CHAHAL ACADEMY

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SUMMARY OF YOJANA OCTOBER 2024

10 years of

SWACHH BHARAT MISSION

TOPIC 1: SWACHH BHARAT MISSION: IMPACT ON RURAL SANITATION & SMART APPROACH FOR SUSTAINED SANITATION SUCCESS

Introduction

The success of the Swachh Bharat Mission (SBM) lies not only in the infrastructure it creates but in the values it instills—making cleanliness a shared responsibility for every citizen. This cultural shift is crucial for ensuring that the gains made under SBM are sustained for generations to come. As India works towards the goal of Viksit Bharat @2047—a developed India by the centenary of its independence—the Swachh Bharat Mission will continue to play a critical role in improving public health, empowering women, protecting the environment, and driving economic growth.

Historical Perspective on Sanitation in India

Ancient Sanitation Practices

Sanitation in India has deep historical roots, dating back to the **Indus Valley Civilization**, where cities like **Harappa** and **Mohenjo-Daro** demonstrated advanced waste management systems. Despite these ancient achievements, modern India faces significant challenges in providing adequate sanitation to its rapidly growing population.

Modern Sanitation Challenges

- **Sanitation Coverage (2014):** By 2014, sanitation coverage in India was only **39%**, leaving over **550 million people**, particularly in rural areas, without access to basic toilet facilities. Open defecation was rampant, especially among vulnerable groups.
- **Impact on Women:** The lack of proper sanitation disproportionately affected women. They were forced to defecate in open fields, increasing their vulnerability to harassment and assault. Women were often referred to as "**slaves of darkness**," deprived of basic rights such as privacy and safety.

India's Journey Toward Improved Sanitation

Key Sanitation Programs Before SBM

- **Central Rural Sanitation Program (CRSP) 1986:** Focused primarily on constructing toilets.
- **Total Sanitation Campaign (TSC) 1999:** Emphasized creating demand for sanitation through **Information, Education, and Communication (IEC)** activities.
- **Nirmal Bharat Abhiyan (NBA) 2012:** Expanded efforts by promoting **community-led approaches** to sanitation.

The Launch of Swachh Bharat Mission (SBM)

By 2014, it became clear that India needed a more comprehensive and transformative approach to sanitation. The launch of the **Swachh Bharat Mission** on **October 2, 2014**, by Prime Minister Narendra Modi marked a **paradigm shift** in the country's sanitation efforts.

- **Target:** Make India **Open Defecation Free (ODF)** by 2019.
- Focus Areas:
  - Behavior change
  - Community participation
  - Public financing
  - Political will

SBM successfully achieved its target on time, drastically transforming India's sanitation landscape.

Why Swachh Bharat Mission?

Rationale for SBM

SBM stemmed from the recognition that sanitation is a **multi-dimensional issue** affecting public health, gender equity, environmental sustainability, and economic development. The mission sought to address these interconnected challenges holistically.

- **Health Impact:** Inadequate sanitation is a major cause of waterborne diseases such as **diarrhea, cholera, and typhoid**, resulting in high morbidity and mortality, especially among children under five. Before SBM, poor sanitation caused around **300,000 child deaths annually** (WHO). Recent studies show that SBM's interventions have significantly reduced **infant mortality**, averting **60,000-70,000 child deaths annually**.
- **Impact on Women and Children:** Lack of access to toilets disproportionately affects women and girls. Women had to defecate in open fields, exposing them to safety risks. Additionally, **school absenteeism** among

girls, especially during menstruation, was high due to inadequate sanitation. According to **UNICEF**, women felt significantly safer after gaining access to toilets in their homes.

- **Environmental Impact:** Open defecation and improper waste management cause **environmental degradation**, contaminating water bodies, damaging ecosystems, and increasing health risks. As per a **UNICEF report**, SBM helped reduce groundwater contamination by **12.7 times** in ODF villages.
- **Economic Impact:** Poor sanitation costs India heavily, with a **World Bank** study estimating that India lost approximately **6.4% of its GDP** in 2006 due to poor sanitation, amounting to over **USD 38 billion annually**. These losses stemmed from increased health costs, reduced productivity, and lower educational attainment. **UNICEF** estimated that a household in an ODF village saved **Rs 50,000 annually** due to reduced health expenses.

SBM focused not only on **infrastructure development** (constructing toilets) but also on **behavioral change**, driving large-scale awareness campaigns essential for long-term involvement in sanitation practices.

SBM's Contribution to Sustainable Development Goals (SDGs)

Alignment with SDGs

The Swachh Bharat Mission is closely aligned with several **Sustainable Development Goals (SDGs)**, particularly **SDG 6: Clean Water and Sanitation**, which aims to ensure access to safe and sustainable water and sanitation for all by 2030.

- **India's Achievement:** India declared itself ODF in 2019, **11 years ahead of the global deadline**, showing its strong commitment to national and global sustainability goals.
- **SDG Target 6.2:** This target emphasizes ending open defecation and providing access to **equitable sanitation** for all. The construction of over **116 million household toilets** under SBM directly contributed to achieving this goal.

Contributions to Other SDGs

- **SDG 3 (Good Health and Well-Being):** Improved sanitation has drastically reduced waterborne diseases and child mortality. SBM has helped avert **300,000 child deaths** annually from diarrhea (WHO).
- **SDG 5 (Gender Equality):** SBM has enhanced the dignity and safety of women. **93% of women** in ODF villages reported feeling safer due to the availability of toilets at home (UNICEF), and **school absenteeism among girls** has significantly decreased.

India's early achievement of **SDG 6** highlights the power of strong political leadership, community mobilization, and innovative program design. SBM also serves as a model for other nations working toward the 2030 Agenda for Sustainable Development.

Key Focus Areas of SBM

SBM Phase II (2020-25)

After the initial focus on making India ODF, SBM Phase II (2020-25) has expanded its scope to ensure **sustainability** and tackle broader sanitation challenges.

1. **ODF Sustainability: Ensuring that ODF villages maintain their status through:**
   - **Regular monitoring** and
   - **Community engagement**.
   - **Swachhagrahis** (local cleanliness champions) play a key role in maintaining progress.
2. **Solid and Liquid Waste Management (SLWM):** The mission now emphasizes the management of both **solid and liquid waste**, promoting technologies such as **waste-to-energy** and encouraging villages to adopt practices like **composting** and **plastic waste management**.
3. **Visual Cleanliness:** SBM-G promotes the maintenance of clean and litter-free public spaces, proper drainage systems, and waste segregation at the household level, reinforcing the larger goal of **Sampoorna Swachhata** (complete cleanliness).
4. **Community Engagement and Capacity Building:** Local bodies such as **Self-Help Groups (SHGs)** and **Panchayati Raj Institutions (PRIs)** are being engaged to ensure the long-term success of SBM. Training programs are provided to build community skills in sanitation infrastructure management and behavior change.

