

WATER CONSERVATION: INITIATIVES AND FUTURE STRATEGIES

- Currently, India is suffering from dual challenges of **water scarcity and poor sanitation facilities**. With a country generating **140 BCM of waste water annually**, mismanagement of waste water which also contaminates groundwater, lacking liquid waste management, poor sanitation conditions and poor hygiene habits have contributed to a major portion of population suffering from water-borne diseases.
- The per person disease burden due to unsafe water and sanitation was **40 times higher in India than in China** and 12 times higher than in Sri Lanka in 2016.

Government Initiatives

- As per the Indian Constitution, Water and Sanitation are **state-subjects** under List II of the Seventh Schedule.
- **Jal Jeevan Mission (JJM)** was launched to supply **piped water to every rural household**. The programme also implements **source sustainability measures** as mandatory elements, such as **recharge and reuse** through grey water management, **water conservation and rain water harvesting**.
- The Mission is based on a **community approach to water** and will include extensive IEC as a key component of the mission. JJM looks to create a **jan andolan for water**, thereby making it everyone's priority. Since the inception of the Jal Jeevan Mission, the percentage of rural household having access to safe drinking water increased from 18 to 28.41.
- **Ministry of Jal Shakti** also launched the **Jal Shakti Abhiyan** in July 2019, in 256 water stressed districts across the country. This Abhiyan is a mass movement to bring all the stakeholders under one ambit of water conservation drive.
- More than 75 lakh traditional and other water bodies and tanks were renovated and around one crore water conservation and rainwater harvesting structures were created.
- In order to provide special emphasis on groundwater conservation, **Atal Bhujal Yojana (ABHY)** has been launched. ABHY envisages **sustainable ground water management**, mainly through convergence among various on-going schemes, with emphasis on demand side measures through active involvement of local communities and stakeholders.
- ABHY will also play a key role in drought proofing, thereby improving climate resilience in select water stressed areas, create better job opportunities through improved skill development, etc., all leading ultimately to sustainable management of ground water,
- In pursuit of **competitive & cooperative federalism** and keeping in view the criticality of water for life, NITI Aayog has developed a **Composite Water Management Index**.
- The index as a yearly exercise is an important tool to assess and improve the performance of States/UTs in efficient management of water resources.
- Beside these central government interventions, some of the states have initiated **state level programmes** which have effectively solved the local water problem. Some of such schemes are *Jalyukt Shivar in Maharashtra, Mukhya Mantri Jal Swavalamban Abhiyan in Rajasthan, Neeru Chettu in Andhra Pradesh* etc.
- Punjab has **banned early sowing of paddy nursery and transplantation of saplings**. It has also launched a voluntary scheme of "**Pani Bachao, Paisa Kamao**" to encourage farmers to save electricity and reduce the use of ground water.

Way Forward

- **Making Water as Part of Economic Development** - Improved water supply and Sanitation and improved water resources management boost countries' economic growth and contributes greatly to poverty eradication. The Economic benefits of improved water supply and sanitation far outweigh the investment costs.
- **Introduction of Water Markets at Large Scale** - It is high time that **along with the public good**, water should be treated as the **high value economic good**. We can learn lessons from the most successful water markets of **Murray Darling Basin of Australia** where Water trading has become a vital business tool and source of additional income for many irrigators.
- Under water markets, during the year, water is distributed by the basin authorities against entitlements in response to factors such as rainfall and storage levels. The entitlement holder can make the effective and efficient use of the water and sell rest of the quantity to the entities which is using more than their own allocation of water.
- **Pollution Tax as the Remedy to Decrease Pollution in Water Bodies** - The cost of water security has to be distributed to different stakeholders and the entities and communities which are harming the resources have to pay for their right to being polluter.
- These taxes or charges not only reduce the pollution and enhances the quality but also provide revenue to the government which can be used to further abatement of pollution.
- **New strategies to support Public Private Partnership in Water Sector** - Governments may consider providing risk mitigation to long-term investment projects where it would result in more appropriate allocation of risks and their associated returns. In the United States, state revolving funds provide examples of a sustainable infrastructure financing model.

Conclusion

- All these structural reforms, if implemented in phase and detailed manner, can immensely benefit the existing programmes and schemes of both state and central government.
- They will decrease the overall dependency on the government sector and make the sector self-reliant, attractive and profitable for number of investors which is a crux for growth of not only any sector but the entire country.

