

RACE (Reduction, Awareness, Circular Solutions, Mass Engagement)
Campaign for Single-use Plastic Free Uttar Pradesh

Published by

Department of Environment, Forest & Climate Change (DoEFCC), Government of Uttar Pradesh

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Report Review

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Editorial Design, Illustrations and Layout

Daalcheeni Design Studio

Photo Source

DoEFCC, GoUP
GIZ India/CES Project
Envato

Uttar Pradesh, March 2023

RACE (REDUCTION, AWARENESS, CIRCULAR, ENGAGEMENT) CAMPAIGN FOR SINGLE-USE PLASTIC (SUP) FREE UTTAR PRADESH



Message



Preventing plastic pollution mitigates climate change impacts, protects marine life and natural ecosystems

Around 10 million tonnes of plastics end up in the oceans every year. Plastic waste is about 80% of all marine pollution. The world's rivers, seas and oceans continue to be affected by increased plastic pollution; it is estimated that around 25,000 tonnes of plastic waste entered the oceans, globally, due to increase in single-use plastics arising from medical waste during COVID-19 pandemic. Preventing plastic pollution mitigates climate change impacts, protects marine life and natural ecosystems. This requires reducing plastic use, promoting alternatives for plastics, improving source segregation and recycling practices as well as disposal facilities to prevent plastic leakages from entering the ecosystems. A substantial investment is required to achieve near-zero plastic waste from entering our rivers and oceans.

During the 5th United Nations Environment Assembly (UNEA) in Nairobi, 175 countries including India agreed on a historic resolution to develop an international legally binding agreement (global plastics treaty) to end plastic pollution by the end of 2024. Through the resolution, an Intergovernmental Negotiating Committee (INC) is established to create the global plastics treaty. In India, policy level frameworks and regulatory measures are already in place to check plastic pollution, including measures for eliminating single-use plastics as well as promoting sustainable consumption and production practices to shift to a circular economy for plastics. India has banned identified single-use plastics with low utility and high littering potential in effect from 1 July 2022.

The recently launched "UP Charter on Plastic Waste Management" by the Department of Environment, Forest and Climate Change, Govt. of Uttar Pradesh, will play a crucial role for sustainable plastic waste management in the state and deliver the larger vision of the state in addressing the issue of plastic pollution and single-use plastics. The recently concluded state-wide RACE (Reduction, Awareness, Circular Solutions, Mass Engagement) Campaign for Single-use plastic Free Uttar Pradesh' is a right step by the Uttar Pradesh government for addressing plastic pollution through enhanced cooperation with urban local bodies, municipal corporations, district authorities as well as private sector actors and entrepreneurs working in the area of plastic waste management. The sustainable initiatives, such as refillable models, circular packaging initiatives, pilot technology demonstrations for reducing plastic litter, and standard operating procedures for EPR Compliance, are a key outcome of the mass campaign and are summarised in this book as a way forward.

I congratulate all officials in the Department of Environment, Forest and Climate Change, and the Urban Development Department, Government of Uttar Pradesh for a successful RACE Campaign 2022. Additionally, I believe this book will assist ULBs and other stakeholders in keeping abreast of pertinent initiatives to deal with plastic waste.

SHRI DURGA SHANKER MISHRA

IAS, Chief Secretary,
Government of Uttar Pradesh



Preface

Circular economy measures can help retain the added value of goods, reducing waste and keeping the value of plastics in the economy without leakage into natural environment

Plastic waste leakages in riverine and marine ecosystems is a global and national issue. Since its origin, plastic commodities have boosted the culture of use and throw, and its growing consumption and mismanagement in disposal are major causes for plastic litter in natural ecosystems. In the last decades, the world has witnessed serious social, environmental, and economic implications due to improper scientific disposal of plastic waste. A fundamental change is necessary on the way plastic products including packaging are designed, used and disposed with regards to responsible waste management, not only amongst consumers but also producers of plastics.

Circular economy measures can help retain the added value of goods, reducing waste and keeping the value of plastics in the economy without leakage into natural environment. Further, the Ministry of Environment, Forest and Climate Change, Government of India has notified the Plastic Waste Management Amendment Rules (PWMR) which prohibits (manufacture, import, stocking, distribution, sale and use) identified single-use plastic items with low utility and high littering potential, in effect from 1 July 2022. On 5 June 2022, Shri Narendra Modi, Hon'ble Prime Minister of India, launched the global Lifestyle for Environment (LiFE) movement which envisions replacing the prevalent 'use-and-dispose' economy with a circular economy by fostering sustainable consumption practices for mindful utilisation over mindless consumption through active individual and community actions to protect the environment.

