resilient agriculture the NDC can also highlight issues of agro-bio-diversity. The NDC while pushing for equity in the international climate regime could also include conditionality in its implementation with regards to trade. This could help in protection of farmers and food commodity trade systems.

Goal 3: Ensure Healthy Lives and Promote Well-Being for All at all Ages

Human health is among the most important of the development goals as it focuses on human well-being. There are methodologies that correlate health with productivity and therefore economic prosperity; also health with human cognitive and mental abilities with education and skills, health with gender equity, and health with nutrition. Therefore, there is a positive correlation between improved health and better human capital. Climate change would stress the health status of the population in India. It is expected to cause an increase in vector and water borne tropical diseases due to increased vector production and transmission due to rise in temperature, therefore increasing the risk of pandemics. Low productivity will aggravate malnutrition and increase mortality associated with changes in heat intensity and frequency of extreme events. It will also impact those who are most vulnerable, including infants, children, the elderly, and those with pre-existing medical conditions.

India has currently launched a new mission on addressing climate impacts on health as part of the NAPCC. Four of the 13 targets find synergies in the agenda. India could use this mission to address existing health concerns as well integrating the climate lens into it.

Goal 4: Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for All

Education is a primary driver for creating sustainable and decarbonized societies. Improving literacy and numeracy can push for a nation's human and economic

development. With increased education people would understand the causes and impacts of climate change. It will enable them to adapt and practice the strategies to cope with the impacts. It will also open up new avenues for jobs and equip them for conducting and engaging with innovation required for climate change adaptation and mitigation.

Education can also provide the training and skills needed to undertake specific adaptation and mitigation efforts. For example, India can use its Skill India Mission to address SDG target 4.4 which is focused on substantially increasing technical and vocational skills. For target 4.5 in addressing equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations we can start seeing the space for new skills and new understanding with respect to adaptation, green technologies etc. There would be a twofold approach in developing and utilizing the technologies needed to support climate mitigation and adaptation. Currently, in NDC the alignment is present in only three of the 10 targets on education.

Goal 5: Achieve Gender Equality and Empower all Women and Girls

Gender equity and women's empowerment is a key strategy for sustainable development. While our development index with respect to this one aspect is already low, gains through the multi-pronged efforts on this front risk being lost due to climate change impacts. Women and girls have been found to be more vulnerable to climate impacts than men and boys, especially in India as women are traditionally responsible for ensuring health, nutrition, safe water and providing care for the children, sick and elderly. Women here spend 150 million work days per year to collect water (UNESCO, 2015). They are often accompanied by children which is an impediment to their education. The water collection burden will worsen due to climate change implications and population growth will add to the water scarcity. Climate induced disasters such as drought, increased spread of disease, flash floods, extreme precipitation have the potential to hit women the hardest.

Women can be key agents of change in the transformation to a low-carbon and climate-resilient future. India's NDC has a marked absence of initiatives and linkages to climate change and gender. We can utilise our schemes or programmes that focus on gender inclusion as part of adaptation actions. Alternatively, adaptation funds can be used to achieve gender equality via climate initiatives.

Goal 6: Ensure Availability and Sustainable Management of Water and Sanitation for All

Water as a resource is the most at risk whether in excess or in scarcity and it is the biggest link to equitable and inclusive development. Potential stresses on availability of drinking water for humans and livestock due to climate change will be exacerbated by increase in industrial and probably agricultural demand. Over exploitation is likely to enhance mineral accumulation / eutrophication which could have unforeseen health impacts when combined with other situations such as increased vector borne disease burden or heat stress. The direct impact will adversely affect quality and availability of drinking water, critical infrastructure and hygiene and sanitation services. Rising sea levels and saline intrusion is additional risk for a country like India that has long coastline.

Water stresses from climate change need to be addressed in India's climate action considering the needs of its growing population and agricultural and economic development. Out of eight, six targets find alignment in the NDC. The NDC misses out on trans-boundary water governance in South Asia, this is of critical significance, given the sharing of waters, mountains and seas across the region. Climate change is a regional issue and India's neighbors do share the same geo-physiography to have similar impacts. A major part of South Asian river system like the GBM basin is vulnerable to climate change.

Goal 7: Ensure Access to Affordable, Reliable, Sustainable and Modern Energy for All

Energy finds a big mention in India's NDC. It has mention to clean energy, energy infrastructure even improving the energy efficiency. The NDC focuses on highly ambitious mitigation targets and renewable energy. Its voluntary pledge is to reduce by 20%-25% its GHG emissions intensity of Indian GDP by 2020 from the 2005 level. There has already been a reduction of 12% from 2005 to 2010 (MoEFCC, 2015). Since 2009 till 2015 the share of renewable grid capacity has increased from 3.9 GW to 36 GW. This is an increase of over 6 times (NDC, 2015). Further, India has also anchored a global solar alliance InSPA (International Agency for Solar Policy & Application) to include countries from Tropic of Cancer to the Tropic of Capricorn.

