

Press Release

Efficient Strategies Could Slash Bihar's Waste Sector GHG Emissions by 60% by 2070

A Pivotal Step Towards Climate Resilience and Low Carbon Development : ICLEI South Asia supports the Government of Bihar to take decisive steps towards strengthening waste sector into its ambitious climate agenda

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With a commitment to transform itself into a net zero state by 2070, Bihar is strengthening its waste management profile by formulating a Low-Carbon Action Plan (LCAP) for the waste and domestic wastewater sector.

ICLEI - Local Governments for Sustainability, South Asia, as one of the partner agencies, collated data for the existing domestic wastewater and solid waste management system, both at the urban and rural levels. The data was used to develop a greenhouse gas (GHG) emissions inventory for both the solid waste and domestic wastewater sectors.

Based on the inventory and discussions with the key actors and stakeholders in the state, a list of low-carbon interventions and recommendations for strengthening the waste sector was proposed as part of the LCAP. The LCAP also includes scenarios for the future emission reductions for the years 2030, 2050 and 2070 through the proposed interventions.

The Chief Minister, Mr Nitish Kumar, along with his Deputy Chief Ministers, last week unveiled a comprehensive draft of the “Climate Resilient and Low Carbon Development Pathway for the state of Bihar,” the first of its kind in the country, marking a significant stride toward mitigating GHG emissions and fostering a sustainable and resilient environmental future. The detailed assessment by ICLEI South Asia of the waste and wastewater sectors constitutes a critical part of the strategy.

*"As we look to the future, our assessments, findings, key recommendations, and support to the Government of Bihar paves the way for significant reductions in unmanaged solid waste and wastewater, enhanced treatment efficiency, and subsequent methane recovery," said **Emani Kumar, Executive Director, ICLEI South Asia.***

By 2025, Bihar aims to secure 100% access to scientifically designed, universal, and economical toilet systems, and by 2070, to realise 100% treatment efficiency and optimal reuse of generated wastewater, with maximum methane recovery in the state, among several other core targets. Anaerobic treatment of wastewater with methane recovery is one of the primary targets for maximum reduction of emissions from the waste sector. Methane recovery is the capture of methane gas from wastewater treatment, organic waste or landfills, preventing it from entering

the atmosphere, thereby reducing GHG emissions. This gas can be reused as a source of renewable energy such as biogas, electricity etc.

The findings stem from rigorous analysis and consultation, through the robust data collated from 2016 to 2020. Total GHG emissions from Bihar's waste sector increased to nearly 8.2 million tons of CO₂ equivalent (tCO₂e) in 2020. A significant portion of these emissions can be traced back to the mis-management of domestic and industrial wastewater and solid waste.

The visionary objective of the LCAP for the waste sector, prepared by ICLEI South Asia, is to ensure, "holistic solid waste management and a sustainable sanitation pathway integrating the concept of low carbon solutions, thereby enabling mitigation of GHG emission from the waste sector and contributing to the state-level goal of pursuing climate resilience and low carbon development pathway for eventually achieving carbon neutrality."

Central to Bihar's climate ambition are pivotal actions designed to transform the state's waste management landscape. The plan aims for statewide coverage of sustainable containment systems for human excreta, significantly reducing GHG emissions from poorly managed or openly discharged wastewater.

"This effort is complemented by strategies to minimise waste generation at the source, enhance waste segregation, and implement comprehensive door-to-door waste collection. These practices are systematically integrated with efficient transport mechanisms, ensuring waste is directed to appropriate processing facilities," said **Bedoshruti Sadhukhan, Associate Director, ICLEI South Asia.**

From 2016 to 2020, emissions from the solid waste disposal alone rose by 32.3% , at a CAGR of 7.5%, underscoring the urgency for the state to act immediately. *"The treatment of domestic wastewater has been a notable contributor to the GHG emissions, highlighting the need for improved management strategies,"* added Sadhukhan.

In 2020, emissions from domestic wastewater increased to 6.69 million tCO₂e, growing at a rate of 2.6% from 2016. The prevalence of septic tanks and untreated discharge, due to inadequate sewage collection and treatment, has been identified as a source of high methane generation. Industrial wastewater, with a staggering rate of 49.7%, emitted approximately 1.1 million tCO₂e.

The solid waste processing and disposal contributed around 0.37 million tCO₂e. The present situation emphasises the importance of developing a holistic and scientific waste management in the state, with enhanced source segregation; segregated collection and transportation of the waste to scientific processing facilities such as composting, biomethanation and other solutions, followed by disposal of inerts in the sanitary landfill.

Ritu Thakur, Assistant Program Coordinator, ICLEI South Asia said, *"There are a lot of opportunities for the state to explore to strengthen its existing waste management landscape and adopt a holistic and scientific integrated waste management plan to move*

towards a circular economy and low carbon development pathway. This is going to be a decisive decade and actions needs to be based on well-informed decisions”

The recommendations highlighted in the LCAP are an outcome of the collaborative efforts involving multiple stakeholders at various levels and departments, complemented by field visits by the ICLEI team. These concerted actions proposed in the LCAP are expected to create a substantial GHG emission mitigation potential across the state.

“Bihar's commitment to this low carbon trajectory is evident from the measures planned in the LCAP, showcasing a thoughtful blend of innovation, community engagement, and policy-driven enforcement to ensure a greener future,” said Kumar.



About ICLEI South Asia

ICLEI South Asia is the South Asian arm of ICLEI – Local Governments for Sustainability, a global network of more than 2500 local and regional governments committed to sustainable urban development. Active in 100+ countries, we influence sustainability policy and drive local action for low-emission, nature-based, equitable, resilient, and circular development. ICLEI South Asia works to support cities on multiple aspects of sustainable development, in order to achieve tangible improvements in regional and global sustainability through local initiatives.

Contact

For more information or interview requests:

Badri Chatterjee | Senior Communications Manager at ICLEI South Asia
+91 9769687592 | badri.chatterjee@iclei.org

Kaushani Banerjee | Communications Manager at ICLEI South Asia
+91 9769295022 | kaushani.banerjee@iclei.org

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