Circular economy measures can help retain the added value of goods, reducing waste and keeping the value of plastics in the economy without leakage into natural environment. Such actions contribute to the global Sustainable Development Goals (SDGs) including SDG 12 (Sustainable Consumption and Production), SDG 13 (Climate Action) and SDG 14 (Life Below Water).

On 28 June 2022, the Department of Environment, Forest and Climate Change and the Urban Development Department, Government of Uttar Pradesh in collaboration with GIZ India launched the mass movement RACE (Reduction, Awareness, Circular Solutions and Mass Engagement) Campaign for single-use plastic free Uttar Pradesh. The week-long campaign

concluded with the Uttar Pradesh Plastic Waste Management Conclave 2022 and Technology Exhibition Showcasing Single-Use Plastic Alternative Solutions on 3 July 2022 i.e. International Plastic Bag Free Day. The campaign brought together key representatives from the Central and State government along with 734 Urban Local Bodies, research and academic institutes, industry experts, entrepreneurs, start-ups, non-governmental organisations, youth groups, civil society organisations to address the issue of plastic pollution by single-use plastics through enhanced cooperation and partnerships between the stakeholders in the public and private sector. The campaign was an innovative approach targeting key stakeholders in the plastic value chain, including plastic manufacturers, producers, brand owners, plastic waste processors, as well as the informal sector, and looked at identifying synergies for technological solutions, circular business models, and eco-friendly alternatives to plastics. Through various thematic sessions, the campaign also explored the different ways to address the gaps and leakages in the plastic value chain, addressing the SUP ban in India and implementation of the national framework Extended Producer for Responsibility (EPR) for Plastic Packaging.

We are fortunate to have witnessed various innovative alternatives to single-use plastics from across states at the Technology Exhibition. I would like to congratulate all officials from the Department of Environment, Forest and Climate Change, and the Urban Department, Government of Uttar Pradesh, CES Project Team GIZ and KPMG Team for remarkable efforts in planning and implementing a state-wide campaign for reducing single-use plastics in the state, a truly admirable effort that will take the state further in its vision towards a plastic free Uttar Pradesh.

MR. MANOJ SINGH

IAS, Additional Chief Secretary,
Department of Environment, Forest & Climate Change
Government of Uttar Pradesh



Foreword

India is committed towards acting against plastic pollution and addressing the plastic leakages in the ecosystems especially through single-use plastics.

India is committed towards acting against plastic pollution and addressing the plastic leakages in the ecosystems especially through single-use plastics. The Ministry of Environment, Forest and Climate Change has notified the Plastic Waste Management Amendment Rules, 2021 with the aim of phasing out single-use plastics by 2022. The notified amendment prohibits identified single-use plastics with low utility and high littering potential, in effect from 1 July 2022.

In this regard, the Government of Uttar Pradesh has undertaken various initiatives, complying with state and national regulations for addressing plastic pollution. With effect from 2 October 2018, there is a ban on the use, manufacture, sale, distribution, storage, transport, import or export of all kinds of plastic carry bags in all urban & industrial areas in the state. Till January 2022, around 1045 MT of prohibited items have been confiscated and a fine of over Rs. 14.5 crores were imposed on defaulters. Banned plastic confiscated used for road construction amounts to 100 tonnes, in the cities of Lucknow, Kanpur, Meerut and Jhansi. Currently, there are 16 recycling units, 4 compostable plastic units, two functional plastics to fuel plants in the state. Other notable measures include the constitution of a Special Task Force to monitor the ban of single-use plastics, and ongoing engagements with the private sector for plastic waste collection, recycling and co-waste processing in the state.

Tackling the issue, a joint project has been initiated by the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) in partnership with the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India and the Department of Environment, Forest and Climate Change (DoEFCC), Government of Uttar Pradesh, implemented by GIZ India. DoEFCC and GIZ India is working closely in the cities of Agra, Varanasi, Prayagraj, Mirzapur and Kanpur for addressing plastic leakages through circular economy solutions.

