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India's Initiatives to Combat **Climate Change**

India's initiatives on climate change

- India is a Party to the United Nations Framework Convention on Climate Change (UNFCCC), Paris Agreement and Kyoto Protocol.
- The MoEF&CC is the nodal Ministry for international climate change negotiations under UNFCCC.
- The Climate Change Division of the Ministry looks after the issues related to climate change, including the international negotiations and domestic policies and actions.

India's post-2020 climate goals

- For post-2020 period, in response to the decisions of the Conference to the Parties, India submitted its Nationally Determined Contribution (NDC) to the UNFCCC in October, 2015, outlining the climate actions intended to be taken under the Paris agreement.
- The period of implementation for India's NDC is 2021-2030.

National Action Plan on Climate Change (NAPCC)

National Action Plan on Climate Change (NAPCC) जलवायु परिवर्तन पर राष्ट्रीय कार्य योजना

- In order to achieve a sustainable development path that simultaneously advances economic and environmental objectives, India formulated a National Action Plan on Climate Change (NAPCC) in 2008.
- It provides mitigation and adaptation measures to tackle the impacts of climate change.

NAPCC is guided by the following principles

- Protecting the poor and vulnerable sections of society through an inclusive and sustainable development strategy, sensitive to climate change.
- Achieving national growth objectives through a qualitative change in direction that enhances ecological sustainability, leading to further mitigation of greenhouse gas emissions.
- Deploying appropriate technologies for both adaptation and mitigation of greenhouse gases emissions extensively as well as at an accelerated pace.

- Engineering new and innovative forms of market, regulatory and voluntary mechanisms to promote sustainable development.
- Effecting implementation of programmes through unique linkages, including with civil society and local government institutions and through public-private-partnership.
- Welcoming international cooperation for research, development, sharing and transfer of technologies enabled by additional funding and a global IPR regime that facilitates technology transfer to developing countries under the UNFCCC.

The NAPCC includes eight national missions:

1. National Solar Mission, राष्ट्रीय सौर ऊर्जा मिशन
2. National Mission for Enhanced Energy Efficiency, राष्ट्रीय विस्तारित ऊर्जा दक्षता मिशन
3. National Water Mission, राष्ट्रीय जल मिशन
4. National Mission for a Green India, हरित भारत' राष्ट्रीय मिशन
5. National Mission on Sustainable Habitat, धारणीय आवास के लिए राष्ट्रीय मिशन:
6. National Mission for Sustainable Agriculture, राष्ट्रीय सतत कृषि मिशन
7. National Mission for Sustaining the Himalayan Ecosystem हिमालयी पारिस्थितिकी को बनाए रखने के लिए राष्ट्रीय मिशन
8. National Mission on Strategic Knowledge for Climate Change रणनीतिक ज्ञान मिशन

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- 1) National Solar Mission (started in 2010 to promote the use of solar power)**
 - 2) National Mission for Enhanced Energy Efficiency (approved in 2009)**
 - 3) National Mission on Sustainable Habitat (approved in 2011)**
 - 4) National Water Mission**
 - 5) National Mission for Sustaining the Himalayan Ecosystem (approved in 2014)**
 - 6) National Mission for A Green India (approved in 2014)**
 - 7) National Mission for Sustainable Agriculture (approved in 2010)**
 - 8) National Mission on Strategic Knowledge for Climate Change (NMSKCC)**
 - 9) National Bio-Energy Mission (approved in 2017)**



Implementation-

- Ministries with lead responsibility for each of the missions are directed to develop objectives, implementation strategies, timelines, and monitoring and evaluation criteria, which are submitted to the Prime Minister's Council on Climate Change.
- The Council is also responsible for periodically reviewing and reporting on each mission's progress.

Out of these eight national missions on climate change, the Department of Science & Technology, Ministry of Science & Technology was entrusted with the responsibility of coordinating two of the missions. These are

1. National Mission for Sustaining Himalayan Ecosystem (NMSHE) and
2. National Mission on Strategic Knowledge for Climate Change (NMSKCC).

National Solar Mission

The objective of the National Solar Mission is to establish India as a global leader in solar energy, by creating the policy conditions for its diffusion across the country as quickly as possible.