A SMART Approach for Sustained Sanitation Success

To ensure the continued success of SBM, a **SMART strategy** has been proposed, focusing on five key pillars:

- Sustainability of Assets and Behavior:
  - Ensuring proper maintenance and daily use of sanitation infrastructure.
  - **Climate-resilient sanitation systems** must be promoted to address climate change impacts in vulnerable regions.
- Making Women Central to Development:
  - Women played a pivotal role in SBM's success, from constructing toilets to leading **behavioral change campaigns**.
  - Women-led **SHGs** should take on leadership roles in operating and maintaining sanitation assets.
- Accelerating Private Sector Involvement:
  - **Public-private partnerships (PPPs)** are crucial for addressing challenges like **solid waste management**, **smart toilets**, and **waste-to-energy technologies**. Private-sector expertise can complement government efforts.
- Re-establishing Communication Protocols:
  - **Information, Education, and Communication (IEC)** campaigns were central to SBM's success in Phase I and will be even more critical moving forward.
  - Behavior Change Communication (BCC) should be enhanced using **digital tools**, **community engagement**, and targeted messaging.
- Training and Technological Interventions:
  - **Training** for communities, sanitation workers, and government officials in advanced sanitation practices.
  - Adoption of **digital monitoring tools**, **smart waste management systems**, and **climate-adaptive sanitation infrastructure**.

The Road Ahead: Achieving Sampoorna Swachhata

As India moves towards the **ODF Plus** model by 2024-25, the Swachh Bharat Mission continues its journey toward **Sampoorna Swachhata**. Phase II focuses on transitioning from ODF to ODF Plus, with an emphasis on **solid and liquid waste management**, **visual cleanliness**, and **sustained behavior change**.

The true success of SBM lies in the **cultural shift** it fosters, making cleanliness a shared responsibility for all citizens. By embracing **innovation**, **inclusivity**, and **sustainability**, India can ensure a cleaner, healthier, and more prosperous future for its citizens while contributing to the global development agenda.

SPECIAL CAMPAIGN 4.0: INSTITUTIONALIZING SWACHHATA AND REDUCING PENDENCY IN GOVERNMENT

Introduction

The **Special Campaign 4.0** is one of the most ambitious initiatives undertaken by the Government of India to **institutionalize Swachhata (cleanliness)** and **reduce pendency** in government offices. Building on the success of previous campaigns, it aims to create **efficient, clean, and citizen-centric office spaces**, enhancing government functioning and service delivery. This campaign aligns with the long-term objective of **Viksit Bharat @2047**, a vision for a developed India by its centenary year.

Background and Achievements of Previous Campaigns

Special Campaigns (2021-2023)

The Government has been conducting special campaigns since 2021, focusing on improving the efficiency of office spaces and record management. The achievements of these campaigns include:

- Office Spaces:
  - **404,776 office spaces** taken up under the campaign.
- Space Freed:
  - **355.5 lakh square feet** of space cleared in various offices.
- Revenue Earned:
  - **Rs 1,162.49 crores** generated from scrap disposal.
- File Management:
  - **96.1 lakh files** weeded out across ministries and departments.

These efforts have led to better space utilization, cleaner work environments, and more efficient government offices.

Extension to Institutions

The special campaigns have extended to a broad range of institutions:

- Schools
- Krishi Vigyan Kendras (KVKs)
- Road Transport Offices
- Employees' Provident Fund Organization (EPFO) offices

This wide outreach has created an impact across sectors, helping bring about cultural change in how government offices operate.

Objectives and Focus Areas of Special Campaign 4.0

Institutionalizing Swachhata

The primary goal of Special Campaign 4.0 is to create **clean, clutter-free, and efficient office spaces** that provide a welcoming environment for both citizens and employees.

Reducing Pendency

- **File and Record Management:** The campaign emphasizes the importance of weeding out old files and adopting **digitized record management** practices to improve efficiency.
- **Public Grievances and Interdepartmental Communications:** By focusing on **quick grievance redressal** and improving internal communication processes, the campaign reduces backlogs and enhances service delivery.

Technology Adoption

- **Digital Platform:** The campaign is being implemented through a **dedicated digital platform** (www.specialcampaign.gov.in) to track progress and monitor activities like scrap disposal and cleanliness.
- **Vidyanjali Initiative:** Refurbishing computers and printers from government offices for rural schools to ensure **digital empowerment** of underserved areas.

Environmental Sustainability

- **3Rs Approach (Reduce, Reuse, Recycle):** Promoting environmentally friendly practices within government offices, focusing on scrap management and waste disposal.
- **Waste-to-Wealth Innovations:** New initiatives, such as **Swachh ATMs** and **Waste-to-Wealth** projects, are being highlighted as part of the campaign's commitment to green practices.

Institutional Coverage and Nationwide Reach

Ministries and Departments

The campaign is being implemented across all **ministries and departments**, including:

- Defence Establishments
- Public Sector Banks (PSBs)
- Police Stations
- Railway Stations
- Post Offices
- Public Sector Undertakings (PSUs)

Saturation Approach

The campaign adopts a **saturation approach**, ensuring its reach across India, from **Pahalgam in Jammu & Kashmir** to **Mayiladuthurai in Tamil Nadu**, and from **Barmer in Rajasthan** to **Mon in Nagaland**. It also covers:

- **Krishi Vigyan Kendras (KVKs):** Outreach to farmers for **vermicomposting** and **parthenium-free farming**.
- **Railway Stations:** Awareness campaigns against **single-use plastics** are led by the Ministry of Railways.

Role of Leadership and Coordination

Leadership Structure

The success of the campaign is driven by **leadership** at various levels, with **nodal officers** in the rank of **Joint Secretary** or **Additional Secretary** coordinating efforts across field offices.

Accountability and Monitoring

- **Monthly Secretariat Reforms Reports:** The **Department of Administrative Reforms and Public Grievances (DARPG)** monitors the campaign and publishes **monthly reports** to track progress and ensure accountability.

Permanent Culture of Swachhata

The Prime Minister has called for Swachhata to become a **permanent part of government culture**, with the special campaigns conducted annually over the next five years to institutionalize cleanliness practices.

Innovations and Environmental Friendly Practices

3R Approach

The adoption of **Reduce, Reuse, Recycle** (3R) practices encourages government offices to embrace sustainable practices in managing waste and maintaining cleanliness.

Waste-to-Wealth and Swachh ATMs

Innovative projects like **Swachh ATMs** and **Waste-to-Wealth** practices are being highlighted, where waste is converted into usable resources, creating both **economic and environmental benefits**.

Vidyanjali Initiative

Through **Vidyanjali**, old computers and printers are refurbished and supplied to **rural schools**, promoting **digital inclusion** and better education infrastructure in underserved areas.

Global Participation and Historical Preservation

Overseas Missions

Special Campaign 4.0 is not limited to India but extends to **Indian missions and embassies** around the world, with the Ministry of External Affairs (MEA) directing all overseas offices to participate.

Historical Records

Records of **historical importance**, such as those related to the **organizational restructuring of the Central Secretariat in 1938 and 1947**, have been digitized and preserved on the **Abhilekh Patal** platform of the **National Archives of India (NAI)**.

Public Grievances and Improved Service Delivery

Grievance Redressal Mechanisms

- **Digital Portals:** Digital platforms have been set up to monitor pendency and provide faster grievance redressal.
- **Timeline Reduction:** The **Policy for Effective Redressal of Public Grievances 2024** has reduced the timeline for resolving grievances from **30 days to 21 days**, improving public satisfaction.

Improved Public Interface

- **Aaykar Sewa Kendras:** Income tax offices have been redesigned to create efficient and **citizen-friendly public interfaces**.
- **Pensioners' Lounges:** Pensioner service areas have been improved in banks like **State Bank of India** and **Punjab National Bank**, enhancing the service experience for retirees.