IMPACT AND PROGRESS OF NAMAMI GANGE PROGRAMME

- River Ganga is not only the cultural and spiritual mainstay for India but also provides economic sustenance, water and food security to more than 43% of country's population.
- **Namami Gange programme**, implemented by National Mission for Clean Ganga is an integrated mission for conservation of Ganga and its tributaries. The vision is to restore the **wholesomeness of the River** by ensuring **Aviral and Nirmal Dhara**, and maintaining its geo-hydrological and ecological integrity.
- Integrated River Basin Management (IRBM) approach is followed with multi-sectoral and multi-agency interventions such as (I) pollution abatement (**Nirmal Ganga**), (II) improving ecology and flow (**Aviral Ganga**), (III) strengthen people-river connect (**Jan Ganga**) and (IV) facilitate diversified research, scientific mapping, studies and evidence-based policy formulation (**Gyan Ganga**).

Pollution Abatement (Nirmal Ganga)

a) Sewerage Infrastructure-

- The goal of achieving Nirmal Dhara is impossible without building sufficient infrastructure to **prevent untreated waste water entering into the river**. More than 80 major drains falling into Ganga have been intercepted and diverted to STPs —new and old.
- Wastewater is one of the **most underexploited resources**. It is actually a valuable resource from which energy, water, Organics phosphates, nitrogen, and other resources can be extracted.
- NMCG is actively pursuing the development of a model policy framework for re-use of treated waste water. In Mathura, 29 MLD treated waste water has been tied up for use in Mathura refinery.
- The circular economy principles can help turning sanitation a sustainable option.

b) Faecal Sludge Management

Faecal sludge and Septage treatment is good option in developing a mix of solutions with centralised and decentralised STPs.

c) Industrial Pollution

- To control the industrial pollution in Ganga, all the Grossly Polluting Industries were identified and annual inspection were undertaken by independent expert institutions.
- Common Effluent Treatment Plant has been established. Industry specific charters were developed to promote greener technology, reduce effluent generation and reuse/recycle which led to improvement in several industries.

d) Solid Waste Management

The mission has directed its focus on solid waste on ghats and in vicinity of the river with regular cleaning of river banks, installing screens/filter to trap solid waste, ban on single-use plastics and periodical third-party inspections.

- e) Rural Sanitation** —NMCG facilitated construction of around 11 lakh household toilets in 4465 identified Ganga bank villages.

f) Water Quality

Central Pollution Control Board monitors water quality of River Ganga through 97 manual stations. The important parameter of Dissolved Oxygen (DO) to be more than 5 mg/litre is now met throughout the river length. There is improvement in meeting Biological Oxygen demand (BOD) to be less than 3mg/litre at several stations.

Ecology and Flow (Aviral Ganga)

NMCG is working on improving flow and overall ecology through a mix of supply as well as demand side management of water.

- a) Ecological Flow-** For the first time, ecological flow was notified for River Ganga in October 2018, formally establishing the **right of river over its own water**.
- b) Wetland Conservation** —Wetlands are important for Nirmalta, Aviralta and also for economy, ecotourism, ground water recharge and supporting biodiversity. Mission is working for their protection and conservation and integrating to basin level.
- c) Afforestation:** For the first time, mission got a scientific plan for afforestation along entire length of Ganga developed by Forest Research Institute.
- d) Biodiversity Conservation-** A comprehensive project is under implementation with Wildlife Institute of India to map biodiversity hotspot for the entire length of Ganga and scientific improvement of habitat, species. NMCG spearheaded campaign for conservation of Gangetic Dolphin, the National Aquatic Animal leading to announcement of **Project Dolphin**.

- e) **Sustainable Agriculture:** NMCG promotes this through organic farming, eco agriculture and medicinal plantation. Organic farming corridor along Ganga has been proposed. Development of herbal corridor along Ganga is also being considered.
- f) **Small River Rejuvenation:** A GIS based district wise inventory of small rivers is being created along with district level interventions with convergence with MGNREGA. Small rivers rejuvenation is key to Aviral and Nirmal Ganga.

People River Connect (Jan Ganga)

The people river connect needs to be established so that they feel the need to join these efforts.

- a) **Ghat and Crematoria—** Ghats and Crematoria have already been constructed with River Front development, making them important public space.
- b) **Jan Bhagidari-** Community and stakeholder groups have been developed such as Ganga Vichar Manch, Ganga Praharis etc.
- c) **Ganga Amantran Abhiyan-**This was largest social outreach program through adventure sports connecting people from Deoprayag to Ganga Sagar last year through 35-daylong rafting expedition.
- d) NMCG regularly conducts several activities to connect youth and others such as '**Great Ganga Run**'.
- e) **Ganga Quest:** During lockdown, an innovative online national quiz was conducted on Ganga to connect school/college students
- f) **Clean Ganga Fund** is another innovative step to create an avenue for people and corporates to donate and take up specific projects for this national