The Mission targets are

- To create an enabling policy framework for the deployment of 20,000 MW of solar power by 2022. The cumulative target has been revised to 1,00,000 MW by 2022.
- The target will principally comprise of 40 GW Rooftop and 60 GW through Large and Medium Scale Grid Connected Solar Power Projects.
- To create favourable conditions for solar manufacturing capability, particularly solar thermal for indigenous production and market leadership.

Solar Power Parks and Ultra Mega Solar Power Parks

- The Scheme for 'Development of Solar Parks and Ultra Mega Solar Power Projects' was rolled out in 2014 with aggregate capacity 20,000 MW.
- Further, the capacity of the Solar Park Scheme was enhanced from 20,000 MW to 40,000 MW in 2017 to set up at least 50 solar parks by 2021-22.
- Solar Park is a large area of land developed with all necessary infrastructures and clearances for setting up of solar projects.
- Approximately 4 to 5 acres per MW of land is required for setting up of solar parks.
- The capacity of the solar parks is generally 500 MW and above. However, smaller parks (up to 20 MW) are also considered in States/UTs where there is shortage of non-agricultural land.

- **Net Metering**

- Net Metering is billing mechanism for grid connected Home Rooftop Solar Installation where
 - ✓ The electricity generated by the solar panels is fed into the utility grid
 - ✓ Household draws electricity from the utility grid
- The household pays only for the difference between the energy units it consumes from the grid and the energy units fed into the grid. This is measured by a bi-directional meter called Net Meter.

National Mission for Enhanced Energy Efficiency

- NMEEE aims to strengthen the market for energy efficiency by creating conducive regulatory and policy regime and has envisaged fostering innovative and sustainable business models to the energy efficiency sector.
- The Mission is implemented since 2011.
- Ministry of Power

NMEEE consist of four initiatives to enhance energy efficiency in energy intensive industries which are as follows:

- **Perform Achieve and Trade Scheme (PAT)**- (प्रदर्शन, उपलब्धि और व्यापार) योजना:
- **Assigning energy reduction targets to large energy intensive industries and distributing Energy Saving Certificates (ESCs) on achievement of the targets. These ESCs can then be traded**

Consumers who are not able to meet their energy savings targets will buy the **ESCs**.

- **Market Transformation for Energy Efficiency (MTEE)**- ऊर्जा दक्षता के लिए बाज़ार का रूपांतरण
- **Promoting adoption of energy efficient equipment and appliances through innovative business models.**

Programs that were developed under this scheme include:

- **Domestic Efficient Lighting Program:** Unnat Jeevan by Affordable LEDs for All (UJALA) program to promote the use of more efficient LED lighting for households.
- **Super-Efficient Equipment Program (SEEP):** Under this program, the manufacturers are incentivized by the government to elevate the efficiency standards of the equipment. Bureau of Energy Efficiency (BEE) launched the program in the XII five-year plan with a focus on ceiling fans, considering its wide use and impact on domestic energy consumption.

Energy Efficiency Financing Platform (EEFP)- Facilitating Financial Institutions to invest in Energy Efficiency Projects and Programmes. ऊर्जा दक्षता वित्तपोषण मंच

Increasing the confidence of financial institutions and investors to support energy efficiency initiatives.

- The EEFP initiative is intended towards catalysing the finances for energy efficiency sector by addressing the barriers and challenges in market development and project implementation.
- It provides a platform for financial institutions, investors and project developers to increase their confidence in supporting energy conservation and efficiency projects.

- **Framework for Energy Efficient Economic Development (EEEEED)**- ऊर्जा कुशल आर्थिक विकास प्रारूप

- **Promoting energy efficiency initiatives by hedging against investment risks.**

- BEE institutionalized two types of funds in order to protect the confidence of banks and investors in energy efficiency projects and to avoid the stalling of projects due to lack of funds.
 1. **Partial Risk Guarantee Fund for Energy Efficiency (PRGFEE):** The fund guarantees a risk cover for banks and investors for up to 50% loan amount or INR 10 crore per project, whichever is less.
 2. **Venture Capital Fund for Energy Efficiency (VCFEE):** This fund is intended towards promoting equity financing (stock, share) in the energy efficiency sector and thus reducing the impact of non-availability of debt financing (bond, loan) to small size companies and projects. The equity support is equivalent to INR 2 crore or 15% of total equity whichever is less.