Communication and Outreach

Awareness Campaigns

The **Department of Administrative Reforms and Public Grievances (DARPG)** has initiated a comprehensive **media and communication strategy**, including:

- 100,000 social media posts
- 300 PIB statements
- **Panel discussions** to raise awareness and highlight campaign success.

Knowledge Dissemination

Efforts are being made to ensure that all **field formations** of government offices are aware of the objectives and achievements of Special Campaign 4.0 through a **focused communication plan**.

Conclusion

The **Special Campaign 4.0** marks a significant step in the Government's commitment to **Swachhata and reducing pendency**, contributing to **clean, efficient, and citizen-centric government offices**. The campaign's emphasis on **digital transformation**, **sustainable practices**, and **service delivery improvements** highlights its role in achieving **Viksit Bharat @2047**. By institutionalizing Swachhata and embracing digitization, the Government is setting the stage for a **modern, transparent, and responsive public administration** in India.

TOPIC 3: SWACHH BHARAT MISSION: TRANSFORMING INDIA'S SANITATION LANDSCAPE

Introduction

The **Swachh Bharat Mission (SBM)**, launched on **October 2, 2014**, by Prime Minister Shri Narendra Modi, marked a paradigm shift in India's approach to **sanitation and hygiene**. Aimed

at making India **Open Defecation Free (ODF)** by the **150th birth anniversary of Mahatma Gandhi** in 2019, the mission set ambitious goals of improving sanitation, constructing **over 100 million toilets** in rural India, and revolutionizing hygiene practices. SBM has become a **global model** for community-driven sanitation reform, creating a lasting impact on **public health** and improving the quality of life across both rural and urban India.

Swachh Bharat Mission - Grameen (Rural)

Phase I (2014-2019)

SBM-Grameen (SBM-G) Phase I focused on ending **open defecation** by driving the largest **behavioral change movement** in the world through **awareness campaigns**, **education**, and **infrastructure development**.

Key Features:

- **Toilet Construction:** Over **100 million toilets** were built in rural areas across India.
- **Community Involvement:** Nationwide participation through community engagement, government initiatives, and local stakeholders made this phase highly impactful.
- **Health Impact:** The introduction of toilets and sanitation infrastructure significantly improved **public health**, particularly in areas where sanitation facilities were previously non-existent.

Phase II (2019-2025)

The objective of **SBM-G Phase II** is to sustain the **ODF status** and promote **solid and liquid waste management**. This phase, which focuses on achieving **Sampoorna Swachhata** (complete cleanliness), integrates sanitation efforts with various **government schemes**.

Key Achievements (As of September 2024):

- **ODF Plus Villages: 5.87 lakh villages** have achieved **ODF Plus** status.
- **Waste Management:** Solid waste management systems have been implemented in **3.92 lakh villages**, and liquid waste management systems in **4.59 lakh villages**.
- Sanitation Infrastructure:
  - Over **11.64 lakh household toilets** were constructed.
  - **2.41 lakh community sanitary complexes** were established.

The government allocated **Rs 1.40 lakh crore** to ensure long-term sustainability of sanitation infrastructure, aiming to improve **health standards** and create a cleaner, safer rural environment.

Swachh Bharat Mission - Urban

Overview of SBM-Urban

SBM-Urban (SBM-U), launched alongside SBM-Grameen in 2014, focuses on improving urban sanitation through **scientific solid waste management**, ensuring **100% ODF status**, and fostering **behavioral change** via a **Jan Andolan** (people's movement).

Key Achievements (As of September 2024):

- **Household Toilets:** Over **63 lakh household toilets** were built in urban areas.
- **Public Toilets: 6.3 lakh public toilets** were constructed across cities and towns.
- **Solid Waste Management:** SBM-U transformed **waste management** in urban spaces, making cities cleaner and healthier.

Promoting Behavioral Change

Through robust **third-party protocols** and **public engagement**, SBM-U has helped shift public perception on sanitation and waste management, prioritizing cleanliness in urban development.

Key Benefits of the Swachh Bharat Mission

Public Health Improvements

SBM has had a **significant impact on public health**, particularly by:

- **Reducing Infant and Under five Mortality Rates:** An estimated **60,000 to 70,000 infant lives** are saved annually due to improved sanitation.
- **Lower Health Costs:** Families in **ODF villages** saved **INR 50,000** per year in healthcare costs.
- **Reduced Groundwater Contamination:** Open defecation-free areas have seen **marked reductions** in groundwater contamination.

Women's Safety

93% of women in ODF villages reported feeling **safer** at home with better sanitation facilities, highlighting the mission's success in improving women's safety and privacy.

Study Overview and Key Findings (Nature Journal)

A comprehensive study published in **Nature Journal** analyzed data from **35 Indian states and UTs** and **640 districts** spanning a decade (2011-2020). The study focused on the relationship between **infant mortality rate (IMR)**, **under-five mortality rate (U5MR)**, and access to sanitation.

Key Findings:

- **Inverse Relationship:** A clear **inverse association** between **toilet access** and **child mortality** was observed.
- **Reduction in Mortality Rates:** For every **10% increase** in toilet access, **IMR** decreased by **0.9 points** and **U5MR** by **1.1 points**.
- **Threshold Effect:** Districts with more than **30% toilet coverage** experienced **significant reductions** in child mortality.

SBM's Unique Approach

SBM adopted a **multi-pronged strategy** combining **toilet construction**, substantial investment in **Information, Education, and Communication (IEC)**, and **community engagement**. This comprehensive approach stands out from previous sanitation efforts in India, contributing to **lower instances of diarrhea** and **malnutrition**, both of which are major drivers of child mortality.

Future Initiatives

Swachhata Hi Seva (SHS) Campaign 2024

In **2024**, the **Swachhata Hi Seva (SHS)** campaign marks a decade of SBM. It focuses on **public participation (Jan Bhagidari)**, **sustainable cleanliness**, and recognizing the importance of **sanitation workers (Safai Mitras)**.

SHS 2023 Key Statistics:

- **109 crore individuals** and **71 ministries** participated in the campaign.
- **53 crore people** contributed through **Shramdaan for Swachhata**.
- Cleaned **7,611 beaches**, **6,371 riverbanks**, and **reclaimed 15,576 legacy waste sites**.

Future Steps

Future SBM efforts will focus on:

- **Behavioral Change:** Promoting **cleanliness as a way of life** under the theme **"Swabhav Swachhata, Sanskar Swachhata"**.
- **Community Engagement:** Strengthening **community participation** in waste management and cleanliness efforts.
- **Recognition of Sanitation Workers: Safai Mitras** and other sanitation workers will be recognized and celebrated for their contribution to the mission.

Collaboration and Partnerships

The success of SBM has been driven by the collaboration of:

- Government agencies
- Non-Governmental Organizations (NGOs)
- Corporate Sector
- Citizens

This collaborative effort has been essential in building a **cleaner**, **healthier**, and **safer** India.

Conclusion

The **Swachh Bharat Mission** has transformed India's sanitation landscape, delivering a **profound impact** on public health, women's safety, and overall well-being. By constructing millions of toilets and mobilizing a nationwide behavioral change movement, SBM continues to stand as one of the **largest and most successful public health initiatives in the world**. It exemplifies how **sanitation improvements** can lead to a healthier, safer, and more prosperous society for all.