The recently concluded RACE (Reduction, Awareness, Circular Solutions, Mass Engagement) Campaign for SUP Free Uttar Pradesh' is a novel initiative and a right step by the state government for addressing plastic pollution together with various state departments, urban local bodies, municipalities, academic institutes, NGOs, civil society organisations, and the citizen at large. The week-long campaign activities which included plog run, mass ghat cleaning drives was conducted around a thematic day-wise calendar (My Plastic Free Life - Citizen led Initiative, Launch of Plastic Free Zones, Ghat Hai Toh Thaat Hai, Swachhta Se Samman) through collaborative efforts of 734 Urban Local Bodies along with RWAs, NGOs, youth groups, which led to the success of this campaign. Around 500 tonnes of plastic waste collected and send for recycling during the campaign. The campaign promoted environment friendly lifestyles (LiFE movement) and explored ways to strengthen sustainable plastic waste management systems in the state through key partnerships between the public and private sector.

My appreciation goes out to the entire organising team, all individuals and officials who tirelessly worked for various on-ground campaign activities across districts in the state. I express my sincere gratitude to all officials in the Department of Environment, Forest and Climate Change, and the Urban Development Department, Government of Uttar Pradesh for contributing to the success implementation of the RACE Campaign.

MR ASHISH TIWARI

IFS, Secretary,
Department of Environment, Forest & Climate Change,
Government of Uttar Pradesh

List of Abbreviations

B2B	Business-to-Business
B0	Brand Owners
CES	Circular economy solutions
CPCB	Central Pollution Control Board
EPR	Extended Producer Responsibility
FMCG	Fast Moving Consumer Goods
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
PRO	Producer Responsibility Organisation
PWM	Plastic Waste Management Rules
LPG	Liquified Petroleum Gas
NGO	Non-government organisation
RWA	Resident Welfare Associations
SUP	Single-use plastics
TPA	Tonnes per annum
TPD	Total plastic debris
ULB	Urban local bodies

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1.

INTRODUCTION

1.1 Context

Plastic items have become an essential part of our daily lives, resulting in significant polymer production on a global scale. On an average, plastic output in the world exceeds 150 million tonnes per year. Packaging films, wrapping materials, shopping and waste bags, fluid containers, apparel, toys, domestic and industrial products, building materials etc. contribute to the growing plastic waste.

It is estimated that around 70% of plastic packaging products are quickly turned into plastic garbage. The country generates approximately 3,469,780 TPA (Tonnes per annum) of plastic garbage¹, which corresponds to 26,000 TPD (Total plastic debris)². While India's recycling rate is far greater than the global average of 20%³, there are still approximately 9,400 tonnes of plastic debris that is either landfilled or pollutes streams or groundwater resources. While some plastics do not dissolve at all, others can take up to 450 years to degrade.

Plastic waste management is indeed a priority for countries around the world due to its social, environmental, and economic implications. During the 4th United Nations Environment Assembly (UNEA) in March 2022, 175 countries including India has agreed on a global plastics treaty by the end of 2024. India is the one of the largest contributors to riverine or marine litter due to influx of plastics mainly single-use plastics. In line with the clarion call given by the Prime Minister Shri. Narendra Modi to phase out single-use plastics by 2022, the Ministry of Environment, Forest and Climate Change, Government of India notified the Plastic Waste Management (Amendment) Rules 2022 which prohibits identified single-use plastic items with low utility and high littering potential. Moreover, the PWM Rules also aims at the implementation of the Extended Producer Responsibility (EPR) framework for plastic packaging.

This year, on World Environment Day (5 June 2022), the Hon'ble. Prime Minister of India Shri Narendra Modi launched the Lifestyle for Environment (LiFE) movement, that envisions replacing the prevalent 'use-and-dispose' economy with a circular economy, which would be defined by



LIFE MOVEMENT IS AN INDIAN-LED GLOBAL MASS MOVEMENT ADVOCATING FOR MINDFUL AND DELIBERATE UTILISATION INSTEAD OF MINDLESS CONSUMPTION FOR INDIVIDUAL AND COMMUNITY ACTIONS TO PROTECT AND PRESERVE THE ENVIRONMENT