This is a reflection of India's domestic priorities and all targets of the SDG align with India's NDC.

Goal 8: Promote Sustained, Inclusive and Sustainable Economic Growth, Full and Productive Employment and Decent Work for All

Environmental sustainability addressing increased pressure on resources due to increasing consumption will have a detrimental impact on the environment. These impacts are likely to be enhanced due to climate change induced scarcities, which will have to be addressed. Economic growth and development must reconcile with the environmental needs. Green growth and economy will have to be the new transition in order to be socially, economically, and environmentally inclusive.

The shift to a greener economy would help create new jobs; raise living standards as well improve social cohesion. Five out of the 12 SDG targets find synergy in the NDC. There will be opportunities in the creation of greener jobs in all sectors especially the energy, waste management, water, transport, tourism construction etc.

The job creation will further enhance economic resilience through better incomes and diversify economic activity to communities that are dependent on single source of income. Target 8.9 discusses tourism and eco-tourism as an opportunity for India to develop as part of its climate action. This can be addressed under the purview of carbon sequestration and preventing deforestation as mitigation measures.

Goal 9: Build Resilient Infrastructure, Promote Inclusive and Sustainable Industrialisation and Foster Innovation

India has acute deficit in basic infrastructure, such as roads, information and communication, water and sanitation, electricity availability. The development ahead would need to address low-carbon and resilient infrastructure. Target 9.5 on enhancing technology finds alignment in the NDC as it states "in its pursuit of low carbon growth, India would be focusing on technologies that need to be moved from lab to field and those that require targeted global research along with those that are still in the realm of imagination."

Dams, dykes, ponds, and other water and energy infrastructure will need to be addressed. Coastal infrastructure will be additionally at risk due to cyclonic winds and typhoons. All new infrastructure will need to be taken into account for climate risk and resilience. In addition, there may be current eco-system based infrastructure services such as mangroves, wetlands etc. that will need to be strengthened. A low-carbon and climate resilient development pathway for infrastructure will be the key to achieving countries' social, economic, political, and environmental goals (WRI,2015).

The urban infrastructure in the NDC has been covered in terms of schemes, however, drainage systems, roads and water supplies will need to be upgraded to handle disasters and sudden impacts of floods, heat spikes etc. The NDC also misses out on addressing target 9.3. Many of the SMEs and industries are based on agri and forest sector produce. The vulnerability, risk and management strategy needs to include these as part of the NDC. It will also help cover the climate risks to industry and to MSME.

Coastal infrastructure is mentioned, however, climate resilience can also account for risk due to cyclonic winds and typhoons. In the ecosystem based infrastructure mangroves, wetlands etc. can be strengthened as part of enhancing climate resilience. Target 9a reflects climate action in the form of south-south technology transfer. India has indicated that it will increasingly be a donor as well but it doesn't reflect in the NDC.

Goal 10: Reduce Inequality Within and Among Countries

Climate justice and equity is a very strong concept in India's NDC. Under these principles and of Common but Differentiated Responsibilities India reasserts it will require extensive international support and partnership from developed countries. It mentions the responsibility of the developed nations and the inequality in terms of the impacts faced. In the complex trajectory of India's development where high rates of GDP are accompanied with joblessness and poor environmental indices, inequity within is a significant concern. Climate change is likely to impact the poorest more because of their increased vulnerability and dependence on climate sensitive sectors for livelihood security. Thus, climate change action directed towards raising the adaptive capacity of the poor and vulnerable, increasing resilience through diversification of jobs, improving access to services and resources and building capacities through empowerment strategies will be coherent with achieving SDG targets as well.

India's NDC misses addressing on reducing inequality among countries. The NDC discusses India's position in terms of climate justice and CBDR, it does not advocate strongly for Small Island Nations and least developing nations. Domestic inequities in emissions are also not addressed as highlighted by a study by CSE.

Goal 11: Make Cities and Human Settlements Inclusive, Safe, Resilient and Sustainable

Cities account for 70% of the greenhouse gases (GHGs) emissions and are poised to be an important element in

climate action (C40.org, 2015). Cities as compared to rural settlements emit a lot of GHGs, utilise more energy, and have a high transportation use. They also change natural ecosystems in order to create unnatural living spaces for inviting more population. Being responsible for accelerating global warming, they therefore bear the brunt of it as well. Resilience to disasters, sustainable infrastructure, and risk informed planning, disaster contingency plans should be made an important component of any smart city plan. Further, adaptation and resilience planning programs cannot be addressed in silos and rather they should be addressed together and incorporated in every aspect of Smart City development. The narrative of resilience should be a part of smart cities from land use planning to transport and housing.

