



**DEPARTMENT OF INFORMATION TECHNOLOGY,  
CHANDIGARH ADMINISTRATION**

5<sup>th</sup> Floor, Additional Deluxe Building, Sector 9-D, Chandigarh -160009  
Phone: 0172-2740641, Email id: dit-chdut@chd.gov.in



ISO 9001 : 2015 Certified

No. Comp. No.:551172/IT/2025/ 1166

Dated: 08/09/2025

To

All Head of Departments/Boards/Corporations  
Chandigarh Administration.

**Subject: - National Hackathon 2025 on Eco-Alternatives to Single Use Plastics (SUPs), organized by Central Pollution Control Board (CPCB)**

Reference D.O. No. CP/61/2025-UPC-II-HO-CPCB-HO dated 14.08.2025 from Vir Vikram Yadav, I.A.S., Chairman, Central Pollution Control Board (CPCB), Ministry of Environment, Forest & Climate Change, Govt. of India on the subject cited above.

Ministry of Environment, Forest and Climate Change, launched the National Hackathon 2025 on Eco-Alternatives to Single Use Plastics (SUPs) as part of India's broader campaign to end plastic pollution. This initiative aligns with the theme of World Environment Day 2025 — **"Ending Plastic Pollution Globally"** — and aims to accelerate the transition toward sustainable alternatives. The Central Pollution Control Board (CPCB), under the Ministry of Environment, Forest and Climate Change, has requested the Chandigarh UTs Departments/Boards/Corporations to participate in the National Hackathon 2025 on Eco-Alternatives to Single Use Plastics (SUPs) as part of India's broader campaign to end plastic pollution.

The hackathon provides a dynamic platform for startups, research institutions, and industrial innovators to showcase scalable, eco-friendly solutions that can replace banned SUP items such as plastic carry bags, straws, and packaging materials. Participants are encouraged to present technologies and products that are economically viable, technically feasible, and ready for large-scale adoption.

The Information Brochure (Annexure I) for Hackathon, 2025 on Eco Alternatives to Single Use Plastics is attached. The last date for submission of solutions to Problem Statements by the eligible participants in the prescribed format (Annexure II) is 15th September 2025.

In this regard, you are requested to share this information with concerned stakeholders and encourage them to register for the hackathon and submit solutions for the aforementioned problem statements. The complete details regarding the hackathon are available in Annexure III and the link <https://cpcb.nic.in/pp-hackathon-cpcb/>.

*Himanshu Agarwal*

Director, Information Technology  
Chandigarh Administration

Endst No. Comp. No.:551172/IT/2025/ 1167

Dated: 08/09/2025

A copy of the above is forwarded to PA/SIT for the kind information of the officer, please.

*Himanshu Agarwal*

Director, Information Technology  
Chandigarh Administration

वीर विक्रम यादव, भा.प्र.से.  
अध्यक्ष

Vir Vikram Yadav, I.A.S.  
Chairman



सत्यमेव जयते



केन्द्रीय प्रदूषण नियंत्रण बोर्ड

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार  
CENTRAL POLLUTION CONTROL BOARD  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

Dear Nand kumarum

D.O. No. CP/61/2025-UPC-II-HO-CPCB-HO  
Delhi, the August 14, 2025

As you are aware, Hon'ble Minister for Environment, Forest and Climate Change inaugurated the National Plastic Pollution Reduction Campaign on World Environment Day (WED), 2025 with the objective of "One Nation, One Mission – End Plastic Pollution". As part of the campaign, a national Hackathon on "Eco-alternatives to Single Use Plastics (SUP)" was also launched by the Hon'ble ME FCC on World Environment Day 2025.

The Hackathon aims to provide a platform to showcase the various efforts taken across the country to develop eco-alternatives to SUP items and select the best available solutions as alternatives to the SUP items. The eligible participants include Start-ups registered under various Government Schemes, Science, Research & Educational Institutions & Industrial Entities.