1. CPCB Annual Report 2019-20 on Implementation of Plastic Waste Management Rules, 2016
2. UNIDO Report on Recycling of Plastics in Indian perspective by Dr. Smita Mohanty
3. Source: <https://ourworldindata.org/faq-on-plastics>

fostering sustainable consumption practices. The Lifestyle for Environment (LiFE) movement is an Indian-led global mass movement advocating for mindful and deliberate utilisation instead of mindless consumption for individual and community actions to protect and preserve the environment. A change in individual and community behaviour can have a significant impact on protecting our environment and accelerating climate actions. In the recent years, India has witnessed and demonstrated the success of joint collective actions in addressing various issues such as sanitation and waste management in the country. The Swachh Bharat Mission (SBM) (construction of 100 million toilets in rural India in a span of 7 years)⁴ and the Ujjwala Scheme (increases households with LPG connections increased from 62% in 2015 to 99.8% in 2021)⁵ are two prominent examples for collective and individual actions. Mission LiFE will focus on existing sustainable environment friendly and traditional practices in India. The unique mass movement is designed with the aim of mobilising one billion Indians to take individual and collective action for protecting the environment between the period 2022-2028. It builds upon three core shifts in a collective approach towards sustainability through change in demand, supply and a change in government policies for sustainable consumption and production practices.

In this regard, the state of Uttar Pradesh is complying with various state regulations for waste reduction and reducing SUPs along with national framework for Plastic Waste Management. There is a need for collaborative efforts by all stakeholders in the plastic value chain for effective enforcement of the guidelines to manage plastic waste and prevent plastic pollution in the state.

To address the growing concern on SUPs, the Department of Environment, Forest and Climate Change (DoEFCC) and the Urban Development Department, Government of Uttar Pradesh in collaboration with GIZ India organised the mass “RACE” Campaign - Reduction, Awareness, Circular (Solutions), Mass (Engagement) for single-use plastic free Uttar Pradesh. GIZ India supported the Department of Environment, Forest and Climate Change (DoEFCC), Government of Uttar Pradesh with the implementation of the RACE Campaign under the Indo-German technical corporation project “Circular Economy Solutions Preventing Marine Litter in Ecosystems (CES)”. GIZ India implements the CES project on behalf of the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) in cooperation with the Ministry of Environment, Forest, and Climate Change (MoEFCC), Government of India. The RACE Campaign was organised from 29 June 2022 to 3 July 2022.

The RACE campaign brought together key representatives from the Central and State government along with 734 ULBs, Research and academic institutes, industry experts, entrepreneurs, start-ups, RWAs, NGOs, youth groups, civil society organisations to address the challenge of reducing Single-use plastic. Around 500 tonnes of plastic waste were collected and send for recycling during the week-long campaign. The campaign concluded with the Uttar

4. SBM Dashboard: <https://sbm.gov.in/sbmreport/home.aspx>

5. PMUY website: <https://pmuy.gov.in/about.html>

Pradesh Plastic Waste Management Conclave 2022 and a Technology Exhibition showcasing Single-use Plastic Alternative Solutions at Indira Gandhi Pratishthan, Lucknow on 3 July 2022 (International Plastic Bag Free Day).

Overall, the Campaign activities were organised in a manner to address the gaps and leakages in the plastic value chain in the state by promoting environment friendly lifestyles (LiFE) to reduce plastic waste, exploring sustainable plastic waste management systems to mitigate plastic pollution impacts while supporting the recent SUP ban and implementation of the EPR framework for plastic packaging with focus on circular business models and innovative alternatives to plastics through B2B partnership opportunities in the state.



1.2 Background of the RACE Campaign

Plastic commodities have boosted the culture of use and throw. Its growing consumption and mismanagement in disposal are root causes for plastic litter in riverine and marine ecosystems, resulting in further negative socio-economic impacts. Therefore, promoting integrated sustainable waste management is the key to prevent riverine and marine litter.

A fundamental change is necessary on the way plastic products including packaging are designed, used, and disposed. One key solution is managing plastic waste in an efficient, responsible manner by fostering circularity in use of plastics. Circular economy measures retain the added value of goods as long as possible, reducing waste and keeping the value of plastics in the economy, without leakage into the natural environment. In this regard, implementing EPR mechanisms as well as Deposit-Refund Systems (DRS) play an important role and such actions contribute to the global Sustainable Development Goals (SDGs) including SDG 12 ensuring sustainable consumption and production patterns, and SDG 14 reducing marine pollution.