A number of schemes for transformation and rejuvenation of urban areas including Smart Cities Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and National Heritage City Development and Augmentation Yojana (HRIDAY) have been created that can find synergies with this goal. Seven of the 10 targets are broadly addressed in the climate commitment.

The urban resilience concern is also important besides cleaner cities as per Goal 11. This has to be taken in consideration as much of India's urban landscape is yet to be built. The new urbanisation agenda can account for enhanced climate resilience.

Goal 12: Ensure Sustainable Consumption and Production Patterns

Sustainable consumption and production is an integral part of India's NDC, as it reiterates the age old way of living according to needs and not wants. The Gandhian legacy is mentioned and it highlights sustainable way of living based on traditions and values of conservation and moderation. SCP is an important part of any low-carbon or zero-carbon strategy.

No specific mention in the NDC but there will be opportunities in the creation of greener jobs in all sectors especially the energy, waste management, water, transport, tourism construction, if the NDC is being implemented. The job creation will further enhance economic resilience through better incomes and hopefully diversification of economic activity to communities that are dependent on single source of income. The NDC could very well utilise this potential and look at international and adaptation finance for this sector.

Goal 13: Take Urgent Action to Combat Climate Change and its Impacts

India's NDC includes aspects on the integration of climate action, both mitigation and adaptation, into broader national policies and strategies. It fulfills all the targets within this goal expect for the last two that are more important for developed nations. It does mention the need for developed countries to raise and provide the required finance.

Goal 14: Conserve and Sustainably Use the Oceans, Seas and Marine Resources for Sustainable Development

Rising sea levels are a direct causal driver for coastal erosion. The coastal erosion in India could displace and affect the fisheries engaged economy. This would cause increased inland migration. Flooding of coasts can also damage coastal infrastructure. The region's most vulnerable to such an implication are Maharashtra, Goa and Gujarat (MOSPI, 2015). Mangroves in Sunderban are also the same. These regulate the climate and act as a carbon sink. Ocean acidification and other impacts could threaten human livelihoods dependent on the ocean. This is in addition to the South Asian Grid or continuity of mangroves across the Indian and Bangladesh coast even river management of the Ganga, Brahmaputra and Meghna River Basin management. Four out of the 10 targets are aligned in the NDC.

The fisheries industry is likely to be heavily impacted due to climate change; there is a huge population dependent on fishing as livelihood. Fish is the source of major protein for a very large population in India. Climate change impact could potentially result in the rollback of many development gains for this population and industry.

Under the National Initiative on Climate Resilient Agriculture (NICRA), fish stocks as per target 14.4 can be addressed. The fisheries industry is likely to be heavily impacted due to climate change, there is a huge population dependent on fishing as livelihood, and Fish is the source of major protein or a very large population in India. The second area of concern under Goal 14 is infrastructure resilience, ports and other connectivity, storage etc on the coastline plus the cities and human settlements that lie on the coast, the dangers of land being lost will mean displacement. Hence, oceans and marine systems are critical for our economic development. In Goal 14, we have the potential for GCF and adaptation fund and other partnerships contributing to protecting water ecosystems.

Goal 15: Protect, Restore and Promote Sustainable Use of Terrestrial Ecosystems, Sustainable Management of Forests, Combat Desertification, and Halt and Reverse Land Degradation and Halt Biodiversity Loss

India is a very species rich country and contributes to about 6% of the total biodiversity in the world. The impact of climate change on forest would manifest in the form of shifts in boundary of forest types, change in area etc. The forested grids are assessed to be impacted by at least 45%. In addition, vulnerable forests are spread across India (MOSPI, 2015). Forests play an important role in stabilising the climate. Forest ecosystems are also important for livelihoods in India. The importance of forest ecosystems is reflected in India's NDC and there is a strong alignment between the two with all five targets being addressed.

Goal 16: Promote Peaceful and Inclusive Societies for Sustainable Development, Provide Access to Justice for All and Build Effective, Accountable and Inclusive Institutions at all Levels

IPCC (2014) suggests that there is a linkage between armed conflicts and climate change. Even though there isn't a direct correlation but climate change can cause stress on poverty stricken population and issues with access of natural resources. In India, climate-related natural hazards could lead to interstate migration and interstate conflicts for resources.