Implementation agencies

- BEE- Bureau of Energy Efficiency.
- EESL- Energy Efficiency Services Limited

- Bureau of Energy Efficiency

- The Bureau of Energy Efficiency is a statutory agency under the Ministry of Power.
- It was created in March 2002 under the provisions of the nation's 2001 Energy Conservation Act.
- BEE's function is to develop programs which will increase the conservation and efficient use of energy.
- It is mandatory for certain appliances in India to have BEE ratings.
 - Standards & Labelling Program (BEE star label)
- The Objectives of Standards & Labeling Program is to provide the consumer an informed choice about the energy saving.

Mandatory Appliances	Voluntary Appliances
1. Room Air Conditioners 2. Frost Free Refrigerators 3. Tubular Florescent Lamp 4. Distribution Transformer 5. Room Air Conditioner (Cassettes, Floor Standing Tower, Ceiling, Corner AC) 6. Direct Cool Refrigerator 7. Color TV 8. Electric Geysers 9. Inverter Air conditioners 10. LED Lamps	1. Induction Motors 2. Agricultural Pump Sets 3. Ceiling Fans 4. Domestic Liquefied Petroleum Gas(LPG) Stoves 5. Washing Machine 6. Computer (Notebook /Laptops) 7. Ballast (Electronic/Magnetic) 8. Office equipment's (Printer, Copier, Scanner, MFD's). 9. Diesel Engine Driven Monoset Pumps for Agricultural Purposes 10. Soli State Inverter 11. Diesel Generator 12. Chillers 13. Microwave Ovens

National Water Mission

- The main objective of the National Water Mission is (NWM) “conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management”.

- The five identified goals of the Mission are:

(a) Comprehensive water data base in public domain and assessment of impact of climate change on water resource;

(b) Promotion of citizen and state action for water conservation, augmentation and preservation;

(c) Focused attention to vulnerable areas including over-exploited areas;

(d) Increasing water use efficiency by 20 per cent, and

(e) Promotion of basin level integrated water resources management.

NWM Web Portal

- An independent Web Portal of NWM was launched.
- The portal aims at providing all the information relating to water resources, organisations and their activities on different aspects of water resources at one point.

Assessment of Impact of Climate Change on water resources:

NWM has identified eight river basins (Mahanadi, Mahi, Luni, Tapi, Sutlej, Sabarmati, Subarnarekha and western flowing rivers from Tadri to Kanyakumari) for study of impact of climate change in association with research institutes like IITs, NITs, IISc and NIH under the R&D scheme of the Ministry.



Comprehensive water data base in public domain and assessment of impact of climate change on water resources



Promotion of citizen and State action for water conservation, augmentation and preservation



Focused attention to vulnerable areas including overexploited areas



Increasing water use efficiency by 20%



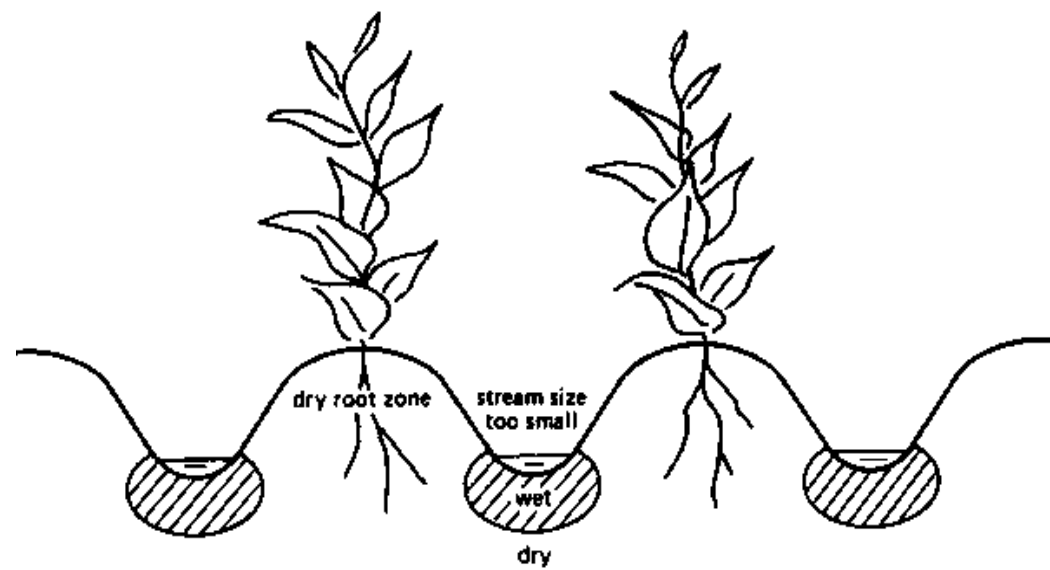
Promotion of basin level integrated water resources management