TOPIC 4: INDIA'S ODF MILESTONE: THE SANITATION REVOLUTION

Introduction

On 2nd October 2024, India celebrated the completion of a decade of progress in the fight against open defecation (OD), marking the culmination of the Swachh Bharat Mission (SBM) launched in 2014. This ambitious effort aimed to eradicate open defecation and improve

solid waste management. Since then, India has achieved remarkable progress, significantly improving water, sanitation, and hygiene (WASH). The behavioral transformation of millions of people around access to toilets has been the hallmark of this revolution, with nearly 50 crore people moving away from open defecation since 2014.

Sanitation Challenges Pre-SBM and Initial Programs

Early Government Initiatives

Before **2014**, India struggled with severe sanitation challenges, especially in rural areas. **Various government schemes** were launched to address the issue, beginning with the **Central Rural Sanitation Program (CRSP)** in **1986** and later the **Total Sanitation Campaign (TSC)** in **1999**, which adopted a **demand-driven approach** with low subsidies. Despite these efforts, only **39% sanitation coverage** was achieved by **2014**, affecting particularly **vulnerable groups** like women and children.

The Launch of Swachh Bharat Mission (2014)

Objectives and Approach

The **Swachh Bharat Mission (SBM)** was launched on **2nd October 2014** by **Prime Minister Narendra Modi**, with the target of achieving an **Open Defecation Free (ODF) India** by **2nd October 2019**, commemorating the **150th birth anniversary of Mahatma Gandhi**. The mission aimed not only to construct toilets but also to **transform behavior** around sanitation. The key focus areas were **awareness building, behavioral change**, and **community participation**.

Global Importance of the Mission

This milestone was pivotal not just for India, but also for the **global sanitation landscape**, aligning closely with **Sustainable Development Goal (SDG) 6**, which calls for **universal access to water, sanitation, and hygiene**. India had the **largest population** defecating in the open, and its success was vital to global sanitation progress.

Achievements Under Swachh Bharat Mission

Declaring India ODF

India was declared **Open Defecation Free (ODF)** on **2nd October 2019**, a historic achievement. The mission brought about a **behavioral shift**, with **520 million people** in India no longer defecating in the open by that time. This milestone was crucial for achieving **SDG 6** and set India apart as a global leader in sanitation efforts.

Phase 2: ODF Plus

With Phase 1 of SBM successfully declaring India **ODF**, **Phase 2 of SBM-Grameen (SBM-G)** was launched, aiming for **ODF Plus** status. ODF Plus focuses on the **sustainability** of the ODF status through improved **solid and liquid waste management** systems. By **May 2023**, **50% of Indian villages** had achieved **ODF Plus** status, with **2.96 lakh villages** declared ODF Plus. The **top-performing states** included **Telangana (100%)**, **Karnataka (99.5%)**, **Tamil Nadu (97.8%)**, and **Uttar Pradesh (95.2%)**, with several **Union Territories** like **Andaman and Nicobar Islands** and **Dadra and Nagar Haveli** achieving **100% ODF Plus villages**.

Health and Environmental Impact of Open Defecation

Health Risks Linked to Open Defecation

Open defecation poses serious health risks, including the spread of **diarrheal diseases**, **trachoma**, and **schistosomiasis**. Fecal contamination has also been linked to **stunting** in children, which can impact their long-term educational and economic prospects. The **World Health Organization (WHO)** estimated that **unimproved sanitation** accounted for **2.4% of the total disease burden** in India as measured by **Disability-Adjusted Life Years (DALYs)**.

Global Efforts and India's Role

United Nations SDG 6

The **United Nations General Assembly** announced **17 Sustainable Development Goals (SDGs)** in **2015**, with **SDG 6** focusing on water and sanitation. As a major part of the global south, **India's open defecation** problem was a central concern for achieving **global sanitation goals**. In **2015**, the **WHO** and **UNICEF's Joint Monitoring Program** estimated that **520 million people** in India were regularly defecating in the open. India's efforts under **SBM** have thus been pivotal for global sanitation progress.

Financial Investment and Government Efforts

Financial Allocations

The Union Government allocated **Rs 83,938**

crore to **SBM-Grameen (SBM-G)** between **2014 and 2022**. Additional funds came from the **15th Finance Commission** for sanitation purposes. **SBM-U** (Urban) was allocated **Rs 1,41,600 crore** for **2021-2026**, more than **2.5 times** the financial outlay of the first phase. These funds were directed toward **building sanitation assets**, promoting **behavioral change**, and implementing **waste management systems**.

The Urban Dimension: SBM Urban (SBM-U)

Achievements Under SBM Urban

SBM Urban (SBM-U) was launched to address sanitation in **urban India**, with a focus on making **cities ODF** and achieving **scientific waste management**. Over **70 lakh toilets** were constructed across cities, prioritizing **women**, **transgender communities**, and **persons with disabilities**. **SBM-U 2.0** was launched in **2021**, aiming for a **garbage-free India** by **2026** and ensuring **scientific waste management** across **4,041 statutory towns**. By **2019**, **urban India** had been declared **ODF**, and by **2023**, over **960 cities** were certified as **ODF++**.

Challenges and Concerns

Reversal of ODF Status

Despite India's impressive gains, there are reports of **reversal of ODF status** in certain areas. According to the **2023 JMP report**, **17% of rural** and **7% of urban** populations still defecate in the open. Reasons include **lack of space**, **tenant-landlord conflicts**, and **financial issues**. This raises concerns about the **sustainability of ODF** status in the long term.

Behavioral Change

Changing attitudes and dispelling myths about **toilet usage** remain key challenges. **UNICEF** and government programs continue to work on **behavioral change communication** to ensure households do not return to their previous practices of **open defecation**.

Conclusion

India's progress under the **Swachh Bharat Mission** has been extraordinary, but **sustaining ODF status** and ensuring **equity in sanitation services** remain challenges. **Behavioral change** and **continuous monitoring** are critical to preventing regression. The success of **SBM** shows that **long-term efforts** focused on **equity**, **sustainability**, and **behavioral transformation** are essential to achieving **universal sanitation access** in India.

TOPIC 5: GANGA REJUVENATION AND WATER CONSERVATION

Introduction

Since the 20th century, the **River Ganga** has suffered from severe pollution and environmental degradation, creating an urgent need for rejuvenation and water conservation. In response, the Government of India, in collaboration with **non-governmental organizations (NGOs)**, scientists, and activists, launched several initiatives, notably the **Namami Ganga Project**, aimed at cleaning and revitalizing the river.

Ganga: Epicenter of Cultural and Spiritual Bharat

Ganga's Cultural and Spiritual Significance

The **Ganga River** is much more than a body of water; it is a symbol of **India's cultural heritage** and a spiritual source. Ganga supports **40% of the Indian population** and stretches over **2,525 kilometers** from **Gangotri** in the Himalayas to the **Bay of Bengal**. The river is the site for the **Kumbh Mela**, held every 12 years in **Haridwar** and **Prayagraj**, attracting millions of devotees. It is believed that bathing in the Ganga washes away sins and helps in attaining **moksha** (salvation).

Ecological and Economic Importance

The Ganga has the **highest level of dissolved oxygen**, giving its water unique self-purifying properties. Its **river basin** contributes more than **40% of India's GDP** and supplies almost **one-third of the nation's surface water**, of which **90%** is used for irrigation. However, despite the fertility of the Ganga River Basin, more than **200 million people** living in this region are in **poverty**. The Ganga now faces severe threats from pollution, **biodiversity loss**, and environmental hazards, endangering its sustainability.