Goal 16 can be addressed as part of climate action. IPCC (2014) suggests that there is a linkage between armed conflicts and climate change. Even though there isn't a direct correlation but climate change can cause stress on poverty stricken population and issues with access of natural resources. In India, climate-related natural hazards could lead to interstate migration, interstate conflicts for resources, social conflicts with communities and industry extending to trans-boundary issues.

Goal 17: Strengthen the Means of Implementation and Revitalise the Global Partnership for Sustainable Development

The Goal reinforces the need for partnerships between developed and developing countries and their respective institutions towards the four means of implementation - finance, technology, capacity building, and trade.

Developing countries such as India face enormous challenge to advance adaptation activities because of lack of financial resources. Finance, technology has always remained one of the key asks of developing countries in climate negotiations. The NDC documents mention the climate finance gap as USD 2.5 trillion (at 2014-15 prices). Primary estimates quote USD 565 billion as the gap in finance to achieve the SDGs, this is not even the overall financial requirement (MoEFCC, 2015). This reiterates that the total contribution of developed countries by way of climate finance falls far behind the numbers required.

India's NDC highlights the need for international support to reach its commitments. It also highlights the domestic resource mobilisation plans it has. India's response to climate change is to acquire a comprehensive resource package. It is therefore committed and reflected in the NDC to mobilizing the resources that are necessary for both mitigation and adaptation. These include financial resources, technical cooperation and technology transfers.

6. Conclusion

In India the planning processes for both the agendas have been different. The NDC ratified by the Government on October 2nd, 2015 is a reflection of India's developmental priorities for the future with targets used from the National & State Action Plans for Climate Change as its foundation. The NAPCC and the state SAPCCs were meant to be dynamic documents and subject to change with changing circumstances and new knowledge. Current implementation on India's part will require modifying the existing National missions and other development plans and policies accordingly. The NDC is based on the principles of climate justice and Equity and Common but Differentiated Responsibilities under the UNFCCC. The NDCs would be translated into the national level policies and laws as it is a binding agreement after India's ratification. They therefore, will strongly drive the zero-emission and climate-resilient development in India.

We hope to advance the dialogue as India moves forward with these ambitions. The questions that need to be answered in this regard must focus on pinpointing how these agendas can be brought together to reinforce each other? How does India differentiate between the finance for development and climate actions? What government schemes align with the SDG targets? Do they enable each other or counteract the progress made in either targets? It is by finding a strong synergy and integrated approach to climate action and sustainable development that India will fulfill its undertaking of both the multilateral agreements from last year.

India understanding of the alignment between the agendas should help planning at the sub-national and district level better. It will help in translation of the agenda to bring synergies between ministries and departments and an integrated approach to planning, budgets and monitoring processes. Addressing these two together could help save resources and reap greater co-benefits for development to ensure that in India "no one is left behind".

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Annex 1

SUSTAINABLE DEVELOPMENT GOALS AND TARGETS	CLIMATE ACTIONS AS INDIA's NATIONALLY DETERMINED CONTRIBUTION
Goal 1. End poverty in all its forms everywhere	
Target 1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day	The NDC highlights that India's expenditure on programmes with critical adaptation components has increased from 1.45% of GDP in 2000-01 to 2.82% during 2009-10. Expenditure on human capabilities and livelihoods viz. poverty alleviation, health improvement and disease control and risk management, constitutes more than 80% of the total expenditure on adaptation in India.[2]
1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	As mentioned above reducing vulnerability by spending on adaptation as a climate action would yield Sustainable development co-benefits. [3]
1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable	
1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	
1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	India's expenditure on programmes with critical adaptation components has increased from 1.45% of GDP in 2000-01 to 2.82% during 2009-10. Expenditure on human capabilities and livelihoods viz. poverty alleviation, health improvement and disease control and risk management, constitutes more than 80% of the total expenditure on adaptation in India.[4]
1.a Ensure significant mobilisation of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions	
1.b Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions	

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Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	
2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	The initiatives as the National Mission on Sustainable Agriculture (NMSA) aims at enhancing food security and protection of resources such as land, water, biodiversity and genetics. This in addition to contingency plans based on early warning systems and other weather forecasting systems help improve agricultural productivity.[5]
2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	
2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	The measure mentioned above as well the NDC discusses a mega project called the National Initiative on Climate Resilient Agriculture (NICRA). Its four main modules include Natural Resource Management, improving crop production, livestock and fisheries and institutional interventions. [6]
2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	Same as above
2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	
2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries	The NDC discusses that in order 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.[7]
2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of	