The Mission, in line with National Water Policy, aims to

- increase water use efficiency by 20%.
- ensure that a considerable share of the water needs of urban areas are met through recycling.
- ensure that the water requirements of coastal cities are met through modern desalination technologies.
- ensure basin level management strategies by working with states to deal with variability in rainfall.

The Mission aims to achieve its objectives through:

- Increasing efficiency through regulatory mechanisms (differential entitlements and pricing).
- Enhanced storage both above and below ground, rainwater harvesting.
- Incentivising water-neutral or water-positive technologies, and adoption of large scale irrigation programmes which rely on sprinklers, drip irrigation and ridge and furrow irrigation.



National Mission for a Green India

- The Green India Mission puts the “greening” in the context of climate adaptation and mitigation, aiming to enhance ecosystem services and provisioning services while addressing the livelihood issues of people living in and around forests.
- GIM thus envisages a unique strategy for holistic treatment of selected areas aiming at overall improvement/restoration of forests and enhancing alternate and forest based livelihood opportunities of forest dependent communities, including tribal and other poor people along with building capacities of the communities.

The objectives of the Green India Mission at national level are:

- a) Increased forest/tree cover on 5m ha of forest/non forest lands and improved quality of forest cover on another 5m ha (a total of 10 m ha).
- b) Improved ecosystem services including biodiversity, hydrological services and carbon sequestration as a result of treatment of 10 m ha.
- c) Increased forest based livelihood income of about 3 million households living in and around the forests.
- d) Enhanced annual CO₂ sequestration by 50 to 60 million tones in the year 2020.



• **National Mission on Seabuckthorn**

- The initiative is a part of Sub-Mission on Cold Desert Ecosystems under the Green India Mission.
- Seabuckthorn, popularly known as Leh berries is also called the “Wonder plant” and “Ladakh gold”.
- The MoEF and DRDO have launched the initiative for Seabuckthorn cultivation in the cold deserts.
- It has multi-purpose medicinal and nutritional properties.
- The plant has the ability to fix atmospheric nitrogen.
- It is tolerant to extreme temperatures and has an extensive root system, making it ideal for controlling soil erosion and preventing desertification.

National Mission on Sustainable Habitat

The mission seeks to promote

- Improvements in energy efficiency in buildings through extension of the energy conservation building code - which addresses the design of new and large commercial buildings to optimize their energy demand.
- Better urban planning and modal shift to public transport - make long term transport plans to facilitate the growth of medium and small cities in such a way that ensures efficient and convenient public transport;

- Improved management of solid and liquid waste, e.g. recycling of material and urban waste management– with special focus on development of technology for producing power from waste;
- Improved ability of habitats to adapt to climate change by improving resilience of infrastructure, community based disaster management, and measures for improving advance warning systems for extreme weather events; and
- Conservation through appropriate changes in legal and regulatory framework.

Mission Targets-

The key deliverables of the Mission includes:

- Development of sustainable habitat standards that lead to robust development strategies while simultaneously addressing climate change related concerns;
- Preparation of city development plans that comprehensively address adaptation and mitigation concerns;
- Preparation of comprehensive mobility plans that enable cities to undertake long-term, energy efficient and cost effective transport planning; and
- Capacity building for undertaking activities relevant to the Mission.