In this regard, an Information Brochure prepared by Central Pollution Control Board (CPCB) is enclosed with this letter for your kind reference (**Annexure I**). The registrations for Hackathon, 2025 have been opened on July 01, 2025 and shall continue upto September 15, 2025. Also, following two problem statements have been published by CPCB as part of the hackathon:

1. Provide an eco-friendly, economically viable, and scalable solution to banned thin plastic carry bags (less than 120µm in thickness), which continue to be a major component of plastic waste.
2. Provide an eco-friendly, technically and economically feasible solution to thin plastic packaging.

The last date for submission of solutions to Problem statements by eligible participants in the prescribed format (**Annexure II**) is September 15, 2025. The Solutions shall be evaluated by a Committee constituted by CPCB, and the best solutions shall be awarded as part of the National Plastic Pollution Reduction Campaign on World Environment Day, 2025

Being an esteemed organization working in the field of Environmental Science & Engineering, I request you to kindly circulate above information on Hackathon on "Eco-alternatives to Single Use Plastics (SUP)" among eligible participants and encourage them to register for the hackathon and submit solutions for the aforementioned problem statements. The complete details regarding the hackathon is available on <https://cpcb.nic.in/pp-hackathon-cpcb/>.

I look forward to your cooperation in this endeavour of ours.

with best wishes

Yours sincerely,

(Vir Vikram Yadav)

Shri. Nand Kumarum,  
Managing Director & CEO  
Digital India Corporation  
Electronics Niketan Annexe, 6 CGO Complex, Lodhi Road, New Delhi-110003

Encl: As above



'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110 032, भारत  
दूरभाष: +91-11-22307233, 22304948 ई-मेल: ccb.cpcb@nic.in  
'Parivesh Bhawan' East Arjun Nagar, Delhi-110 032, India  
Tel. +91-11-22307233, 22304948, e-mail: ccb.cpcb@nic.in



# One Nation, One Mission – End Plastic Pollution National Plastic Pollution Reduction Campaign

## ***Hackathon - 2025***

### *Eco-Alternatives to Single Use Plastics*

#### ***Information Brochure***

#### **1.0 Background**

Hon'ble Prime Minister of India had announced India's pledge to phase out Single Use Plastic (SUP) by 2022 on World Environment Day June 05, 2018 and also pitched for freedom from SUP while delivering the Independence Day speech on August 15, 2019. In line with the clarion call given by Hon'ble PM, Shri Narendra Modi, to phase out SUP items, Ministry of Environment, Forest and Climate Change, Government of India notified the Plastic Waste Management Amendment Rules, 2021 prohibiting the identified SUP items, which have low utility combined with high environmental impact & littering potential. As per Amendment to Plastic Waste Management (PWM) Rules dated August 12, 2021 – Import, Stocking, Production, Sale & Usage of the following items was banned w.e.f. July 01, 2022:

- i. Ear buds with plastic sticks
- ii. Plastic sticks for balloons
- iii. Plastic flags
- iv. Candy sticks
- v. Ice- cream sticks
- vi. Polystyrene [Thermocol] for decoration
- vii. Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, stirrers
- viii. Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets,
- ix. Plastic or PVC banners less than 100 microns

It is to be noted that the above provisions are not applicable to commodities made of compostable plastics and biodegradable plastics.

On World Environment Day, 2025, Hon'ble Minister of Environment, Forest and Climate Change, Government of India, Sh. Bhupender Yadav inaugurated the National Plastic Pollution Reduction (NPPR) Campaign. A Hackathon on "Eco-alternatives to Single Use Plastics" was launched by Hon'ble MEF under the NPPR Campaign. This hackathon aims at finding alternative eco-friendly solutions to reduce the usage of petro-based single use plastic items.