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agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round	
2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility	
Goal 3. Ensure healthy lives and promote well - being for all at all ages	
3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	
3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	
3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	Government of India has launched programmes like Integrated Disease Surveillance Programme (IDSP), National Vector Borne Disease Control Programme (NVBDCP) to deal with vector borne diseases like malaria, dengue etc. As part of this programme India aims to eliminate malaria by 2030.[8]
3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	
3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	
3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents	
3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes	
3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	Same as above
3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	
3.a Strengthen the implementation of the World Health Organisation Framework Convention on Tobacco Control in all countries, as appropriate	

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3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all	Health Mission' under the ambit of NAPCC to evolve strategies for mitigating, containing and managing the adverse impact of Climate Change on health. [9]
3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States	
3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks	India has developed 580 district level (covering many states) contingency plans based on early warning systems and other weather forecasting systems.[10]
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	
4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes	
4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education	
4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university	
4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	Government of India has also implemented National Training Policy, through which each Ministry and Department earmarks about 2.5% of its salary budget for training. A part of this budget is used for training in climate change and sustainable development issues as well. [11] This is in addition to the Skill India Initiative.
4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations	

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4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy	
4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	Same as above
4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	
4.b By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries	It is expected that the international mechanism will support such initiatives including formation of Thematic Knowledge Networks, further expand activities under Global Technology Watch Group, establishing more intensive state centric knowledge and awareness creating activities and training of professionals in different aspects of renewable energy and supporting research and development institutions for pre-competitive research.[12]
4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States	
Goal 5. Achieve gender equality and empower all women and girls	
5.1 End all forms of discrimination against all women and girls everywhere	
5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation	
5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation	
5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate	
5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	

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5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences	
5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws	
5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women	
5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels	
Goal 6. Ensure availability and sustainable management of water and sanitation for all	
6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	
6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	The NDC mentions AMRUT and Smart cities, in order to reach climate resilient cities it will include urban infrastructure in terms of water supply, sewerage, storm water drains, however it does not say what or how much" will be achieved. [13]
6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	Looking at the Proportion of wastewater safely treated and water bodies with good water quality the NDC highlights that 816 Sewage Treatment Plants (522 operational and rest at different stages of construction and planning) are available having a combined capacity of 23,277 million of liters per day across 28 States and Union Territories.[14]
6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Standards related to effluent discharge have been modified for over 2000 industries focusing on reducing quantity of waste water generation, conservation of water, promote Zero Liquid Discharge (ZLD) and use of treated effluent for irrigation.[15]
6.5 By 2030, implement integrated water resources management at all levels, including through trans-boundary cooperation as appropriate	The main objective of India's National Water Mission (NWM) is "conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management". One of the key goals of the mission is to enhance water use efficiency by 20%.

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6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	Government of India has also set up the National River Conservation Directorate for conservation of rivers, lakes and wetlands in the country and improving the water quality which covers stretches of 40 rivers in 190 towns spread over 20 States.[16] Although it is not enough to cover all water ecosystems.
6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies	
6.b Support and strengthen the participation of local communities in improving water and sanitation management	Looking at the Proportion of local administrative units that have policies and procedures for management. The NDC highlights that several municipal authorities, including Delhi have amended their existing building bye-laws, making it compulsory for every large house or hotel (200 yards or more in area) to undertake rainwater harvesting thereby improving water management.[17]
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	
7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	The National Electricity Policy (NEP) underscores the focus on universalising access to electricity and promoting renewable sources of energy, as does the Integrated Energy Policy (IEP).[18] The NDC also mentions Smart Power for Environmentally-sound Economic Development (SPEED) is a program that aims at electrification of rural areas based on a decentralised renewable energy system.[19]
7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	Green Generation for Clean & Energy Secure India: more than 5 times increase in Renewable Capacity from 35 GW (upto March 2015) to 175 GW by 2022.[20]
7.3 By 2030, double the global rate of improvement in energy efficiency	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.[21]
7.a By 2030, enhance international cooperation to facilitate access to clean energy research and	India has also decided to anchor a global solar alliance, InSPA (International Agency for Solar Policy &