In Uttar Pradesh, various initiatives have already been undertaken by the state government including the ban on the use, manufacture, sale, distribution, storage, transport, import or export of all kinds of plastic carry bags in all urban & industrial areas (2 October 2018). Currently, there are 16 recycling units, 4 compostable plastic units, and two functional plastics to fuel plants of 1800 TPA in Mathura and 730 TPA in Prayagraj in the state. The state generates

693 TPD plastic waste. Other notable measures include the constitution of the Special Task Force to monitor the ban of single-use plastics, piloting green protocols in government and private institutes, and ongoing engagements with the private sector for plastic waste collection, recycling and co-waste processing in the state. On the EPR front, the Uttar Pradesh Pollution Control Board has received 77 EPR plans and issued show cause notices to 393 unregistered units and imposed environmental compensation against defaulters. Further, about 9.7 lakh metric tonnes of plastic waste has been collected and disposed of by brand owners and producers under the EPR scheme. The Uttar Pradesh Pollution Control Board also monitors the enforcement of Environmental Laws including PWM rules through the online portal www.uepcp.in. The notable private sector engagements in the state for addressing plastic pollution, to name a few, include the instalment of a Trash Boom in Varanasi (Ganges River) by Plastic Fischer, co-waste processing in Agra through Bubble Barrier technology on stretches of the Yamuna River, and a proposed project on Plastic Waste Management and Livelihood to be implemented by UNDP

FUNDAMENTAL CHANGE IS NECESSARY ON THE WAY PLASTIC PRODUCTS INCLUDING PACKAGING ARE DESIGNED, USED, AND DISPOSED. ONE KEY SOLUTION IS MANAGING PLASTIC WASTE IN AN EFFICIENT, RESPONSIBLE MANNER BY FOSTERING CIRCULARITY IN USE OF PLASTICS.

India and Coca Cola India Foundation in close partnership with Urban Local Bodies (ULBs).

During the week-long RACE Campaign, plastic collection drives were organised at a large scale for mass awareness and capacity building for sustainable plastic waste management. On 29 June, the campaign was launched by Shri. Arvind Kumar Sharma, Minister, Department of Urban Development, Government of Uttar Pradesh and Dr. Arun Kumar Saxena, Minister, Department of Environment, Forest and Climate Change, Government of Uttar Pradesh by flagging off the Plog Run at Chatori Gali, Gomti Riverfront, Lucknow along with Mr. KP Malik, Minister of State, Department of Environment, Forest and Climate Change, Smt. Sanyukta Bhatia, Mayor, Lucknow, Mr. Durga Shankar Mishra, Chief Secretary, Department of Environment, Forest and Climate Change, Mr. Manoj Singh, Additional Chief Secretary, Department of Environment, Forest and Climate Change, Mr. Amrit Abhijat, Principal Secretary, Department of Urban Development, Mr. Ashish Tiwari, Secretary, Department of Environment, Forest and Climate Change, and Ms. Neha Sharma, Director, Urban Local Bodies, Department of Urban Development, Government of Uttar Pradesh. Mr Ripu Daman Bevli was the special guest for the plog run for the inaugural launch of the RACE Campaign. Various activities were organised across cities in the state with support from 734 ULBs, citizens groups, RWAs, NGOs, youth groups, civil society organisations, making the campaign a collaborative success. These activities also included preparation of the unique RACE Campaign Anthem, dedicated social media pages and other on-ground activities such as plog run, mass ghat cleaning drives, plastic collection drives etc. which were organised on different days during the campaign from 29 June to 3 July.



2.