Why is Ganga Under Threat?

Industrialization and Pollution

Industrialization along the banks of the Ganga has severely degraded water quality. **Sewage discharge**, **industrial effluents**, and **solid waste dumping** are the primary sources of pollution. Poor **environmental governance**, inadequate **infrastructure**, and the adoption of unsustainable **Western development models** have further deteriorated the river's purity.

Ganga Action Plan (GAP)

Introduction and Objectives

The **Ganga Action Plan (GAP)** was launched in **1986** under **Prime Minister Rajiv Gandhi** to reduce pollution and improve the river's water quality. The plan focused on setting up **sewage treatment plants (STPs)**, improving sanitation, and controlling industrial effluents. However, **GAP** faced challenges such as **inadequate infrastructure**, **weak implementation**, and limited **public awareness**, which hindered its success.

Achievements and Limitations

GAP's goals included improving water quality, controlling pollution sources, and adopting **new technologies** for sewage treatment and waste management. **Phase I** cost **Rs. 452 crores**, and

Phase II (1993–1996) expanded to other Indian rivers under the **National River Conservation Plan**. Despite completing **652 projects** and constructing **35 sewage treatment plants** across five states, GAP's failure was largely due to insufficient financial resources, poor collaboration, and governance issues. The plan lacked **long-term sustainability**, which resulted in temporary improvements rather than lasting changes.

Namami Gange (Clean Ganga Mission):

Do you know, Namami Gange has been internationally recognized by the United Nations as one of the Top 10 'World restoration Flagship' initiatives, earning global acclaim.

Launch of Namami Gange

In **2014**, after coming to power, **Prime Minister Narendra Modi** prioritized the **Ganga Rejuvenation** effort, emphasizing its impact on **40% of the country's population** and linking it to India's **economic agenda**. The **Namami Gange Mission** was launched to rejuvenate the river, with a **fourfold budget increase**, making it a **central sector scheme**. The government also established the **National Council for River Ganga (Rejuvenation Protection and Management)** in **2016** to coordinate the effort.

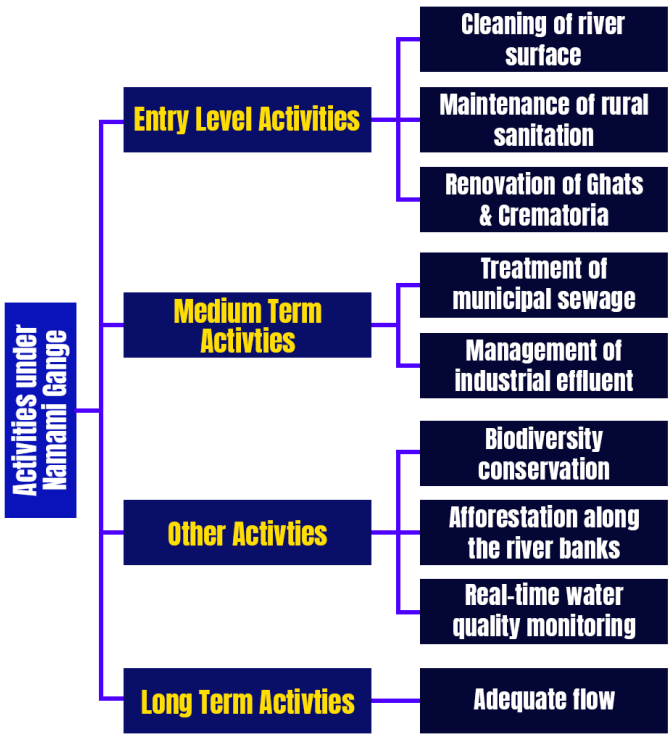
Key Initiatives

Namami Ganga focuses on:

- Sewage treatment infrastructure
- River surface cleaning
- Industrial effluent monitoring
- Biodiversity restoration
- Public awareness programs
- Riverfront development
- Ganga Gram (village improvement)
- (Note for the team: make infographic image for this)

Between **2015 and 2021**, **815 new STPs** were installed, and **116 out of 200 sewerage projects** were successfully implemented with a budget of **Rs. 31,810 crore**. Local communities are engaged through platforms like **Ganga Vichar Manch** and **Ganga Praharis**. Institutions such as the **Ganga Knowledge Center (GKC)** and **cGANGA** promote sustainable development.

Achievements of Namami Ganga



Riverfront Development and Pollution Control

Namami Ganga has achieved multiple milestones, including:

- Installing **STPs** in key cities like **Varanasi**, with seven operational plants.
- Promoting **sustainable sanitation practices** and improving **solid waste management**.
- Partnering with institutions like the **Wildlife Institute of India** and the **Central Inland Fisheries Research Institute** to restore aquatic species.
- Designating **1,674 Gram Panchayats** for rural sanitation in **Jharkhand**.

Challenges and Criticisms

Operational and Environmental Challenges

The **Comptroller and Auditor General (CAG)** in a **2017 audit report** highlighted shortcomings in financial management, planning, and execution of the **Namami Ganga** project. India's **monsoon rains** present another challenge, overwhelming sewage treatment plants with both **rainwater** and **sewage** during the rainy season, while the river experiences **low water levels** during the dry months, leading to higher pollution concentration.

Industrial Pollution and Groundwater Depletion

Industries that were closed for polluting the Ganga tributaries are often allowed to resume

operations illegally, undermining efforts to maintain water quality. Additionally, studies reveal that groundwater flow to the Ganga has declined by 50% since the 1970s due to over-extraction, and it is projected to decrease by 75% over the next three decades if corrective measures are not taken.

Common Cause: The Future of Ganga Rejuvenation

Public Involvement and Financial Needs

Restoring the Ganga requires a **multifaceted approach** involving large financial investments. The **Clean Ganga Fund** was created to encourage **public donations** and support for the cause. The principle of **reduce, reuse, and recycle** is essential in curbing waste and pollution. Improved **collaboration** between ministries and central and state governments is needed to implement long-term, sustainable solutions.

Community Engagement

The public can contribute by reducing **water consumption** and **waste generation**, and adopting sustainable practices like recycling and efficient water use. Effective **community involvement** is crucial for the success of Ganga rejuvenation efforts.

Conclusion

The rejuvenation of the **River Ganga** is a complex task, given its socio-economic and cultural significance. While significant strides have been made through initiatives like the **Namami Ganga Mission**, challenges persist in terms of **pollution management**, **industrial regulation**, and **sustainability**. Moving forward, greater **community engagement**, improved governance, and sustainable water management practices are essential to ensure the long-term health of the Ganga and its ecosystem.

TOPIC 6: AFTER CLEANER GHATS, GANGA AT VARANASI TO BE POLLUTION-FREE TOO

Introduction

The **National Mission for Clean Ganga (NMCG)** has been executing a series of initiatives aimed at reducing pollution in the **Ganga River** in **Varanasi**. This includes sewage treatment, ghat improvement, and river surface cleaning. These efforts, aligned with the **Namami Gange Programme**, are aimed at making the Ganga pollution-free and ensuring a sustainable environment for future generations in Varanasi.