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technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	Application), of all countries located between the Tropic of Cancer and the Tropic of Capricorn.[22]
7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support	National Smart Grid Mission has been launched to bring efficiency in power supply network and facilitate reduction in losses and outages. Green Energy Corridor projects worth INR (Indian National Rupee) 380 billion (USD 6 billion) are also being rolled out to ensure evacuation of renewable energy.[23] There are also plans in NDC that suggest increasing solar energy programme to 100 GW by 2022[24]
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive and decent work for all	
8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	India believes that development and environment are not adversaries but can go hand in hand, if environmental sensibilities can be imbibed. Equitable, inclusive and sustainable development would be the key to a new model of growth that India is committed to pursue, which can be fostered and facilitated by a collaborative approach among the Developing and the Developed countries.[25]
8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	It is also to be appreciated that every country has different requirements of technology and different capabilities of handling technologies depending on trained and skilled manpower, supporting infrastructure, intellectual environment etc. Knowledge creation, eco-system design for innovation and development, and technology deployment would be a continuous requirement in this process. In its pursuit of low carbon growth, India would be focusing on technologies that need to be moved from lab to field and those that require targeted global research along with those that are still in the realm of imagination.[26]
8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalisation and growth of micro-, small- and medium-sized enterprises, including through access to financial services	New Ventures India (NVI) is an initiative to support cleantech entrepreneurs in developing their business plans and access finance and markets. [27]
8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the	Zero Effect, Zero Defect (ZED) with Make in India campaign to enhance energy & resource efficiency, pollution control, use of renewable energy, waste management etc.[28]

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10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	
8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	National Rural Livelihoods Mission which has the objective to cover 70 million rural poor households, across 600,000 villages in the country through self-managed self-help groups and federated institutions to support the rural communities in strengthening their livelihood.[29]
8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training	
8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms	
8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	
8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	
8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all	
8.a Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries	
8.b By 2020, develop and operationalise a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organisation	
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	
9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	
9.2 Promote inclusive and sustainable industrialisation and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries	

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9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets	
9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	The Small and medium-sized enterprises (SME) Cluster Programs for Energy Efficiency 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[30]
9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending	In its pursuit of low carbon growth, India would be focusing on technologies that need to be moved from lab to field and those that require targeted global research along with those that are still in the realm of imagination. One of the important areas of global collaborative research should be clean coal and fossil fuel, energy management and storage systems for renewable energy.[31]
9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States	
9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities	
9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020	
Goal 10. Reduce inequality within and among countries	
10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average	
10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	
10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and	

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promoting appropriate legislation, policies and action in this regard	
10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality	
10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations	
10.6 Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions	
10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies	
10.a Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organisation agreements	
10.b Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes	
10.c By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent	
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	
11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums	Under the Smart Cities Mission, 100 smart cities are planned with the objective to develop new generation cities, which will provide core infrastructure and a decent quality of life to its citizens by building a clean and sustainable environment. Smart solutions like recycling and reuse of waste, use of renewables, protection of sensitive natural environment will be incorporated to make these cities climate resilient. Atal Mission for Rejuvenation and Urban Transformation (AMRUT), a new urban renewal mission has been launched by Government of India for 500 cities with focus on ensuring basic infrastructure services such as water supply, sewerage, storm water drains, transport and development of green spaces and parks by adopting climate resilient and energy efficient policies and regulations.[32]

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11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	Reducing emissions as per the NDC in the transportation sector would also cover expansion of public transport.[33]
11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries	
11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage	National Heritage City Development and Augmentation Yojana (HRIDAY) launched to bring together urban planning, economic growth and heritage conservation in an inclusive manner.[34]
11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations	In order to deal with disasters such as flash floods, extreme weather events, droughts etc. the NDC discusses the measures including the Sendai framework. The Smart Cities program also suggests smart solutions like recycling and reuse of waste, use of renewables, and protection of sensitive natural environment will be incorporated to make these cities climate resilient. [35]
11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	In 2014, a National Air Quality Index (AQI) was launched for Indian cities. AQI is based on six pollutants and is notified every day serving as public information tool to disseminate information on air quality in qualitative terms. Amendment of Municipal Solid Waste Management (Management and Handling) Rules is underway which will emphasise on proper segregation of waste at source; enhance waste processing and implementation of scientific landfills. Similarly, Bio-Medical Waste (Management & Handling) Rules, Plastic Waste Management Rules, e-waste (Management) Rules and Hazardous and Other Wastes (Management and Transboundary Movement) Rules are being amended for a more scientific, technology driven, regulated and participative environment management[36]
11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities	Atal Mission for Rejuvenation and Urban Transformation (AMRUT), a new urban renewal mission has been launched by Government of India for 500 cities with focus on ensuring basic infrastructure services such as water supply, sewerage, storm water drains, transport and development of green spaces and parks by adopting climate resilient and energy efficient policies and regulations.[37]