Research, Policy and Knowledge Management (Gyan Ganga)

Mission has given priority to evidence based policy decisions and to get authentic data and information backed by scientific research. Some of the initiatives are:

- a) **LIDAR Mapping-** It will provide data on drainage, flood plains etc. This will enable better project formulation, monitoring, regulation and conservation.
- b) **Microbial Diversity Mapping** -to understand the Special Property of Ganga River and also impact of human intervention on microbial diversity.
- c) **Cultural mapping** of entire length of Ganga for natural, built and intangible heritage, has the potential for protection of rich heritage and development of tourism and traditional livelihood opportunities.
- d) **Climate Scenario Mapping—**to map out high-resolution, long-term climate scenarios to improve understanding and scientifically estimate impact of climate change on water resources in the Indo-Gangetic Plain
- e) **Spring Rejuvenation-** Namami Gange is leading spring rejuvenation projects to assess the impact of land use-land cover change or impact of precipitation variability and mapping of sources of springs for taking up their rejuvenation.
- f) A project for **aquifer mapping** has been started with focus on paleo-channels in parts of **Ganga-Yamuna doab** in Kausambi-Kanpur stretch. This will help in planning for aquifer recharge with potential for increasing the flow of river Ganga during lean season.
- g) Namami Gange is collaborating with different international organisations like **India-EU water partnership** and **German collaboration** for the technology and knowledge transfer for River Basin management, E-flow assessment and Policy for Reuse of treated wastewater.
- h) **Arth Ganga** - Namami Gange is now leading to the development of **Arth Ganga model linking economic development of Ganga Basin with ecological improvement** and Ganga Rejuvenation.

Conclusion

The nature has capacity to rejuvenate itself if human interventions are controlled and the same was witnessed during the national lockdown period. People's participation is key to transformation.

Ganga Rejuvenation is critical for implementation of 2030 agenda of SDGs. Namami Gange has developed a framework for river rejuvenation which is now being followed for several rivers beyond Ganga basin.

SUSTAINING ODF INDIA

- After the success of Swachh Bharat Mission (Gramin), another highly ambitious sanitation programme, SBM(G) phase II has been launched.
- It has the objective of 'leaving-no-one-behind' without access to toilet, while supporting Gram Panchayats in implementing solid and liquid waste management (SLWM) initiatives including bioorganic waste, grey water, faecal sludge and plastic waste.
- Its aim is to sustain ODF status of the villages, if needed through **retro-fitting of defunct or malfunctioning toilets and sustained behaviour change communication**.

How It Is Different?

- **SBM(G) II interventions are more complex** than the interventions of SBM(G) phase I, which focussed on construction of twin pit IHHL and behaviour change communication through **community led total sanitation approach**.
- SBM(G) II needs **different types of contextual technical solutions** for retrofitting, as well as for solid and liquid waste management.
- Further, solid waste management involves series of processes commonly categorised as: segregation, collection, transportation, treatment, recycle or reuse. Hence, it would require some committed sanitation workers to ensure that all the steps are operated and closely monitored.

SBM(G) Phase I (2014-19): Success Factors

- **Political leadership**
- **Public Finance**
- **Partnership** through mobilisation of range strategic stakeholders
- **Peoples Participation and Community Mobilisation** – Community members were mobilised as motivators, nigrani samitis (vigilante/village committees), local champions, rani mistris (queen mistris) etc. School children actively participated as local change agents.
- **Strong Capacity Development Support from Partners** – Development partners such as UNICEF, WB, Tata Trusts and others supported the capacity development of SBM(G) team.
- **Critical Role of Media** – Media supported the programme by amplifying success stories, motivating sanitation champions girls and women and connecting the influencers.

SBM (G)-II Scope And Focus:

- a. **Sustaining the ODF** - SBM(G)II intends to ensure that all remaining households get access to toilets, existing toilets are retrofitted to meet safety/technical standards, community sanitary complexes are built for an easy access to toilets for everyone.

- b. Sustainable Solid and Liquid Waste Management** – This component focuses on a) bio-organic waste management, b) plastic waste management, c) liquid waste management, and d) faecal sludge management.
- c. Role of Panchayati Raj Institutions (PRIs)** – SBM (G) II recognises PRIs as critical institutions in the planning and implementation of SBM(G)II. The provision for the use of 15th Finance Commission grants to/ by local bodies to fund SBM(G)-II initiatives through convergence at the local level, further strengthens the mandate of the PRIs. It recommends **establishment of a District SBM Committee**, under the Chair of the District Panchayat with the Co-chair of District Collector/Magistrate. Similarly, MPs/MLAs are recommended as the members of this committee at the district level.
- d. IEC and Role of Media** - 5 percent of budget is earmarked for range of social and behaviour change communication strategies and related capacity development work.