Current Situation of Sewage Management in Varanasi

Sewage Generation and Treatment Gap

Varanasi currently generates an estimated **300 million liters per day (MLD)** of sewage, a figure that is expected to rise to **390 MLD by 2030**. Presently, the city's three existing **sewage treatment plants (STPs)**—located at **Dinapur**, **Bhagwanpur**, and **DLW**—treat only **102 MLD** of sewage. This leaves a significant portion of untreated sewage flowing directly into the Ganga via the **Varuna** and **Assi** rivers.

Expansion of Sewage Treatment Capacity

To address the sewage treatment shortfall, new facilities are being developed:

- A **140 MLD STP** at **Dinapur** under the **Japan International Cooperation Agency (JICA)** project.
- A **120 MLD STP** at **Goitha** under the **Jawaharlal Nehru National Urban Renewal Mission (JNNURM)** scheme.
- Additionally, a **50 MLD STP** at **Ramana** has been awarded under the **Hybrid Annuity-Based PPP Model**, specifically targeting the sewage needs of the **Assi-BHU area**.

Together, these efforts will create a total sewage treatment capacity of **412 MLD**, which will be sufficient to meet the city's sewage demands until **2035**.

River Surface Cleaning and Trash Management

River Surface Cleaning Initiatives

A significant focus of the Ganga cleaning mission in Varanasi has been on removing **floating waste** from the river's surface. A **trash skimmer** has been operational since **April 2017** as part of the **River Surface Cleaning Component** under the Namami Gange Programme. This intervention ensures that visible pollutants like plastic waste, debris, and other refuse are collected and disposed of properly, contributing to a cleaner river.

Ghat Cleaning and Improvement

Ghat Cleaning Under Namami Gange

The cleanliness of the Ganga is incomplete without addressing the condition of the **ghats**. In recognition of this, the **Government of India** launched a comprehensive cleaning drive at **84 iconic and heritage ghats** in Varanasi under the **Namami Gange Programme**. This initiative has yielded **positive results**, transforming the ghats into cleaner, more appealing spaces for both locals and pilgrims.

Community Toilet Complexes

In addition to cleaning the ghats, sanitation facilities have been improved by constructing **153 Community Toilet Complexes** at an estimated cost of **Rs. 20.07 crore**. Of these, **109 toilets** have already been completed and are in use by **15,000–20,000 people** daily, addressing one of the major sources of pollution along the ghats.

Efforts to Control Ghat Pollution from Cloth-Washing

Renovation of Dhobi Ghats

One of the key sources of ghat pollution is the **cloth-washing activities** by the **Dhobi community**. To address this, the government has initiated **Ghat improvement works** at **26 locations** and undertaken **repair works** at identified sites. Four **Dhobi Ghats—Pandepur**, **Nadesar**, **Bhavania Pokhran**, and **Konia**—have already been **renovated**. The construction of three additional Dhobi Ghats is underway at **Bazar Diha**, **Machodari Slaughterhouse**, and **Bhavania Pokhri (extension)**.

Several members of the Dhobi community have already shifted to the newly renovated ghats, with efforts ongoing to persuade more users to adopt these cleaner facilities.

Comprehensive Approach and Results

The focused approach taken under the **Namami Gange Programme** to make **Ganga pollution-free in Varanasi** has yielded visible results. The combination of sewage treatment expansion, river surface cleaning, ghat improvements, and sanitation initiatives have all contributed to a cleaner, healthier Ganga. These interventions are ensuring that the **objective of Nirmal Ganga** (clean Ganga) is becoming a reality for the city of Varanasi.

Conclusion

The commitment to cleaning and rejuvenating the **Ganga River in Varanasi** is yielding positive outcomes. With ongoing improvements in sewage treatment, the implementation of **trash skimmers**, the renovation of ghats, and the construction of sanitation facilities, the Ganga is steadily moving towards being pollution-free. These efforts are not only addressing the current pollution crisis but also ensuring that the city is well-prepared to meet future environmental challenges, making **Nirmal Ganga** in Varanasi an achievable goal.

TOPIC 7: CONSTRUCTION AND DEMOLITION CIRCULAR ECONOMY SOLUTIONS

Introduction

India's **construction sector** plays a crucial role in the economy, contributing to **GDP**, **infrastructure investment**, and **employment**. However, it also poses significant environmental challenges due to the generation of large volumes of **construction and demolition (C&D) waste**, which accounts for nearly one-third of India's total solid waste. Implementing **circular economy solutions** can reduce C&D waste, promoting **sustainable development** and transforming the construction industry into a more efficient and environmentally responsible sector.

Linear vs. Circular Economic Systems

Linear Economy: A 'Take-Make-Waste' Model

Historically, the **linear economy** follows a model where raw materials are extracted, used to manufacture products, and then discarded as waste. This system assumes an endless supply of resources, which is no longer sustainable due to **urbanization**, **population growth**, and **resource depletion**. The linear model leads to waste generation, environmental degradation, and health hazards as discarded materials often end up in **landfills**, **incinerators**, or **dumpsites**.

Circular Economy: A Closed-Loop System

The **circular economy** represents an alternative model that reduces waste by keeping products and materials in circulation for as long as possible.

It follows a **closed-loop system**, focusing on minimizing the use of virgin resources and maximizing **reuse** and **recycling**. In this model, products are designed to stay in the economic loop through their entire lifecycle, ensuring that even residues and waste materials are recycled or recovered for further use.

The Importance of the Construction Sector in India

Scale of Construction in India

Globally, the **construction industry** is the largest consumer of resources and raw materials, and in India, it accounts for around **20%** of total material demand. As India's construction sector is poised to become the third largest in the world, its impact on **environmental sustainability** is significant. The sector currently contributes over **8% to the GDP** and is vital for meeting the growing **affordable housing demand**, which is expected to reach **38 million units** by 2030.

C&D Waste Generation in India

Construction activities in India generate about **12 million tons** of C&D waste annually, constituting **20-25%** of the country's total **municipal solid waste (MSW)**. This waste typically consists of **soil**, **sand**, **gravel**, **bricks**, **masonry**, **concrete**, **metal**, and **wood**. Unfortunately, much of this waste ends up in **landfills** or is improperly disposed of, contributing to urban waste management challenges. Recycling and reusing C&D waste can reduce resource consumption and provide environmental benefits.

Role of Circular Economy in Managing C&D Waste

Circular Economy Principles

The circular economy emphasizes waste avoidance, reuse, and recycling—often referred to as the 3R principles. Approximately 95% of C&D waste can be recycled or reused if processed effectively. However, the lack of adequate infrastructure for C&D waste processing in India leads to much of this waste reaching landfills, exacerbating urban waste management challenges. To address this, the NITI Aayog and other relevant ministries are promoting maximum recycling and reuse of C&D waste to substitute virgin materials in construction.

Adaptive Reuse and Deconstruction

The circular economy encourages the reuse of materials and components through methods such as:

- **Adaptive Reuse**: Repurposing parts of existing structures.
- **Deconstruction**: Careful dismantling to recover reusable components.
- **Design for Deconstruction (DfD)** and **Design for Reuse (DfR)**: Designing buildings to incorporate reclaimed components, ensuring that materials can be reused at the end of the building's lifecycle.
- **Design for Longevity (DfL)**: Planning buildings for extended use, reducing the need for new materials.

These strategies promote **material recovery**, reduce reliance on virgin materials, and lower environmental impacts.