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11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning	
11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	India has been able to establish a holistic disaster risk reduction and response apparatus at national, state and district levels with the aim of reducing existing levels of vulnerability, prevention, and mitigation of disasters and also to provide appropriate response, rehabilitation and reconstruction. Strategies include early warnings and communications, construction and sustainable maintenance of multi-purpose cyclone shelter, improved access and evacuation, enhanced capacity and capability of local communities to respond to disaster and strengthening disaster risk mitigation capacity at central, state and local levels[38]
11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials	
Goal 12. Ensure sustainable consumption and production patterns	
12.1 Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries	
12.2 By 2030, achieve the sustainable management and efficient use of natural resources	
12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	
12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimise their adverse impacts on human health and the environment	Only carbon emissions as air pollution are addressed in the form that the Indian industry has also 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.[39]
12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	Zero Effect, Zero Defect (ZED): The Make in India campaign with ZED is a policy initiative to rate Medium & Small Industries on quality control and certification for energy efficiency, enhanced resources efficiency,

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	pollution control, use of renewable energy, waste management etc. using ZED Maturity Assessment Model.[40]
12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle	
12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities	
12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	The NDC throws light on promoting sustainable production processes and also sustainable lifestyles across the globe.[41]
12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production	
12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products	
12.c Rationalise inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimising the possible adverse impacts on their development in a manner that protects the poor and the affected communities	Policies to promote actions that address climate concerns also include fiscal instruments like coal cess, cuts in subsidies, increase in taxes on petrol and diesel, market mechanisms including Perform Achieve and Trade (PAT), Renewable Energy Certificates (REC) and a regulatory regime of Renewable Purchase Obligation (RPO). The institutional arrangement for offtake of renewable power will be further strengthened.[42] With a series of steps taken recently, India has cut subsidies and increased taxes on fossil fuels (petrol and diesel) turning a carbon subsidy regime into one of carbon taxation. Further, in its effort to rationalise and target subsidies, India has launched 'Direct Benefit Transfer Scheme' for cooking gas, where subsidy will be transferred directly into the bank accounts of the targeted beneficiaries. In fact, over the past one year India has almost cut its petroleum subsidy by about 26%.[43] Give It Up' Campaign launched to encourage citizens to give up subsidy on cooking gas to meet the needs of the truly needy citizens, thereby promote shift away from inefficient use of biomass in rural areas.[44]

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Goal 13. Take urgent action to combat climate change and its impacts	
13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	Planning and implementation of actions to enhance climate resilience and reduce vulnerability to climate change. [45]
13.2 Integrate climate change measures into national policies, strategies and planning	The NDC discusses integrating climate change into a variety of sectors through its National Action Plans[46]
13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	Besides a holistic disaster risk reduction and response apparatus at national, state and district levels with the aim of reducing existing levels of vulnerability, prevention, and mitigation of disasters and also to provide appropriate response, rehabilitation and reconstruction the NDC suggests awareness creating activities and training of professionals to increase mitigation would be conducted.[47] A network of 127 institutions called "INCCA" (Indian Network on Climate Change Assessment) has been set up to share knowledge and work in a collaborative manner on climate change issues. [48]
13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalise the Green Climate Fund through its capitalisation as soon as possible	The NDC does call for the need for finance in the form of the Green Climate Fund. It also puts it achieving its targets on the condition that it avails transfer of technology and low cost international finance including from Green Climate Fund.[49]
13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalised communities	The NDC does mention that its successful implementation is contingent additional means of implementation to be provided by developed country parties, capacity building following Article 3.1 and 4.7 of the Convention.[50]
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	
14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	India has demarcated vulnerable areas on the coasts and declared them as Coastal Regulation Zone (CRZ) with restrictions imposed on setting up and expansion of industries, operations and processes in these areas.[51]
14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their	India is also implementing programmes for Integrated Coastal Zone Management (ICZM). The vision of the project is to build national capacity for implementation of

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resilience, and take action for their restoration in order to achieve healthy and productive oceans	comprehensive coastal management through ecological management, conservation and protection of critical habitats, coastal geomorphology and geology of coastal and marine areas, coastal engineering, socio-economic aspects, policy and legal issues and other related fields in the area of coastal governance.[52]
14.3 Minimise and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels	
14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	
14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information	India is also implementing programmes for Integrated Coastal Zone Management (ICZM). The vision of the project is to build national capacity for implementation of comprehensive coastal management through ecological management, conservation and protection of critical habitats, coastal geomorphology and geology of coastal and marine areas, coastal engineering, socio-economic aspects, policy and legal issues and other related fields in the area of coastal governance.[53]
14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognising that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organisation fisheries subsidies negotiation	Government notified the Island Protection Zone (IPZ) in 2011 with the objective of ensuring livelihood security to the local communities, conserving and protecting coastal stretches, and promoting development in a sustainable manner[54]
14.7 By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism	
14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries	