How The Role of PRIs Could Be Strengthened/Materialised?

- **Making sanitation a part of the GPDP framework** - It is required that sanitation SDGs are part of the Gram Panchayat Development plan, so that they are implemented with priority and ODF is sustained.
- **Engagement of Block and District Panchayats**
- **Accountability framework for PRIs**
- **Engagement of Media as a Tool for Downward Accountability** – Through identification of gaps and delays in programme implementation and sharing the same with wider public so that the PRs are held accountable to their citizens.

HAR GHAR JAL

Water Scarcity

- According to a **2018 NITI Aayog report**, India is facing the “worst water crisis in its history” which is threatening “millions of lives and livelihoods”. It says that by 2030 the country’s **water demand is projected to be twice the available supply**.
- This may further create severe water scarcity for crores of people and may lead to an approximate **loss of 6 percent in its GDP point then**.
- India has more than **18 % of the world’s population** but it only has **4 % of world’s renewable water resources** of which farmers consume almost 90 percent of the available groundwater.
- NSSO 76th round (July-December 2018) informs that **one in every five** (21.4 percent) **households in India** has piped drinking water connections. In rural India, just 11.3 percent households receive potable water directly at homes whereas about 42.9 percent of the households in the rural areas use hand pump as the principal source of drinking water.
- In urban India, 40.9 percent households receive piped water into dwelling as the principal source of drinking water.

Water and Government Initiatives

- The government has created a **new ministry—the Ministry of Jal Shakti in 2019** to integrate various departments and ministries dealing with water resources and water supply under one roof.
- **Jal Jeevan Mission-Har Ghar Jal** promises piped water in every rural household by 2024 and aims to provide **55 litre per capita per day drinking water** to every household through a functional household tap.

Salient or Key Features of Jal Jeevan Mission (JJM)

- Emphasis is on **'service delivery' rather creating infrastructure**. Gram Panchayat and/or its subcommittee is tasked to plan, implement, operate and maintain their own water supply system.
- SHGs/community-based organisations/NGOs involved as **Implementation Support Agencies** to enhance community's capacity to implement the mission making JJM, truly a 'people's movement'.
- **Villagers to be skilled** as masons, plumbers, electricians, fitters, etc. so as to ensure longterm maintenance of water supply systems
- **Five persons, preferably women**, in every village **to be trained to check quality** of water supply using simple ready-to-use test kits.
- **Rashtriya Jal Jeevan Kosh** has been set up to mobilise and accept contributions / donations from various sources towards achieving the goal of JJM.

SWACHH BHARAT MISSION**History of Sanitation Initiatives In India**

- In the post-independence phase, health and sanitation aspects were **part of the five-year plans**. In 1954, the rural sanitation programme in India was introduced as a part of the First Five Year Plan. However, **no separate funds were allocated** for construction and repair of toilets.
- In 1986 a programme - **Central Rural Sanitation Programme (CRSP)** which solely focussed on sanitation was introduced.
- In 1999, **Total Sanitation Campaign (TSC)** with a vision to eradicate open defecation by 2017 was launched. This was followed by the launch of **Nirmal Gram Puraskar, Sampurna Swachata Andolana Scheme** and other initiatives to strengthen the TSC.
- In 2006, **TSC was merged with Indira Awas Yojana (IAY)**. The convergence allowed the use of funds for the construction of sanitary toilets in IAY houses. There was no focus on changing behaviour at the ground level in promotion of usage of toilets.
- In 2012, the centre launched **Nirmal Bharat Abhiyan (NBA)**, with an aim to provide 100 percent access to toilets in rural households by 2022.
- In 2014, government **revamped the NBA into Swachh Bharat Mission (SBM)** and introduced two sub-missions — **Swachh Bharat Mission (Gramin)** and **Swachh Bharat Mission (Urban)**. The goal was to achieve clean and Open Defecation Free (ODF) India by the 150th birth anniversary of Mahatma Gandhi on October 2, 2019.
- There were several other activities which were implemented as a part of SBM. Some of the activities taken up through inter-ministerial collaboration are:
 - a. **Namami Gange** - to make villages near Ganga open defecation free and the handling in solid and liquid waste management for villages located on the bank of Ganges in Utrakhnad, Jharkhand, Uttar Pradesh and West Bengal.
 - b. **Swachh Swasth Sarvatra** – to strengthen community health centres
 - c. **Rashtriya Swachhata Kendra** - to monitor the progress of Swachh Bharat Abhiyan programme.
 - d. **Swachhata at Petrol Pumps** to create facilities for a clean basic toilet for promoting cleanliness and hygiene at all the petrol pumps.
 - e. **Swachh Bharat App and Web Portal** to monitor coordination between different departments

Achievements

- Since the implementation of SBM, the rural sanitation coverage has increased significantly, from 39 percent in October 2014 to 100 percent in September 2019.
- Over 10 million household toilets were constructed under the SBM. Number of people who have changed their behaviours is 60 crore.