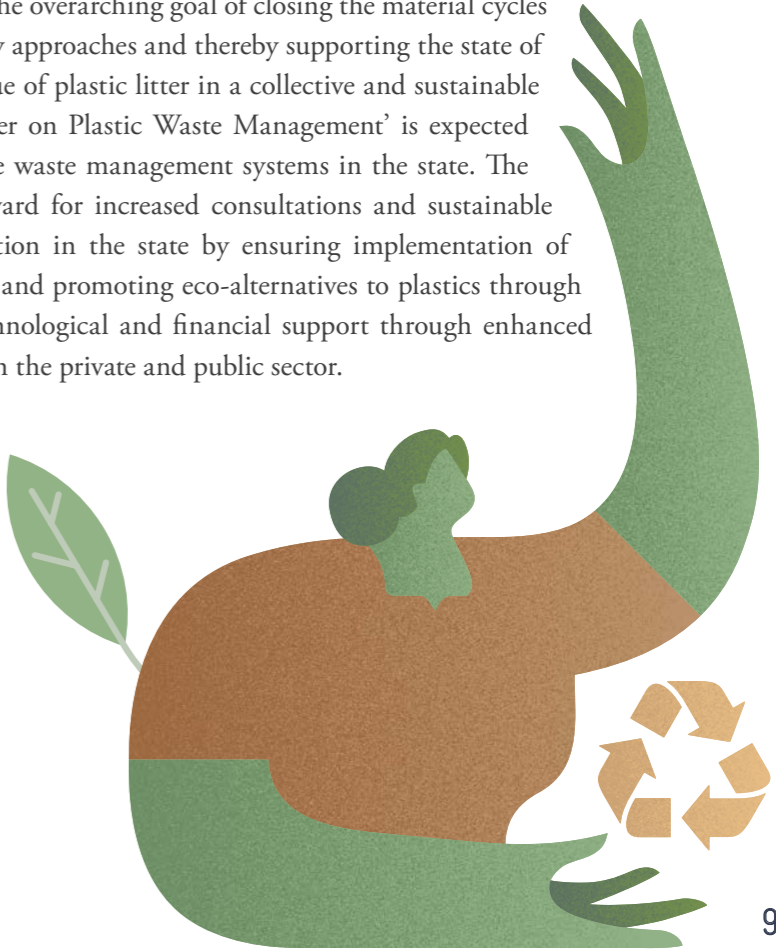
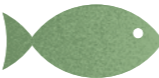
RACE CAMPAIGN: PLANNING THE CAMPAIGN STRATEGY

2.1 Multi-Stakeholder Consultations

The Department of Environment, Forest and Climate Change, Government of Uttar Pradesh in collaboration with GIZ India and the Federation of Indian Chambers of Commerce and Industry (FICCI) had organised a **Roadshow event on “Creating Awareness to Prevent Riverine/ Marine Litter in Ecosystems”** at Noida, Uttar Pradesh in December 2021. The roadshow is marked as a flagship event under the CES Project to promote multi-stakeholder engagements on plastic waste management in the state of Uttar Pradesh.

This event witnessed thematic discussions with key representatives in the government and industry sector on policies and technologies to address the issue of plastics management, and further provided a platform to start-ups to showcase innovative technologies and solutions to prevent plastic litter. From the consultations and thematic discussions held during the Roadshow, a charter was envisaged, aiming to look into the overarching goal of closing the material cycles of marine litter via circular economy approaches and thereby supporting the state of Uttar Pradesh in addressing the issue of plastic litter in a collective and sustainable manner. The ‘Uttar Pradesh Charter on Plastic Waste Management’ is expected to play a crucial role for sustainable waste management systems in the state. The Roadshow has paved the way forward for increased consultations and sustainable actions to reduce plastic consumption in the state by ensuring implementation of policy frameworks and regulations, and promoting eco-alternatives to plastics through innovative solutions backed by technological and financial support through enhanced linkages between key stakeholders in the private and public sector.

UTTAR PRADESH PLASTIC WASTE CHARTER WAS ENVISAGED, TO LOOK INTO THE OVERARCHING GOAL OF CLOSING THE MATERIAL CYCLES OF MARINE LITTER VIA CIRCULAR ECONOMY APPROACHES



2.2 Engagement with ULBs and Government departments

Progressing from the success of the Roadshow, the RACE Campaign was planned for the state of Uttar Pradesh. Aiming to the success of the mass movement RACE for single-use plastic free Uttar Pradesh, a series of preparatory meetings were held between the months of May to June 2022 with various government departments and key representatives including officials from district administration, ULB administration, the Uttar Pradesh Pollution Control Board (UPPCB) and State Swachh Bharat Mission (Urban) PMU to monitor the preparations of the campaign. Other representatives included Additional District Magistrates - Officer Incharge of Urban Local Bodies from 75 districts, Regional officers from UPPCB, State and district level teams from the Swachh Bharat Mission-Urban.