Benefits of Implementing Circularity in C&D Waste Management

Economic and Social Benefits

Circular economy practices in C&D waste management offer numerous **economic and social benefits**, including:

- **Reduced waste processing costs**: By preventing C&D waste from entering the MSW stream, it enhances the efficiency of MSW processing.
- **Prevention of urban flooding**: Proper management prevents clogging of drains and water bodies.
- **Land conservation**: By reducing waste volume going to landfills, more land is preserved for other purposes.
- **Employment generation**: Recycling and processing of C&D waste create jobs and foster new enterprises.
- **Conservation of natural resources**: Recycled C&D materials reduce the demand for virgin materials.

Environmental Benefits

In addition to economic gains, the circular economy provides significant **environmental benefits**:

- **Air pollution reduction**: Proper C&D waste management suppresses dust and pollutants.
- **Flood prevention**: Managing C&D waste

reduces unauthorized dumping in drains and water channels, mitigating the risk of floods.

- **Reduced environmental impact**: Recycling C&D materials lowers the environmental impacts associated with mining virgin resources.

Circularity Potential of C&D Waste

Maximizing Circularity

Complete circularity in C&D waste management requires a comprehensive approach that encompasses all phases of construction, including:

- **Planning Phase**: Integration of circular economy principles at the project appraisal stage.
- **Construction Phase**: Using environmentally friendly materials and reducing waste generation.
- **Operation and Maintenance Phase**: Ensuring longevity and reuse of materials throughout the building's lifespan.
- **Dismantling Phase**: Recycling and repurposing materials at the end of a structure's life.

Leveraging technologies like **Radio Frequency Identification (RFID)** can aid circularity by tracking materials, facilitating preventive maintenance, and ensuring the reuse of materials after the building's lifecycle.

Conclusion

Adopting circular economy principles in the construction sector presents immense opportunities for **innovation**, **cost reduction**, and **resource conservation**. By reducing the demand for raw materials, improving construction quality, and minimizing waste, the circular economy aligns with India's sustainable development goals. Complete adoption of circular practices could create annual benefits of **Rs 4.9 lakh crore (USD 76 billion)** by **2050**, along with **environmental** and **social** benefits such as reduced **greenhouse gas emissions** and decreased **water consumption**. The introduction of circular economy concepts into **urban planning** and **building design** can help India create resilient cities that are less reliant on non-renewable resources, while also supporting **environmental sustainability** in the long term.

TOPIC 8: SMART GRIDS AND RENEWABLE ENERGY: POWERING RURAL SANITATION

Access to Water and Sanitation

- Access to water and sanitation is essential for the health and well-being of individuals and communities.
- The integration of smart grids and renewable energy offers an opportunity to ensure a reliable power supply for rural sanitation initiatives, such as water pumping and waste management.
- The **PM-Surya Ghar Yojana** is expected to be a game-changer by empowering rural households with affordable solar energy.
- Solar PV systems, particularly through microgrids, can help Gram Panchayats reduce electricity costs and provide reliable power for sanitation efforts, aiding India's goal of **carbon neutrality by 2070.**

Challenges of Power Supply in Rural Areas

- Providing a consistent power supply in rural areas remains a challenge.
- A stable power supply is vital for the availability of clean water, which is intrinsically linked to sanitation.
- Climate change is expected to worsen water scarcity, and a lack of basic hygiene practices will heighten the risk of disease transmission.
- Smart grid and renewable energy integration create an opportunity for efficient rural sanitation.

Smart Grid

Definition and Features

- A smart grid is an electric grid enabled with automation, communication, and IT systems.
- It monitors power flows from the point of generation to consumption, controls the power flows, and curtails the load to match generation in real-time.
- **Key Contributions**:
  - Integration of consumer and renewable power sources.
  - Reduction in transmission and distribution losses.
  - Peak load management and increased reliability.

Benefits of a Smart Grid

- **Outage Management**: Automated outage management systems enable faster restoration of services during outages.
- **Real-Time Monitoring**: Power measurements are recorded in real-time at the consumer level.
  - **Dynamic Pricing**: Implements **time-of-day (TOD) consumption** patterns to reduce peak load demand.
  - Reduced tariffs during off-peak hours encourage consumption during night/off-peak times.
  - **Consumer Awareness**: Web portals and mobile apps allow consumers to track their electricity consumption and reduce it.
  - **Bidirectional Power Flow**: Allows **prosumers (producers and consumers)** to connect to the grid through net metering.
  - **Improved Utility Management**: Better information and control over the distribution network and improved asset management.

Microgrid

What is a Microgrid?

- A microgrid is an integrated energy and communication system consisting of interconnected loads and distributed energy sources.
- It can operate in stand-alone mode or parallel with a larger grid (macrogrid) in case of an emergency.

Generation Sources

- Microgrid generation sources include solar, wind, microturbines, or other smaller energy sources.
- **Reliability**: Its ability to isolate from larger networks makes microgrids a highly reliable source of electric power for its consumers.

Drinking Water: Jal Jeevan Mission

Mission Overview

- The **Jal Jeevan Mission** aims to provide safe and adequate drinking water to all households in rural India through **individual household tap connections by 2024**.
- **Sustainability Measures**: Includes rainwater harvesting, groundwater recharge, greywater management, and water conservation.

Community Involvement

- A community-based approach where active participation of people is crucial.
- Extensive communication and information sharing are key to its success.
- **'Jan Andolan' (People's Movement)**: Aims to educate people and make water everyone's priority, connecting citizens with the initiative.

PM-Suryaghar: Muft Bijli Yojana

Solar Rooftop Capacity Enhancement

- To increase the share of solar rooftop capacity and empower residential households to generate their own electricity, the Government of India has launched the **PM-Suryaghar Yojana**.
- India is blessed with ample sunshine throughout the year, which can be extensively used for **solar photovoltaic (PV)** system installations.

Key Features of PM-Suryaghar Yojana

- **Reliable and Affordable Power**: The scheme ensures the availability of reliable and affordable power supply to rural households, crucial for efficient rural sanitation.
- **Incentive Structure**: The scheme includes an incentive of **Rs 1,000 crores** for local bodies to promote residential rooftop solar **(RTS)** installations.
- **Local Mobilization**: Local bodies and Panchayati Raj Institutions at the gram panchayat level are tasked with promoting RTS installations through awareness campaigns.
- **Central Financial Assistance**: Financial assistance is transferred directly to consumers through a national portal.
- **Stakeholder Collaboration**: Governing bodies bring together consumers, residential welfare associations, DISCOMs, banking institutions, local contractors, and community members to effectively promote rooftop solar projects.

Sanitation and Renewable Energy

Role of Renewable Energy in Sanitation

- Key elements of efficient rural sanitation:
  - Maintenance of toilets in hygienic conditions.

  - ➢ Isolation of human waste from human contact.
  - ➢ Proper management of solid and liquid waste.
  - ➢ Promotion of hygienic practices.
- **Renewable Energy in Water Supply**: Solar energy, through smart microgrids, can provide the required reliable power for water pumping systems.

Cost Reduction for Gram Panchayats

- Gram Panchayats often struggle to meet operational expenses.
- Solar PV systems can reduce electricity costs compared to conventional sources (DISCOMs).
  - ➢ **RESCO Mode**: Developer installs the solar plant, and the consumer purchases electricity at a fixed rate for 25 years.
  - ➢ **CAPEX Mode**: Gram Panchayats can invest their funds for solar plant installation, with a payback period of 4–5 years.

