



## Low-Carbon Action Plan (LCAP)

**For Prelims:** Low-Carbon Action Plan, Waste Management, [Net Zero](#), [Greenhouse Gas \(GHG\)](#), [Waste to Wealth Portal](#).

**For Mains:** Low-Carbon Action Plan, Waste Management Initiatives and Rules, Government Policies & Interventions.

[Source: DTE](#)

### Why in News?

Bihar has initiated a **well-designed work plan to strengthen its waste management** profile by formulating a **Low-Carbon Action Plan (LCAP)** for the waste and domestic wastewater sector.

- This is part of its commitment to transform itself into a [Net Zero state by 2070](#).
- The detailed assessment, done by **ICLEI (International Council for Local Environmental Initiatives)**, South Asia, of the waste and wastewater sectors constitutes a critical part of the strategy.
  - ICLEI is a network of more than 2500 local and regional governments, supported by a team of global experts, driving sustainable urban development worldwide.
  - ICLEI influences **sustainability policy and drives local action** for low emission, nature-based, equitable, resilient and circular development.

### What is the Low Carbon Action Plan (LCAP)?

- **About:**
  - The LCAP is a strategic document **developed to address the challenges of [Greenhouse Gas \(GHG\) emissions](#) and promote **sustainable waste management practices****.
  - Specifically tailored to Bihar, the LCAP outlines a comprehensive roadmap for reducing emissions from the waste and domestic wastewater sectors, thereby contributing to the **state's goal of becoming carbon neutral by 2070**.
- **Components:**
  - **Assessment and Inventory:** The LCAP begins with a **thorough assessment of the existing waste management** infrastructure, including both the solid waste and domestic wastewater sectors.
    - This involves collecting **data on waste generation**, treatment methods, and GHG emissions.
  - **Identification of Key Issues:** The LCAP identifies key challenges in waste management, such as inadequate sewage collection and treatment, **poor waste segregation**, and unmanaged solid waste disposal.
  - **Setting Targets and Goals:** Based on the assessment, the LCAP establishes ambitious targets for emission reductions and waste management improvements.
    - These targets are set for different timeframes, including **2030, 2050, and 2070**.
  - **Intervention Strategies:** The LCAP proposes a range of low-carbon interventions and

recommendations to address the identified issues.

- These strategies include improving waste segregation at the source, enhancing collection and transportation systems, implementing efficient treatment technologies, and promoting methane recovery from wastewater.
- **Community Engagement and Policy Enforcement:** The success of the LCAP relies on active participation from various stakeholders, including government agencies, local communities, and private sector entities. Additionally, policy-driven enforcement mechanisms are essential to ensure compliance with waste management regulations and promote sustainable practices.

## What are the Benefits of LCAPs?

- **Environmental Benefits:** The main advantage is combating climate change by reducing emissions that trap heat in the atmosphere. This can help slow global warming and its associated problems like extreme weather events, rising sea levels, and harm to ecosystems.
- **Public health Benefits:** Reducing reliance on fossil fuels like coal can improve air quality, leading to less respiratory illness. Low carbon plans often encourage things like walking, cycling, and public transport, which can boost physical activity levels.
- **Economic Benefits:** Investing in renewable energy sources and energy efficiency can create new jobs in these sectors. There can also be long-term cost savings from reduced reliance on imported fossil fuels.

## What are the Challenges of LCAP?

- **Upfront Costs:** Shifting to renewable energy sources or energy-efficient technologies often requires an initial investment.
- **Changing Habits:** The plan might require changes in how people live and work, such as using public transport more or driving less. People may be resistant to these changes.
- **Political Will:** Low carbon plans can take time and sustained effort to show results. There may be political resistance to changes that could disrupt powerful industries.
- **Equity Concerns:** The transition to a low carbon economy needs to be managed fairly to ensure that everyone benefits and the burden isn't placed unequally on disadvantaged groups.

## What are the Initiatives Related to Waste Management in India?

- **Solid Waste Management Rules 2016:**
  - These rules replaced the Municipal Solid Wastes (Management and Handling) Rules, 2000 and focused on segregation of waste at source, responsibility on the manufacturer to dispose of sanitary and packaging wastes, user fees for collection, disposal and processing from the bulk generator.
- **Waste to Wealth Portal:**
  - It aims to identify, develop, and deploy technologies to treat waste to generate energy, recycle materials, and extract resources of value.
- **Waste to Energy:**
  - A waste-to-energy or energy-from-waste plant converts municipal and industrial solid waste into electricity and/or heat for industrial processing.
- **Plastic Waste Management (PWM) Rules, 2016:**
  - It mandates the generators of plastic waste to take steps to minimize generation of plastic waste, prevent littering of plastic waste, and ensure segregated storage of waste at source among other measures.
  - In Feb 2022, **Plastic Waste Management (Amendment) Rules, 2022** were notified.
- **Project REPLAN:**
  - It aims to make carry bags by mixing processed and treated plastic waste with cotton fibre rags in the ratio 20:80.
- **Plastic Waste Management (Amendment) Rules, 2022:**
  - The rules specify the responsibilities of various stakeholders such as manufacturers, importers, retailers, and consumers. All these stakeholders have a role to play in ensuring that plastic waste is managed properly and does not end up polluting the environment.

## Way Forward

- **Spread the Burden:** Utilize a mix of public and private funding sources to lessen the initial financial strain. Grants, tax breaks, and low-interest loans can incentivize businesses and individuals to adopt low-carbon technologies.
- **Focus on Long-term Savings:** Emphasize the cost benefits of LCAPs in the long run. This could involve highlighting reduced energy bills from efficiency upgrades or lower healthcare costs due to improved air quality.
- **Set Ambitious but achievable Goals:** Break down LCAPs into clear, phased milestones to demonstrate progress and keep stakeholders engaged.
- **Job Training and Retraining:** Invest in programs to equip people with the skills needed for the low-carbon economy, ensuring a just transition for all.
- **Make Low-Carbon Options Attractive:** Invest in public transportation infrastructure, create bike lanes and walkable communities, and offer subsidies for electric vehicles or energy-efficient appliances.

## UPSC Civil Services Examination, Previous Year Questions (PYQs)

### **Prelims:**

**Q. As per the Solid Waste Management Rules, 2016 in India, which one of the following statements is correct? (2019)**

- (a) Waste generator has to segregate waste into five categories.
- (b) The Rules are applicable to notified urban local bodies, notified towns and all industrial townships only.
- (c) The Rules provide for exact and elaborate criteria for the identification of sites for landfills and waste processing facilities.
- (d) It is mandatory on the part of the waste generator that the waste generated in one district cannot be moved to another district.

**Ans: (c)**

### **Mains:**

**Q. What are the impediments in disposing of the huge quantities of discarded solid waste which are continuously being generated? How do we safely remove the toxic wastes that have been accumulating in our habitable environment? (2018)**