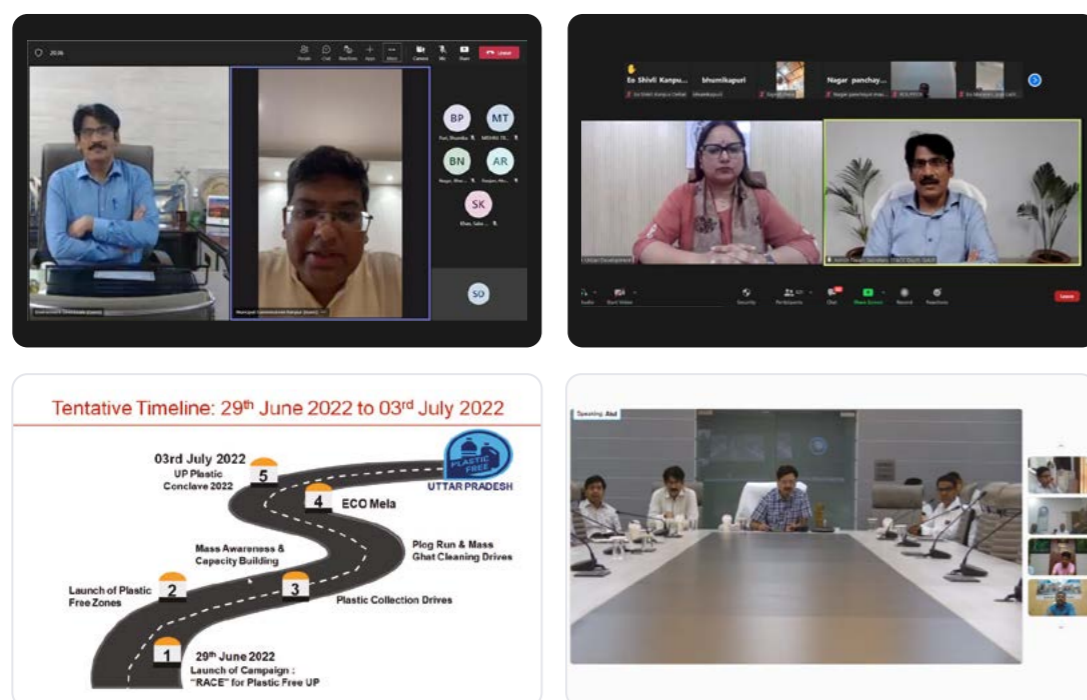


Figure 1: Meetings with ULBs and state department officials

The planning meetings pushed for extensive IEC programmes and plastic waste collecting drives to ensure the campaign's success. The government representatives were asked to mobilise maximum engagement from the general public, students, NCC cadets, NSS, NGOs, RWAs, civil society organisations and other stakeholders. UPPCB along with PIBOs and recyclers were given the responsibility for transportation and disposal of plastic waste to be collected during the campaign. Other notable initiatives such as formation of Bartan Banks, Thaila Banks, and ECO-Melas across ULBs were discussed.

2.3 Engagement with Stakeholders

The RACE campaign was planned to enhance awareness among public and private stakeholders on the impacts of plastic leakages in the state, and to spark a movement among the general public to find ways to reduce plastic pollution. To inspire the state's green heroes, malls, market associations, brand owners and other private stakeholders to participate in the campaign, multiple meetings and discussions were organised in June 2022.

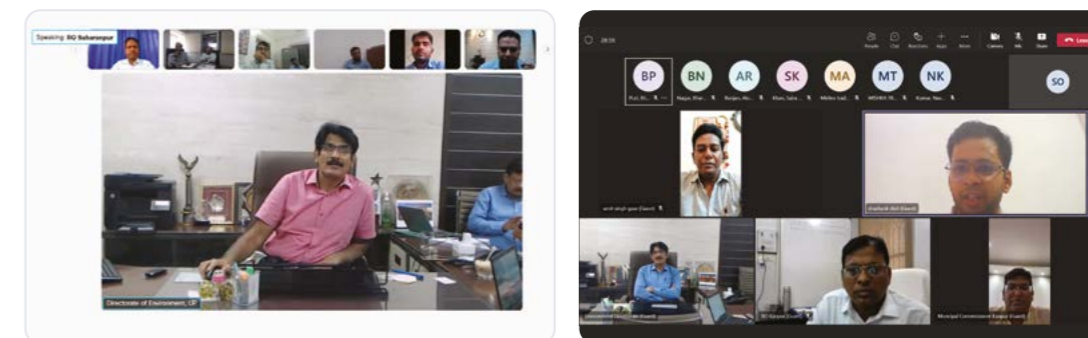


Figure 2: Meetings with producers, brand owners and industry experts

2.4 Technical Consultations and Workshops

As a precursor to the Uttar Pradesh Plastic Waste Management Conclave 2022, a series of technical workshops were organised under the mass campaign RACE for Single-use Plastic Free Uttar Pradesh. These consultation workshops were organised to highlight the importance of implementation of the Extended Producer Responsibility (EPR) framework and existing alternative solutions to single-use plastics in the market by innovators, individuals and start-ups, promoting business opportunities to reduce and recycle plastic packaging waste. The workshops brought together entrepreneurs, State Government representatives, regulatory bodies, waste management companies, citizens organisations, R&D and academic institutions working towards addressing the challenge of plastic pollution in the state.