Net Metering System

- A **bidirectional energy meter** is installed by **DISCOMs** to track energy consumption.
- Monthly electricity bills are generated based on net consumption, with any surplus carried forward.

Surplus Biomass and Waste

Contribution to India's Renewable Energy Goals

- India aims to achieve **50%** cumulative electric power installed capacity from non-fossil fuel-based energy sources and **net-zero emissions by 2070.**
- Surplus biomass and waste in rural areas can be utilized to produce electricity.
- **Benefits**:
  - ➢ Reduction in waste management costs.
  - ➢ Social and environmental benefits, such as reduced air, water, and land pollution.

Electricity Demand in Rural Areas

Challenges of Rural Electricity Demand

- Rural electricity demand is **small and sparsely distributed**, leading to capital-intensive power distribution networks.
- Installing solar PV systems locally can reduce the need for large distribution networks.

Microgrids Supporting Rural Communities

- Microgrids with smaller solar PV systems can meet the electricity requirements of rural communities.
- They provide a reliable power supply for sanitation initiatives, such as water pumping, mechanical cleaning of toilets, and waste management.

Conclusion: The Future of Renewable Energy in Rural Sanitation

- The integration of smart grids with widespread renewable energy sources provides a significant opportunity to meet the power requirements for sanitation in rural areas.
- Adopting renewable energy will help meet the energy demands of rural communities and support India's goal of achieving carbon neutrality by 2070.

TOPIC 9: GANDHIJI'S PHILOSOPHY ON SWACHHATA THROUGH SELF-PRACTICE

Gandhiji's Commitment to Cleanliness and Sanitation

- **Cleanliness** and **sanitation** were central to Gandhiji's philosophy. He viewed them as **fundamental human qualities**.
- Famous for saying, "**Everyone must be his own scavenger**," Gandhiji believed in **leading by example**, cleaning filth when others refused to.
- His experiences in **South Africa** and **India** reinforced his belief in the necessity of **personal and community hygiene**.
  - ➢ He declared, "**A lavatory must be as clean as a drawing room**."
- Gandhiji's vision for India's independence was not only political but also social, with **village sanitation** and **health and hygiene** being key components of his **18-point constructive program**.

Cleanliness: A Personal Passion for Gandhiji

a. Childhood in Porbandar

- Gandhiji's upbringing in **Porbandar** exposed him to societal practices of untouchability.
  - In his household, touching a **Mehtar (sweeper)** led to being considered "unclean." Gandhiji resisted this practice even at a young age.
  - He questioned his mother's practice of making him bathe after touching the scavenger's son, **Uka**, reflecting his early rebellion against caste discrimination.

Realization in South Africa

Encountering Racial Prejudice

- Gandhiji's commitment to **cleanliness** was intensified by his experiences in **South Africa**, where he faced **racial prejudice** and saw the poor living conditions of Indian communities.
  - He emphasized the importance of **personal cleanliness** and improving **sanitary conditions** in their surroundings.

Promoting Cleanliness in South Africa

- Gandhiji encouraged Indians in South Africa to practice:
  - **Cleanliness**: Personal hygiene and keeping the surroundings clean.
  - **Truthfulness** and **learning another language** (specifically, English) to improve their social standing.

Hygiene in India: Calcutta Congress Session (1901)

- When Gandhiji attended the **1901 Congress session** in Calcutta, he was appalled by the **horrible sanitary conditions** at the camp.
  - Some delegates used the verandas as latrines, yet no one objected to it.
  - Despite his position as a lawyer, Gandhiji **cleaned the filth himself**, leading by example, even when the volunteers refused, stating it was a **sweeper's job**.

Fighting Untouchability through Self-Practice

Creation of Bhangi Squads

- Years later, during his leadership in the **Indian National Congress**, Gandhiji's efforts led to the formation of **Bhangi (sweeper) squads** at Congress camps.
  - Even members of the upper castes participated in scavenging work, which was revolutionary at the time.
  - During the **Haripura Congress**, **2,000 volunteers** were trained in scavenging work.

Campaign Against Untouchability

- Gandhiji's sanitation efforts were intertwined with his fight against **untouchability**.
  - He believed that untouchables were marginalized because they did scavenging work, which was considered "impure."
  - In 1915, Gandhiji accepted an **untouchable family** into the **Satyagraha Ashram** in Kochrab, Gujarat. Despite social boycott and opposition from family members, Gandhiji stood firm, treating the girl from the untouchable family as his own daughter.

Eradicating Manual Scavenging and Stigma

Breaking Social Barriers

- Gandhiji wanted to eliminate the stigma associated with **manual scavenging**.
  - He emphasized that society's mindset needed to change: **"Why should scavengers be considered untouchable for cleaning filth?"**
  - Gandhiji also questioned societal practices like using the **left hand** for cleaning and considering it impure.

Vinoba Bhave's Example

- Gandhiji's close associate, **Vinoba Bhave**, from the upper caste, performed two significant duties in the ashram:
  - **Discourse on the Gita**.
  - **Cleaning the toilets**.
- Bhave's actions symbolized the **equal respect** for spiritual work and scavenging, highlighting the dignity of labor.

Learning from the West: Sanitation and Hygiene

- Gandhiji admitted that many of his sanitation practices were influenced by the **West**.
  - He learned that lavatories should be as clean as drawing rooms, and diseases spread due to unsanitary conditions.

- He firmly believed in maintaining **clean places for answering nature's call** and emphasized **cleaning excreta properly**.

Swachhata During the Salt March

Instructions to Salt Marchers

- During the **Salt March**, Gandhiji insisted that all marchers carry sticks to dig small pits as temporary toilets and cover them to maintain hygiene.
  - He advocated for **sanitation in villages**, with volunteers teaching villagers to **bury excreta** and maintain **clean surroundings**.

Village Sanitation Initiatives

- Gandhiji led by example, visiting villages with a **bucket and broom**, cleaning excreta himself, and encouraging others to follow.
  - He believed that the cleanliness of **Harijan quarters** and village **sanitation** was essential to preventing the spread of disease.

Reconstructing Society through Swachhata

Village Sanitation as Part of Social Reconstruction

- Gandhiji viewed **sanitation** as an integral part of his **18-point constructive program**, which aimed at **social reconstruction**.
  - Among the 18 points, **village sanitation** and **knowledge of health and hygiene** were highlighted as crucial for rebuilding Indian society.

Constructive Program: A Blueprint for True Swaraj

- In his 1945 book, "Constructive Programme: Its Meaning and Place", Gandhiji outlined a plan for volunteers to work on sanitation and hygiene as part of achieving Poorna Swaraj (complete self-rule).
  - He wrote that political freedom should be accompanied by cleanliness and the health of society.

Gandhiji's Legacy of Swachhata

- Gandhiji's philosophy of cleanliness was not limited to hygiene but extended to **social transformation**.
  - He believed that **true courage** lay in being able to clean one's surroundings, stating, "**It needs no less courage to become an expert scavenger than to win a Victoria Cross.**"
- His legacy of **Swachhata** continues to inspire modern-day cleanliness movements, such as the **Swachh Bharat Mission**, and remains a call for all citizens to take responsibility for keeping their surroundings clean.