Key Takeaways

- Increasing municipal and industrial activities has resulted in significant increase in sewage generation in urban areas of the country.

- Between 2011 and 2017, the total sewage generated by Class I and Class II cities increased from 40,715 million litres per day (mld) in 2011 to 75,020 mld in 2017, recording a CAGR of 10.72%.

- The country's sewage treatment capacity increased from 11,787 mld in 2009 to 26,066.31 mld in 2018 (as of July 2018). About 83% is currently operational.

- In the last couple of years, the government has launched a number of programmes/schemes for augmenting sewage treatment and collection infrastructure in the country. Ongoing schemes like development of 100 Smart Cities, the Atal Mission for Rejuvenation and Urban Transformation of 500 habitations, the Namami Gange Mission and the Swachh Bharat Mission are estimated to entail an investment of over 3 trillion. The progress under these schemes has been slow with majority of the projects currently in the bidding and planning stage.

- The new Environment (Protection) Rules, 2017 has relaxed the discharge standards for treated wastewater/sewage (for upcoming STPs).

- Given the financial constraints and inefficiencies of ULBs, the case for more PPP in the sector is strong. The Namami Gange programme has awarded two sewage treatment projects for Haridwar and Varanasi under the new Hybrid Annuity Model.

- A number of incentives and policy structures have been promulgated by the municipal agencies as well as state governments to encourage different stakeholders to recycle and reuse wastewater.

- A number of ULBs in India have started to deploy advanced sewage treatment technologies such as sequential batch reactor, moving bed biofilm reactor and moving bed bio-reactor to improve the quality of treated sewage and optimise O&M cost and land requirements.

- Further, in the last couple of years, municipal corporations in Pune and Hyderabad raised funds through municipal bonds.

![Growth in Sewage Generation and Urban Population during 2011-17](image-url)
Key Constraining Factors

- The existing sewerage infrastructure in most cities is characterised by obsolete and faulty pipeline networks, insufficient treatment capacity, sub-optimal capacity utilisation, etc.
- Poor financial health of urban local bodies (ULBs) is another major issue of concern. ULBs in India are primarily dependent on government funds for implementing sewerage projects. Their own revenues from user charges as well as other local taxes are not even sufficient to recover O&M expenses.
- Further, the lack of a fixed revenue stream is a major constraint that limits private sector investments.
- The contracting process for most sewerage projects is considered to be very weak. The project documents are not standardised and leave a lot of room for ambiguity.
- Majority of the ULBs lack up-to-date and accurate data on key sewerage parameters, including generation, treatment, collection efficiency and treatment capacity.

Overall Sector Outlook

- Based on the projects tracked by India Infrastructure Research, the short term (by 2018-19) and long-term (April 2019-March 2026) investment requirement for the sewerage sector is estimated at Rs 204 billion and Rs 167 billion respectively.
- About 118 sewerage projects involving a combined investment of Rs 370.55 billion are yet to be awarded. Of these, 56 projects are under bidding. These are likely to be awarded in the next 5-6 months. The remaining 62 projects involving a combined investment of Rs 166.75 billion are either announced or are planned to be taken up in the future.
- Overall, projects in the pipeline are expected to create more than 11,550 mld of additional sewage treatment capacity and expand the sewerage network by 18,280 km.
- Going forward, the government will continue to play a key role in driving sector growth by way of approving new programmes and schemes.
1. Executive Summary

SECTION I: MARKET OVERVIEW AND TRENDS

2. Sector Size and Growth
   - Sewerage Sector Snapshot
   - Treatment Capacity
   - Institutional Framework
   - Policy and Regulatory Framework
   - Norms for Sewage Treatment
   - Key Trends
   - Recent Developments
   - Current Tariff Structure and Revisions
   - Issues and Challenges

3. Investment Scenario and PPP Experience
   - Experience So Far
   - Funding Sources and Financing Model
   - Key Sources of Revenue
   - Cost Components
   - Project Economics
   - PPP Trends
   - Case Studies of PPP Projects
   - Key Success Factors
   - Role of Multilateral Funds
   - Investment Requirements

4. Focus on Hybrid Annuity Model
   - Salient Features
   - Experience So Far
   - Key Projects (Ongoing, Upcoming, Announced)
   - Industry Expectations
   - Risks and Challenges
   - Future Outlook

5. Intercity Comparison
   - Analysis of Sewage Generation
   - Analysis of Sewage Treatment Capacity
   - Technology-wise Analysis
   - Capacity Addition Plans
   - Initiatives towards Recycle and Reuse - Current Practices and Future Plans

6. Competitive Landscape
   - Key Players (Indian and Global)
   - Experience So Far
   - Upcoming Contract Value
   - Project Portfolio (Ongoing and Completed Projects)
   - Capacity Addition Plans
   - Financial Performance
   - Key Concerns and Future Plans

7. Trends in Treatment Technologies
   - Conventional Technologies
   - Advanced Technologies
   - Current Capacity
   - Key Case Studies
   - Emerging Technologies
   - Regulatory Initiatives

SECTION II: MARKET OUTLOOK AND OPPORTUNITIES

8. Demand Drivers
   - Growth in Population and Urbanisation
   - Depleting Water Resources
   - Increasing Focus on Recycle and Reuse
   - Others

9. Opportunities under Key Government Initiatives
   - Snapshot of Key Government Initiatives
   - Namami Gange Programme
   - Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
   - Smart Cities Mission
   - Swachh Bharat Mission

10. Project Pipeline
    - Overall Project Pipeline
    - Summary of Key Projects in Pipeline
    - Project Pipeline by State
    - Project Pipeline by Status
    - Project Pipeline by Mode of Implementation
    - Project Pipeline by Completion Period
    - Key Sewerage Projects – Short-term Opportunity
    - Key Sewerage Projects – Long-term Opportunity

11. Future Projections and Market Opportunities (till 2025-26)
    - Investment Requirements
    - Expected Capacity Addition
    - Market Opportunities
    - Sector Outlook

SECTION III: FOCUS ON EMERGING SEGMENTS

12. Energy from Sewage
    - Existing Capacity
    - Relevant Technologies
    - Technologies in use across Cities
    - Upcoming Projects
    - Potential for Energy Consumption

13. Recycle and Reuse
    - Experience So Far
    - Current Practices
    - Standards for Reuse
    - Technologies in use across Cities
    - Potential for Recycle and Reuse
    - Issues and Challenges
    - Segment Outlook

SECTION IV: KEY CITY PROFILES

14. Profiles of Key Cities
    - Mumbai, Hyderabad, Chennai, Bengaluru, Delhi, Ahmedabad, Kolkata, Surat, Pune, Nagpur, Pimpri Chinchwad
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