-implemented through the 4 flagship missions/ programmes of the Ministry of Urban Development, which are-

- a) Atal Mission on Rejuvenation and Urban Transformation (AMRUT)
- b) Swachh Bharat Mission
- c) Smart Cities Mission
- d) Urban Transport Programme

National Mission for Sustainable Agriculture

- National Mission for Sustainable Agriculture (NMSA) has been made operational from the year 2014-15.
- It aims at making agriculture more productive, sustainable, remunerative and climate resilient by
 - promoting location specific integrated/composite farming systems;
 - Soil and moisture conservation measures;
 - comprehensive soil health management;
 - Efficient water management practices and mainstreaming rainfed technologies.

NMSA has following four (4) major programme components or activities:

1. Rainfed Area Development (RAD)
2. On Farm Water Management (OFWM)
3. Soil Health Management (SHM)
4. Climate Change and Sustainable Agriculture: Monitoring, Modeling and Networking (CCSAMMN)

- NMSA has been formulated for enhancing agricultural productivity especially in rainfed areas.

- 60% of the country's net sown area is rainfed and accounts for 40% of the total food production.

- The focus areas are integrated farming, water use efficiency, soil health and resource conservation.

Stated dimensions of NMSA:

- 1) Improved crop seeds, livestock and fish cultures
- 2) Water Use Efficiency
- 3) Pest Management
- 4) Improved Farm Practices
- 5) Nutrient Management
- 6) Agricultural insurance
- 7) Credit support
- 8) Markets
- 9) Access to Information
- 10) Livelihood diversification

1. Rainfed Area Development (RAD)

- RAD adopts an area based approach for development and conservation of natural resources along with farming systems.
- This component has been formulated in a 'watershed plus framework', i.e., to explore potential utilization of natural resource base/assets available/created through watershed development and soil conservation activities

- This component introduces appropriate farming systems by integrating multiple components of agriculture such as crops, horticulture, livestock, fishery, forestry with agro based income generating activities and value addition.
- Besides, soil test/ soil health card based nutrient management practices, farmland development, resource conservation and crop selection conducive to local agro climatic condition are also promoted under this component.

2. On Farm Water Management (OFWM)

- On Farm Water Management (OFWM) was implemented as one of the component of NMSA during 2014-15.
- It has the objective of enhancing water use efficiency by promoting technological interventions like drip & sprinkler technologies, efficient water application & distribution system, secondary storage etc.
- Thereafter, these activities have been subsumed under the 'Per Drop More Crop (PDMC)' component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) during 2015-16.

- The PMKSY-PDMC mainly focuses on water use efficiency at farm level through precision/ Micro Irrigation (Drip and Sprinkler Irrigation).
- It promotes precision irrigation and better on farm water management practices to optimize the use of available water resources.
- The component also supports micro level water storage or water conservation /management activities to supplement source creation.

3. **Soil Health Management (SHM)**

- **SHM aims at promoting location as well as crop specific sustainable soil health management** including
 - Residue management,
 - Organic farming practices by way of creating and linking soil fertility maps with macro-micro nutrient management,
 - Appropriate land use based on land capability,
 - Judicious application of fertilizers and
 - Minimizing the soil erosion/degradation.

4. **Climate Change and Sustainable Agriculture: Monitoring, Modeling and Networking (CCSAMMN)**

- CCSAMMN provides creation and bidirectional (land/farmers to research/scientific establishments and vice versa) dissemination of climate change related information and knowledge.
- This is done by piloting climate change adaptation/mitigation research/model projects in the domain of climate smart sustainable management practices and integrated farming system suitable to local agro- climatic conditions.

5. Sub-Mission on Agroforestry (SMAF)

- Sub-Mission on Agroforestry has been launched in 2016-17 to encourage tree plantation on farm land “Har Medh Par Ped”, along with cropping system.
- The scheme is being implemented in the States which have liberalized transit regulations for selected tree species.
- The implementation of the sub-mission will result in providing additional income opportunities for farmers, increase in tree cover through will lead to higher carbon sequestration and compliment the national initiatives on climate change adaptation and mitigation and trees grown on farm land will help in enriching soil organic matter.

