Wastewater management policies: a perspective and roadmap for India

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Wastewater management policies of India need updates due to inadequate infrastructure and the environmental impacts that the country is currently facing. The study analyses the wastewater situation in India, revealing infrastructure deficiencies and environmental impacts, and is backed by successful international case studies for valuable insights. The proposed roadmap for policy evolution in India involves key components such as regulatory enhancement, sustainable practices, monitoring and enforcement strengthening, government involvement, industry and community collaboration/participation and public awareness. Advanced monitoring, data analytics with data integration and decision support systems are emphasized. Challenges in policy implementation are discussed, followed by expected outcomes. This provides a comprehensive framework for revitalizing wastewater management policies of India, ensuring a sustainable future.

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pharmaceuticals, pesticides and PPCPs into the environment[16,17]. This could lead to uncertainty about proper disposal practices[18]. Given the changing pollution landscape and the limitations of existing treatment methods, there is a need for new effective guidelines and policies. These should focus on creating a sustainable and safe environment, addressing the challenges of emerging pollutants and the changing dynamics of pollution sources. To address these issues and ensure a more sustainable and safer environment, it is essential to develop advanced treatment technologies capable of removing a wider range of pollutants, including emerging contaminants.

Additionally, regulatory bodies should develop comprehensive guidelines and policies that reflect the current pollution landscape and provide direction for stakeholders to mitigate pollution effectively. Public awareness and education about responsible water usage and pollution prevention are crucial to addressing this issue. However, the existing policies have proven inadequate to handle this burgeoning challenge. The present study addresses the pressing need for policy reform, recognizing that such reform is not merely an