Impact Assessment of SBM

The UNICEF studied the **Financial and Economic Impact of the Swachh Bharat Mission** in India in November 2018. Key Findings are:

- On an average, households in ODF villages accrued cumulative benefits of Rs.50,000 per year
- On an average, total benefits exceed costs by 4.7 times for households
- Financial savings from paying less for medical costs based on reductions in illness
- Reduced time lost from sickness and seeking a place for open defecation
- Economic value of saved lives due to lower mortality rates

SBM(G)-phase II also referred ODF plus

- The government has launched Swachh Bharat Mission (Gramin) phase II also referred as ODF-plus in February, 2020.
- Under the program, provision for incentive of Rs.12,000/- for construction of Individual Household Toilet to the newly emerging eligible households as per the existing norms will continue.
- The financial assistance to the Gram Panchayats for construction of Community Managed Sanitary Complex at village level has been increased from Rs. 2 lakhs to Rs. 3 lakhs per complex.
- The SBM-G Phase II is aimed at generating employment and providing impetus to the rural economy through construction of household toilets and community toilets, as well as infrastructure for SLWM such as compost pits, soak pits, waste stabilisation ponds, material recovery facilities etc.

CLEAN WATER, SANITATION AND HEALTH

- An adequate quantity of good quality water is essential for health as is access to sanitation facilities with appropriate disposal of sewage. The WB estimates that around **21% of communicable ailments are water-borne**.
- Inadequate water and sanitation-related facilities in health care institutions is severely detrimental for mothers and new-borns as it leads to the spread of infectious diseases.
- Similarly, poor mechanisms for managing menstrual hygiene management in educational institutions not only pose serious health concerns for girls but also impact their attendance and academic performance adversely.

Factors Responsible for Success of SBM

- We have witnessed **strong political** will for making change happen. The PM has personally championed the cause for a Clean India at multiple national and international fora.
- There has been a **strong emphasis on behaviour change**. SBM has focused on outputs and outcomes from the outset, which distinguishes it from other programmes that were **focused primarily on the construction of toilets**.

- SBM is the **first sanitation programme in India** that has followed a **demand driven approach** as opposed to being supply-driven along with **measuring success in terms of “Open Defecation Free” (ODF)** villages and districts, instead of mere toilet construction.
- SBM has had an unwavering focus on **decentralised monitoring** through the extensive use of modern technology.
- All components of the Mission - construction, payment of incentives, ODF declaration, verification, and even active personnel in every village -are **reported on a real time basis**. Every toilet constructed under the Mission was **mandatorily geo-tagged**.
- Recently, the Government has launched **MIS portal** in an effort to integrate the numerous digital initiatives under SBM on a single platform in order to enable a hassle-free experience for states and cities.
- In 2015, the Government launched, **Swachh survekshan** an annual survey of cleanliness, hygiene and sanitation across India’s towns and cities.
- In addition to Swachh Survekshan, good practices like segregation of waste at source, scientific waste processing, penalties for littering and dumpsite remediation are being institutionalised through innovative frameworks such as the **Star Rating Protocol for Garbage Free Cities**.
- In order to realise **single-use plastic free India by 2022**, the Government is collaborating to promote plastic reuse in road construction.
- Citizens are developing innovative models like the **Garbage Café** where people can get a meal in return of plastic waste.

Improving Access to Good Quality Water

- NITI Aayog has come out with a **Composite Water Management Index** as a useful tool to assess and improve the performance in efficient management of water resources.
- This index is an attempt to **nudge states towards efficient and optimal utilisation** of water and recycling thereof with a sense of urgency.
- In 2017, the Union Cabinet restructured the National Rural Drinking Water Programme (NRDWP) to make it more outcome based. As part of the restructured programme, 2 percent of the funds were earmarked for Japanese Encephalitis in affected areas.
- The **National Water Quality Sub-Mission** was included as a sub-programme under NRDWP to provide clean drinking water in 28,000 habitations affected by arsenic and fluoride.