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14.b Provide access for small-scale artisanal fishers to marine resources and markets	
14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want	
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	
15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Another initiative to protect coastal livelihood is 'Mangroves for the Future (MFF)' coordinated by International Union for Conservation of Nature (IUCN) in India.
15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	To create an additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent through additional forest and tree cover by 2030. Initiatives like Green India Mission (GIM) aim to further increase the forest/tree cover to the extent of 5 million hectares (mha) and improve quality of forest/tree cover on another 5 mha of forest/non-forest lands along with providing livelihood support. It is expected to enhance carbon sequestration by about 100 million tonnes CO2 equivalent annually. [55] These efforts have been further augmented by policies like National Agro-forestry Policy (NAP), REDD-Plus policy, Joint Forest Management; National Afforestation Programme and proposed devolution of about USD 6 billion under Compensatory Afforestation to states. [56]
15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	
15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	The National Mission for Sustaining the Himalayan Ecosystem (NMSHE) addresses important issues concerning Himalayan Glaciers and the associated hydrological consequences, biodiversity and wildlife conservation and protection, traditional knowledge societies and their livelihood and planning for sustaining of the Himalayan Ecosystem. Government has also launched National Mission on Himalayan Studies to complement NMSHE with the objective of building a body of scientific and traditional knowledge along with demonstrating replicable solutions to the problems in thematic areas including natural resource management, capacity building, long-term ecological monitoring etc.[57]

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15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	The National Mission for Sustaining the Himalayan Ecosystem (NMSHE) addresses important issues concerning Himalayan Glaciers and the associated hydrological consequences, biodiversity and wildlife conservation and protection, traditional knowledge societies and their livelihood and planning for sustaining of the Himalayan Ecosystem. Government has also launched National Mission on Himalayan Studies to complement NMSHE with the objective of building a body of scientific and traditional knowledge along with demonstrating replicable solutions to the problems in thematic areas including natural resource management, capacity building, long-term ecological monitoring etc.
15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed	
15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products	
15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	
15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	India's environment policy is anchored in the Constitution of India, Article 48-A of the Constitution states that "The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country".[58]
15.a Mobilise and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems	
15.b Mobilise significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation	
15.c Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities	Citizens of India are an integral part of country's strategies to combat climate change. The Constitution of India vide Article 51-A lays down that it as a fundamental duty of every citizen to "protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures".[59]

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Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
16.1 Significantly reduce all forms of violence and related death rates everywhere	
16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children	
16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all	
16.4 By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organised crime	
16.5 Substantially reduce corruption and bribery in all their forms	
16.6 Develop effective, accountable and transparent institutions at all levels	
16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels	
16.8 Broaden and strengthen the participation of developing countries in the institutions of global governance	
16.9 By 2030, provide legal identity for all, including birth registration	
16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements	
16.a Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime	
16.b Promote and enforce non-discriminatory laws and policies for sustainable development	
Goal 17. Strengthen the means of implementation and revitalise the global partnership for sustainable development	
Finance 17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection	
17.2 Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of	

ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries	
17.3 Mobilise additional financial resources for developing countries from multiple sources	
17.4 Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress	
17.5 Adopt and implement investment promotion regimes for least developed countries	
Technology 17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism	Climate friendly technologies, adapted and deployed in India are also being utilised in other countries, particularly in developing countries, through bilateral cooperation. This development and transfer of technologies, both into the Indian market and from India into other markets, will continue to sustain future decreases in the carbon intensity of the Indian economy and increases in the share of renewables in the electricity-mix.60
17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed	
17.8 Fully operationalise the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology Capacity-building	
17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation Trade	
17.10 Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organisation, including through the conclusion of negotiations under its Doha Development Agenda	

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17.11 Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020	
17.12 Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organisation decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access	
Systemic issues Policy and institutional coherence 17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence	
17.14 Enhance policy coherence for sustainable development	
Target 17.15 Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development	India's contribution takes into account its commitment to conservation of nature as well as the imperatives of meeting the competing demand of resources for addressing the challenges of poverty eradication, food security and nutrition, universal access to education and health, gender equality and women empowerment, water and sanitation, energy, employment, sustainable urbanisation and new human settlements and the means of implementation for enhanced action for achieving among others, the sustainable development goals for its 1.2 billion people[61]
17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilise and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries	
17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships	
Data, monitoring and accountability 17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts	

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17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries	

About Development Alternatives Group www.devalt.org

Development Alternatives (DA) is a premier social enterprise with a global presence in the fields of green economic development, social equity and environmental management. It is credited with numerous technology and delivery system innovations that help create sustainable livelihoods in the developing world. DA focuses on empowering communities through strengthening people's institutions and facilitating their access to basic needs; enabling economic opportunities through skill development for green jobs and enterprise creation; and promoting low carbon pathways for development through natural resource management models and clean technology solutions.

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