It has the following objectives

- To encourage and expand tree plantation in complementary and integrated manner with crops and livestock to improve productivity, employment opportunities, income generation and livelihoods of rural households, especially the small farmers.
- To ensure availability of quality planting material like seeds, seedlings, clones, hybrids, improved varieties, etc.
- To popularise various Agroforestry practices/models suitable to different agro ecological regions and land use conditions.
- To create database, information and knowledge support in the area of agroforestry.
- To provide extension and capacity building support to agroforestry sector.

National Mission for Sustaining the Himalayan Ecosystem (NMSHE)

The mission attempts to address some important issues concerning

- a) Himalayan Glaciers and the associated hydrological consequences,
- b) Biodiversity conservation and protection,
- c) Wildlife conservation and protection,
- d) Traditional knowledge societies and their livelihood and
- e) Planning for sustaining of the Himalayan Ecosystem

- The Mission needs to deliver better understanding of the coupling between the Himalayan ecosystem and the climate factors and provide inputs for Himalayan Sustainable development while addressing also the protection of a fragile ecosystem.
- This will require the joint effort of climatologists, glaciologists and other experts.
- Exchange of information with the South Asian countries and countries sharing the Himalayan ecology is also required.
- There is a need to establish an observational and monitoring network for the Himalayan environment to assess freshwater resources and health of the ecosystem.

Objectives of the mission

- Building human and institutional capacities in the different existing/new Institutions in the Himalayan region.
- Identification of national knowledge institutions and development of a self sustaining knowledge network.
- Development and adoption of new methods for assessing the health of the Himalayan ecosystem including those of glaciers and create a database of the same.
- Assessment and quantification of the changes in the Himalayan ecosystem attributable to the climate change as a result of global emissions and human activities in the region and model for future projections.

National Mission on Strategic Knowledge for Climate Change (NMSKCC)

- It aims at networking existing knowledge institutions, capacity building & improving understanding of key climate processes and climate risks.
- It strives to build a dynamic and vibrant knowledge system that effectively tackles climate change challenges, while not compromising on the nation's growth goals.

Objectives of the mission

- Formation of knowledge networks among the existing knowledge institutions engaged in research and development relating to climate science and facilitate data sharing and exchange through a suitable policy framework and institutional support.
- Establishment of global technology watch groups with institutional capacities to carry out research on risk minimized technology selection for developmental choices.
- Development of national capacity for modeling the regional impact of climate change on different ecological zones within the country for different seasons and living standards.

- Establishing research networks and encouraging research in the areas of climate change impacts on important socio-economic sectors like agriculture, health, natural ecosystem, biodiversity, coastal zones, etc.
- Providing an improved understanding and awareness of the key climate processes and the resultant climate risks and associated consequences.
- Building alliances and partnerships through global collaboration in research & technology development on climate change under International and bilateral S&T cooperation arrangements.

Other initiatives

National Adaptation Fund for Climate Change

- It was launched in 2015 with an initial outlay of Rs. 350 crore to meet the cost of adaptation to climate change for the State and Union Territories of India that are particularly vulnerable to the adverse effects of climate change.
- The overall aim of the fund is to support concrete adaptation activities which are not covered under ongoing activities through the schemes of State and National Government that reduce the adverse effects of climate change facing community, sector and states.

- The Scheme will be continuing beyond 12th Five Year Plan till 31st March, 2020.
- The Fund is meant to assist National and State level activities to meet the cost of adaptation measures in areas that are particularly vulnerable to the adverse impacts of climate Change.
- The Scheme has been taken as Central Sector Scheme with National Bank for Agriculture and Rural Development (NABARD) as the National Implementing Entity (NIE).
- Till date 30 projects have been approved.

Climate Change Action Programme

- It is a central scheme which was approved by the Cabinet in January 2014 for duration of five years.
- Its objective is to create and strengthen the scientific and analytical capacity for assessment of climate change in the country, putting in place appropriate institutional framework for scientific and policy initiatives and implementation of climate change related actions in the context of sustainable development.

- Some of the components of the CCAP scheme include
 - National Carbonaceous Aerosols Programme (NCAP),
 - Long Term Ecological Observatories (LTEO), and
 - Coordinated Studies on Climate Change for North East Region (CSCCNER).