Way Forward

- In order to produce a sustained change, **behaviour-change campaigns** need to be implemented on a regular basis.
- **Incentives and benefits** need to be designed for promoting the use of infrastructure. E.g. a teacher or student who champions the cause of sanitation in school should be recognised or rewarded appropriately.
- The personal habits of children are in the process of being shaped and they can also act as change agents for their communities. Messages pertaining to health and **hygiene must therefore become an integral part of the school curriculum**.
- **Targeted behavior change communication** campaigns can also be designed. These campaigns should also encourage households to segregate waste into wet, dry and hazardous waste at source.

- **Involving panchayats and local communities** by training them on water quality contamination and management is also critical.
- In Gujarat, the Water and Sanitation Management Organisation implemented an innovative model for involving communities with planning and maintaining a project. Village communities contributed 10 percent of the initial cost of the project and assumed responsibility for ongoing operation and maintenance by utilising tariff collected from users.
- The focus must shift towards ensuring safe containment, transportation and disposal of faecal sludge and septage from toilets, as well as the **grey and black water from households and establishments**.
- All wastewater **must be treated prior to discharging** into water bodies.
- Efforts should be made to ensure the **safety and dignity of sanitation workers through the provision of protective gear and mechanised equipment**.

HEALTH AND HYGIENE CONCERNS FOR RURAL WOMEN

- India is one of the few nations in the world where the **males and females have nearly the same life expectancy at birth**. In India, life expectancy at birth for males is 67.46 years while that for females is 69.83 years.
- Yet girls/women suffer from rather high mortality rates. Indian women's health and well-being is inherently linked to their status in the society.
- This gender discrimination among children coupled with escalating dowry expense for the daughters sometimes lead to maltreatment of the girl-child.

As defined by WHO 'Health is a state of complete physical, mental and social well-being and not merely the absence of any disease or infirmity'.

Poor Health of Women: Cause of Concern

- Poor health of women has repercussions not only for them **but for their family's health** and wellbeing too. The problem of ill health and malnutrition is complex, multi-dimensional and very often **inter-generational in nature**.
- Undernourished and malnourished women are more likely to bear low-birth weight/small-for-gestational age/ pre-term babies.
- In addition to child bearing and child rearing, rural woman shoulder multiple roles. For maintaining good health and optimum nutritional status of the women, their health and hygiene practices play an important role.
- It helps in uplifting the health and socioeconomic status of the family and the community as a whole.
- The aim of Sustainable Development Goal-3 (SDG-3) is to ensure healthy lives and promote wellbeing for all at all ages. The highest attainable standard of health is a fundamental right of every person; however, gender-based discrimination challenges this right.

The global definition of an 'improved' Sanitation facility is the one that hygienically separates human excreta from human contact.

United Nations General Assembly Resolution proclaims the period 2018 to 2028 'the **International Decade for Action -Water for Sustainable Development**'.

Steps Taken:

- **National Health Policy** was revamped in 2017 with an aim to inform, clarify, strengthen and prioritise the Government's role in shaping the health systems holistically.
- NHP has identified priority areas for improving health of the people through coordinated action which include:
 - Swachh Bharat Abhiyan
 - Balanced, healthy diet and regular exercise
 - Addressing tobacco, alcohol and substance abuse
 - NirbhayaNari —action against gender violence
 - Reduced stress and improved safety in the work place
 - Reducing indoor and outdoor air pollution
- **Health system strengthening programmes** include Ayushman Bharat Yojana; Pradhan Mantri Swasthya Suraksha Yojana (PMSSY); LaQshya' programme (Labour Room Quality Improvement Initiative); National Health Mission.
- **Menstrual health and hygiene** is an important objective of the Sustainable Development Goals, particularly SDG 6.2 which aims to achieve access to adequate and equitable sanitation and hygiene for all and end open defecation with special focus on the needs of women and girls and those in vulnerable situations.
- **Menstrual Hygiene Scheme** (MHS) was introduced by the Ministry of Health and Family Welfare with the aim to increase their awareness regarding menstrual hygiene; improve access and increase the use of high-quality sanitary napkins; and to ensure their safe as well as environment friendly disposal.
- **SABLA program** also stresses on awareness regarding health and hygiene among women.
- The key components of **National Health Mission** (NHM) include — Anaemia Mukh Bharat; organisation of Village Health camp; Nutrition Days as well as Sanitation & Nutrition days (for providing maternal/ child health services and awareness generation regarding maternal & child care); Iron and Folic Acid (IFA) supplementation; calcium supplementation and promotion of iodised salt consumption.
- Under **National Iron Plus Initiative** (NIPI) programme, for control of Iron deficiency anaemia across life stages, Iron and folic acid supplements are being given. In addition, **biannual deworming** is carried out for children and adolescents.
- **Intensified National Iron Plus Initiative** (I-NIPI) is aimed at reducing the prevalence of anaemia by 3% point per annum.
- **Mother and Child Tracking System** helps in tracking the health status of pregnant women, nursing mothers and the child; and it aims to provide information regarding various health services.
- **Swasth Nagrik Abhiyan** — a social movement for health, recommends setting indicators and their targets as well as the mechanisms for achieving the priority areas mentioned earlier.