## **2.0 Actions taken for Enforcement of Ban on SUP**

Several key measures have been taken by CPCB to enforce the ban on SUP items, including the development of a Comprehensive Action Plan focusing on supply-side control, demand reduction and creating an enabling environment for phasing out SUP. Directions were issued to State Pollution Control Board /Pollution Control Committees (SPCB/PCCs), Urban Local Bodies (ULBs), plastic raw material manufacturers, industries using and producing SUPs etc. for effective implementation of the ban. To strengthen monitoring and enforcement, CPCB launched two web portals—the Monitoring Module for Compliance of SUP and the SUP Public Grievance Portal. Regular joint inspections with SPCBs and ULBs are conducted to break the supply chain of banned SUP items. A series of Workshops were also conducted with Central Institute of Petrochemicals Engineering & Technology (CIPET) for the micro, small & medium enterprises (MSME) to facilitate their transition from manufacturing of Single Use Plastic to their eco-alternatives. A compendium on Eco-alternatives was launched on World Environment Day, 2025 by Hon'ble MEF.

## **3.0 Objectives**

In line with the theme for World Environment Day (WED), 2025 - Ending Plastic Pollution Globally, this hackathon has been launched with the following objectives:

- To provide a platform to showcase the efforts which are being taken across the country to develop eco-alternatives to SUP items.
- To select the best available solutions, which can be adopted as alternatives to the SUP items.

## **4.0 Eligible Participants**

The following entities will be eligible to participate in the hackathon to showcase already developed and scalable solutions that align with the objectives of the hackathon to address plastic waste challenges.

- Start-ups registered under various Government Schemes.
- Science, Research & Educational Institutions
- Industrial Entities

### 5.0 Registration and Application Submission

Applicants can register through the registration form prepared for the purpose. Link to the registration form can be accessed by i) scanning the QR code in the poster, ii) Registration link provided on the CPCB Hackathon webpage, and iii)

#### **Following Registration Form Link :**

([https://docs.google.com/forms/d/e/1FAIpQLSdHFqBaACX3\\_cbCErUhEDqrulixmbUXfCY7UPeolln894FyLA/viewform?usp=sharing&ouid=110077018875699516391](https://docs.google.com/forms/d/e/1FAIpQLSdHFqBaACX3_cbCErUhEDqrulixmbUXfCY7UPeolln894FyLA/viewform?usp=sharing&ouid=110077018875699516391))

- Problem statement will be published on the CPCB Hackathon Webpage on 14<sup>th</sup> July, 2025.
- Participants can submit their developed solutions either individually or as a team, addressing one or more themes of the Hackathon, latest by 15<sup>th</sup> September, 2025.
- The solution shall be submitted as per the format provided in **Annexure I** via Email to [pp.hackathon.cpcb@gmail.com](mailto:pp.hackathon.cpcb@gmail.com).

### 6.0 Evaluation of the Applications for Selection of the Best Available Eco-Alternatives to SUP Items

Based on the evaluation, top 10 participants shall be invited to make a presentation, either via video conferencing or in person (with prior intimation only), to the Evaluation Committee. The winning solutions of the hackathon will be recognized and awarded attractive prizes.

### 7.0 Prizes for Winners

The prizes for winners to be provided by CPCB are given below:

1st Prize	2nd Prize	3rd Prize
₹ 1,00,000	₹ 75,000	₹ 50,000

## **8.0 Further Information**

For any further Information/queries, please contact:

Phone No. 011-43102 460/459

Email ID: [pp.hackathon.cpcb@gmail.com](mailto:pp.hackathon.cpcb@gmail.com)



*Annexure I - Solution Submission Format for Participants*

1.	<b>Team's Registered Email ID</b>					
2.	<b>Problem Statement ID</b>					
3.	<b>Title of the Developed Solution</b>					
4.	<b>Description of Developed Solution (50 words)</b>					
5.	<b>Comparison of Eco-Alternative with Plastic</b>					
	<b>a</b>	<b>Functionality</b>	<b>Test Conducted (Y/N) (Please upload test reports)</b>	<b>Plastic</b>	<b>Alternative</b>	<b>Remarks</b>
	<b>i</b>	<b>Strength</b>				
	<b>ii</b>	<b>Permeability</b>				
	<b>iii</b>	<b>Leachability</b>				
	<b>iv</b>	<b>Shelf life</b>				
	<b>v</b>	<b>Any other Parameter</b>				
	<b>b</b>	<b>Biodegradability</b>				
	<b>c</b>	<b>Cost per Unit (Please specify ₹)</b>				
	<b>d</b>	<b>Scalability and feasibility of the solution</b>				
6.	<b>Target Market/ End-user (50 words)</b>					
7.	<b>What is the novelty of the developed solution? (50 words)</b>					
8.	<b>What is the business model or funding requirement for implementation of the solution? (50 words)</b>					
9.	<b>Limitations of the developed solution and future improvements required (100 words)</b>					