FAME Scheme for E-mobility

- The National Electric Mobility Mission Plan (NEMMP) 2020 is a National Mission document providing the vision and the roadmap for the faster adoption of electric vehicles and their manufacturing in the country.
- As part of the NEMMP 2020, Department of Heavy Industry formulated a Scheme viz. Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme in the year 2015 to promote manufacturing of electric and hybrid vehicle technology and to ensure sustainable growth of the same.

Atal Mission for Rejuvenation and Urban Transformation (AMRUT) Ministry of Housing and Urban Affairs

The Mission will focus on the following Thrust Areas:

- 1. Water Supply**
- 2. Sewerage and septage management**
- 3. Storm Water Drainage to reduce flooding**
- 4. Non-motorized Urban Transport**
- 5. Green space/parks**

Five hundred cities have been selected under AMRUT.

The purpose of Atal Mission for Rejuvenation and Urban Transformation (AMRUT) is to

- Ensure that every household has access to a tap with the assured supply of water and a sewerage connection.
- Increase the amenity value of cities by developing greenery and well maintained open spaces (e.g. parks) and
- Reduce pollution by switching to public transport or constructing facilities for non-motorized transport (e.g. walking and cycling).

Pradhan Mantri Ujjwala Yojana Ministry of Petroleum and Natural Gas

- It was launched in 2016.
- Pradhan Mantri Ujjwala Yojana (PMUY) aims to safeguard the health of women & children by providing them with a clean cooking fuel– LPG, so that they don't have to compromise their health in smoky kitchens or wander in unsafe areas collecting firewood.
- Under this scheme, 5 Cr LPG connections will be provided to BPL families with a support of Rs.1600 per connection in the next 3 years.

- Ensuring women's empowerment, especially in rural India, the connections will be issued in the name of women of the households.
- Rs. 8000 Cr. has been allocated towards the implementation of the scheme. Identification of the BPL families will be done through Socio Economic Caste Census Data.
- PMUY resulted in an additional employment of around 1 Lakh and provide business opportunity of at least Rs. 10,000 Cr. for 3 Years to the Indian Industry.
- Launch of this scheme also provided a great boost to the 'Make in India' campaign as all the manufacturers of cylinders, gas stoves, regulators, and gas hose are domestic.

UJALA scheme

- National LED programme was unveiled on January 5, 2015.
- It was launched with a target of replacing 77 crore incandescent lamps with LED bulbs.
- The LED based Domestic Efficient Lighting Programme (DELP) was relaunched as UJALA, Unnat Jyoti by Affordable LEDs for All, in 2016.
- This programme will help in mitigating the climate change by reducing the CO2 emission by 24 metric tonnes annually.

- Energy Efficiency Services Limited (EESL), a government company under the administrative control of Ministry of Power, Government of India, has been designated as the implementing agency for this programme.

Swachh Bharat Mission

- It was launched in 2014 to accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation.
- It has two Sub-Missions,
 - **the Swachh Bharat Mission (Gramin) and**
 - **the Swachh Bharat Mission (Urban).**

Objectives

- To bring about an improvement in the general quality of life in the rural areas, by promoting cleanliness, hygiene and eliminating open defecation.
- To accelerate sanitation coverage in rural areas to achieve the vision of Swachh Bharat by 2nd October 2019.
- To motivate communities to adopt sustainable sanitation practices and facilities through awareness creation and health education.
- To encourage cost effective and appropriate technologies for ecologically safe and sustainable sanitation.

- To develop, wherever required, community managed sanitation systems focusing on scientific Solid & Liquid Waste Management systems for overall cleanliness in the rural areas.
- To create significant positive impact on gender and promote social inclusion by improving sanitation especially in marginalized communities.

National Clean Air Programme

- It was launched by the **Ministry of Environment and Forests** recently.
- It **provides a framework** for the Centre and the states to combat air pollution.
- NCAP has a **goal to meet the prescribed annual average ambient air quality standards at all locations in the country in a stipulated time frame.**
- It has been launched **to cut down particulate matter by 20-30% in at least 102 cities by 2024.**