National Health Policy — Targets**Life Expectancy and Healthy Life**

- Increase Life Expectancy at birth from 67.5 to 70 by 2025.
- Reduction of Total Fertility Rate (TFR) to 2.1 at national and sub-national level by 2025.

Mortality By Age and/or Cause

- Reduce Maternal Mortality Rate from current levels to 100 by 2020.
- Reduce infant mortality rate to 28 by 2019.
- Reduce neo-natal mortality to 16 and still birth rate to single digit by 2025.

Reduction Of Disease Prevalence/Incidence

- Achieve by 2020 the global target of 90:90:90 for HIV/AIDS (90% of all people living with HIV know their HIV status; 90% of all people diagnosed with HIV infection receive sustained antiretroviral therapy; and 90% of all people receiving antiretroviral therapy to attain viral suppression.)
- To reduce premature mortality from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases by 25% by 2025.
- To achieve and maintain >85% cure rate for new sputum positive patients of TB and reduce the incidence of new cases to attain elimination status by 2025.
- Targeted to achieve and maintain elimination status of Leprosy by 2018, Kala- Azar by 2017 and Lymphatic Filariasis in endemic pockets by 2017
- To reduce the prevalence of blindness to 0.25/1000 by 2025.

Health Systems Performance/Coverage Under Health Services

- Increase utilisation of public health facilities by 50% from current levels by 2025.
- Sustained antenatal-care coverage above 90%; and skilled attendance at birth above 90% by 2025,
- Meeting the needs for family planning above 90% at national/sub national level by 2025.
- 80% of known hypertensives and diabetics under home care maintain 'controlled disease status' by 2025.

STATUS OF SAFE DRINKING WATER AND SANITATION

- Access to safe drinking water, sanitation and hygiene is an important indicator of the level of socio-economic development of a country.
- The adequate provision of safe **water, sanitation and hygiene (WASH)** is crucial to achieve sustainable development and can contribute greatly for the eradication of poverty, hunger and disease in a country like India where more than one fourth rural population still lives below poverty line.
- The **primary responsibility of providing safe drinking water and sanitation facilities in India rests with the State Governments.**
- At the central level, the **Department of Drinking Water and Sanitation** under the Ministry of Jal Shakti is the **nodal agency** responsible for policy planning, funding and coordination of programs for safe drinking water and sanitation in rural areas.

Status of Safe Drinking Water

As per the latest population census, **82.7 percent population living in rural areas** has access to safe drinking water (tap/ handpump/ tube well) as against 91.4 percent in urban areas and 85.5 percent in the country as a whole.

Status of Rural Sanitation

- All the villages (603,177) spread over 36 States and Union Territories were declared 'open defecation free' on 2nd October 2019.
- Thus, over 55 crore rural people gained access to sanitation in a record time period of 5 years, which is quite unprecedented.

Challenges and Future Initiatives

- Due to rapid growth of population, per capita annual water availability in the country came down from 5,177 cubic meter in 1951 to **1,545 cubic meter in 2011**. It is estimated to decline further to 1,486 cubic meter by 2021.
- For making India a water secure nation, a lot of challenges are needed to be addressed from both, the demand as well as the supply side of water. From the **demand side**, population pressures, changing cropping pattern, high rate of urbanisation, rapid industrialisation and issues relating to climate change are need to be urgently addressed.
- **On the supply side**, proper conservation, storage and distribution of water is needed to be prioritised. Increased public investment for the creation of potable water infrastructure is also required.
- **Over exploitation of ground water** is also a cause of concern. The problem with Ground Water is that it is not only depleting at a rapid rate, but in some parts of the country, it is highly contaminated with the presence of arsenic and fluoride.
- In this context, necessary technology interventions are needed for the treatment and removal of contaminants and promote the re-use of water.
- **Rain water harvesting and artificial recharge** of ground water by utilising surplus rainfall runoff is also the best supply side water management option for the sustainability of ground water sources.
- **Proper water resource management, revival of aquifers and traditional rainwater harvesting structures** with the active participation of local communities and NGOs also need to be promoted.
- More provision of **funds to develop infrastructure** for solid and liquid waste management, plastic waste management and grey-water management is needed to ensure sanitation facilities in a sustainable manner in rural areas.
- **Public awareness** regarding the rational use of water and change in the attitude of people towards sanitation need to be promoted through IEC.