**One Nation, One Mission - End Plastic Pollution**

**National Plastic Pollution Reduction Campaign**

## **Problem Statements for Hackathon, 2025**

on

### **Eco-Alternatives to Single Use Plastics**

On World Environment Day, 2025, the Hon'ble Minister for Environment, Forest and Climate Change, Government of India, Shri Bhupender Yadav, has launched several initiatives including a "National Plastic Pollution Reduction Campaign" with a series of planned initiatives. One such initiative is a National Hackathon titled "Eco-alternatives to Single Use Plastics", which aims to identify and promote country-wide efforts in development of eco-friendly alternatives to petroleum-based single-use plastic (SUP) items.

Many initiatives across India—by start-ups, research institutions, industry, and civil society—are already working on innovative solutions to replace banned SUP items. This hackathon aims to bring visibility to such efforts and further encourage development of viable eco-alternatives.

As per the planned activities of the Hackathon, 2025, CPCB is required to publish problem statements for Hackathon, 2025, for which developed solutions can be submitted by the eligible participants, which include (i) Start-ups registered under various Government Schemes, (ii) Science, Research & Educational Institutions and (iii) Industrial Entities. Participants may choose to apply by submitting their solutions to either one or both the Problem statements.

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#### **Problem Statement - 1**

*Provide an eco-friendly, economically viable, and scalable solution to banned thin plastic carry bags (less than 120µm in thickness), which continue to be a major component of plastic waste.*

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#### **Problem Description**

The thin plastic carry bags are light-weight, possess high littering potential and low collection potential. However, their usage is found in almost every aspect of our lives as they are convenient to use. As a result, they often accumulate in landfills and open environments, contributing to environmental pollution.

In view of above, following provisions were introduced in the PWM Rules, 2016 (as amended) for restricting the usage and manufacturing of thin plastic carry bags:

Clause 4(1)(c): *"Carry bag made of virgin or recycled plastic, shall not be less than seventy-five microns in thickness with effect from the 30th September, 2021 and one hundred and twenty (120) microns in thickness with effect from the 31st December, 2022;"*

Clause 4(1)(h): *"the provision of thickness under clause (c) shall not apply to carry bags or commodities made from compostable plastic or biodegradable plastics. Carry bags and commodities made from compostable plastics shall conform to the Indian Standard: IS/ISO 17088:2021 titled as Specifications for Compostable Plastics"*

Several key measures have been taken to enforce the ban on carry bags which include promotion of alternatives to carry bags which include paper bags, jute and canvas bags, compostable bags. CPCB has certified total of 284 no. of manufacturers of compostable plastics/commodities with a combined capacity of over 8,00,000 Tons Per Annum (TPA). Several States/Union Territories have installed vending machines in their jurisdiction to promote the alternatives.

Despite the several measures taken by the concerned authorities, usage of carry bags is still observed in several section of the economy, specifically the informal sector including street vendors, vegetable & fish markets. Characterization and assessment of plastic packaging waste carried out by CPCB in eight cities revealed that thin plastic carry bags (thickness <120  $\mu\text{m}$ ) make up a significant portion of the total plastic waste—ranging from 14% to 54%.

In view of the above, it is imperative to find eco-alternatives to thin plastic carry bags which are commercially scalable and economically viable.

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### **Expected outcome**

Participants are expected to showcase already developed eco-alternatives to banned thin carry bags (thickness <120  $\mu\text{m}$ ). The alternatives should demonstrate adequate strength, biodegradability, scalability of production, economic viability and novelty.

Solutions should be supported with relevant test reports and highlight their feasibility for large-scale use and potential adoption by end-users.

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