DECENTRALISED GOVERNANCE: CONCEPT AND IMPLICATIONS IN PLANNING AND DEVELOPMENT

- The foundation of democracy of the modern times was laid by the '**Magna Carta**' of England in 1215. From raising awareness in 1960s, democratic decentralisation has evolved as a process of engagement with government in decision-making related to development programmes as well as Management, production and allocation of public goods and services.
- Currently, it is found that, more than half (57 percent) of the world's population lives in some form of democracy, compared to 36 percent in 1975.

Impact of Democratisation:

- Rapid democratisation has brought the government closer to people and made the process more participatory. The primary aim of democratic governance is to give people an **empowered and meaningful role to participate** in the decision-making process.

- People's Participation in the decision-making Process is being seen by the policy makers as an essential pre-requisite for improving the performance of public service delivery system.

Decentralisation and its Benefits:

- **Decentralisation**, as referred by UNDP, is the restructuring or reorganisation of authority so that there is a system of **Co-responsibility between institutions of governance** at the central, regional and local levels **according to the Principle of subsidiary**.
- This **increases the overall quality and effectiveness** of the system of governance, while increasing the authority and capacities of sub-national levels.
- It is expected to **contribute to key elements of good governance**, such as increasing people's opportunities for participation in economic, social and political decisions; assisting in developing people's capacities; and enhancing government responsiveness, transparency and accountability.

Forms of Decentralisation

- There are three major forms of decentralisation, namely - '**De-concentration**', '**Delegation**' and '**Devolution**'.
- De-concentration is the **weak form of decentralisation** and refers to **mere shifting of responsibilities** from central government officials in the capital city to those working in regions, provinces or districts and grass root levels.
- On the other, **delegation refers to transferring responsibility** for decision-making and administration of public functions to **semi- autonomous organisations** not wholly controlled by the central government, but ultimately accountable to it.
- **Devolution is the strongest form of decentralisation**, where the central government transfer functions, authority for decision-making, finance, and management to quasi-autonomous units of local government with corporate status.

Panchayati Raj Institution in India

- Through **73th Constitutional Amendment in 1992**, Panchayati Raj Institution (PRI) in India have been formalised as an institution.
- PRI has the constitutional provision to constitute three-tier panchayat system in each state as well as emerge as an institute of self-governance.

PRI and implementation of MGNREGA

- MGNREGA, 2005 ensures **minimum 100 days of wage employment** for rural unskilled workers. The decentralised governance structure has significant role to play in implantation of MGNREGA.
- The Act mandates that the **selection and prioritisation of works** to be taken up in a financial year **has to be done by Gram Sabha**.
- The Act also prescribes that works be allotted in a way that at least 50 percent of the total works **be undertaken by the Gram Panchayats**.
- The recommended work plan needs to be sent to the concerned gram panchayat for community validation and vetting and the final document will reflect the people's suggestion recommended at gram sabhas under gram panchayat involved in those works.

Livelihood Promotion Scheme and PRI

- National Rural Livelihood Mission (NRLM) or Aajeevika has been launched by the Ministry of Rural Development (MoRD) in June 2011. NRLM follows a demand driven strategy, the States have the

flexibility to develop their livelihoods-based perspective plans and annual action plans for poverty reduction.

- In NRLM, the role of PRIs could be to facilitate/support in social mobilisation, institution building Participatory Identification of Poor and its endorsement in Gram Sabha, allocating resources to the priority demands of the SHGs and their federations in the annual plans/activities of the PRIs and coordinating with different departments and agencies on behalf of the SHG network.
- SHGs and their Federations could encourage their members to attend the gramsabha for placing their demands and needs.

Challenges

- It is often criticised for **over emphasis on process of planning**. Participatory development is also questioned from the standpoint of unequal empowerment.
- It at times **reproduces social inequalities** within communities. Evidence says that, some stakeholders have lesser voice and influence than others and this is particularly true with **women, who continue to remain marginalised**.
- There is a **difference between 'formal' power and 'effective' power**. While there is no doubt that women have been given formal power to get elected and there is prescribed mandate to get them involved in decision-making, they continue to **face a masculine model of politics, a dual burden of domestic chores and professional obligations, and lack of confidence and self-esteem**.
- In India, there are **instances of women holding formal rather than effective power** due to reasons like opposition from the families, interference by husbands, discrimination in meetings, lack of community support, lack of education and dependence on men.

Conclusion

- Despite such shortcomings, participation, as a political concept as well as a process, has opened up space for new relationship between governments and citizens.
- Increase in literacy level, access to technology and process of digitalisation are helping public participation in government policy.