“ The supply and demand of plastics in the economy is driving the massive surge of littering. SUP ban will facilitate the control of plastic leakages in the ecosystems. The targets to support alternative material markets must include policy level, legal, scientific and economic verticals while ensuring time bound activities. ”

MR. MANOJ SINGH

Additional Chief Secretary, Department of Environment
Government of Uttar Pradesh

EPR Framework for Plastic Packaging Consultation Workshop, 1 July 2022

Extended Producers Responsibility (EPR) is an environmental protection strategy that makes the manufacturer of a product responsible for the entire life cycle of the product and especially for the take-back, recycling, and ensuring end-of-life disposal. To identify synergies for implementing technological solutions for plastic waste management and reduction of marine litter (plastic) in surrounding ecosystems with implementation of EPR framework and promoting circular economy models for plastics, a workshop was organised on 2 July 2022 at Hilton Garden Inn, Lucknow.



Figure 3: Workshop on EPR Framework for Plastic Packaging, 1 July 2022, Lucknow

SESSION 1: Overcoming gaps and compliance concerns in implementing Extended Producers Responsibility (EPR) on ground level with PIBOs, PROs and PWP's

SESSION 2: Improvements in packaging types and production technologies to reduce plastic packaging waste, use alternative materials and improve the recyclability of plastic packaging with a special focus on monolayer plastic films and pouches

Outcomes:



Systems to be enforced to ensure PIBOs and PWP's in the state are registered on the centralised EPR Portal for Plastic Packaging.



Mutual understanding to work in close coordination with the CES project for piloting technological solutions in the city of Lucknow.



The need for ideas like eco-design and sustainable packaging design by producers and brand owners to ensure circularity for the plastic economy.



Mutual understanding for a multi-stakeholder approach to develop a vision roadmap for the state to manage plastics.

Invest for Plastic Free UP, 2 July 2022

„Invest for Plastic Free UP“ centered on networking and exploring the challenges and opportunities of driving value through the state's current political, economic, and bureaucratic discourse. Scaling-up new ideas and products requires significant investment, and therefore this workshop aimed at facilitating collaboration among PWP's, start-ups, innovators, investors, and stakeholders working on plastic waste management, plastic alternatives, and identifying appropriate solutions to make Uttar Pradesh plastic-free. Seven entrepreneurs from Uttar Pradesh presented their technologies and solutions at the workshop.

Outcomes:



Targets for supporting alternative material markets must ensure time-bound operations while considering legislative, legal, scientific, and economic aspects.



Cutting-edge concepts for sustainable packaging and alternatives to plastics must be encouraged for pilot implementation in Uttar Pradesh.



Start-ups will be invited to pilot ideas in Uttar Pradesh, especially in the city of Lucknow.



A detailed action plan needs to be formulated for supporting scaling-up and mainstreaming alternatives to plastics, products developed by start-ups and innovators.

●● THERE IS AN URGENT NEED FOR IMPLEMENTING EPR IN PLASTIC PACKAGING. THERE IS ALSO A NEED FOR INCORPORATING ELEMENTS OF RECYCLABILITY IN PLASTIC PACKAGING AND PROMOTING CIRCULAR ECONOMY BUSINESS MODELS FOR SYSTEMIC CHANGE IN PLASTIC WASTE MANAGEMENT. ●●

DR RACHNA ARORA

Team Lead, CES Project, GIZ India



Figure 4: Invest for Plastic Free UP, 2 July 2022, Lucknow



IMPLEMENTATION OF THE RACE CAMPAIGN

3.

An action plan was developed by the Department of Environment, Forest and Climate Change, the Department of Urban Development, the Government of Uttar Pradesh, and GIZ India. The week-long plan of RACE Campaign schedule was created under two sections: Planning and Monitoring, and Implementation.

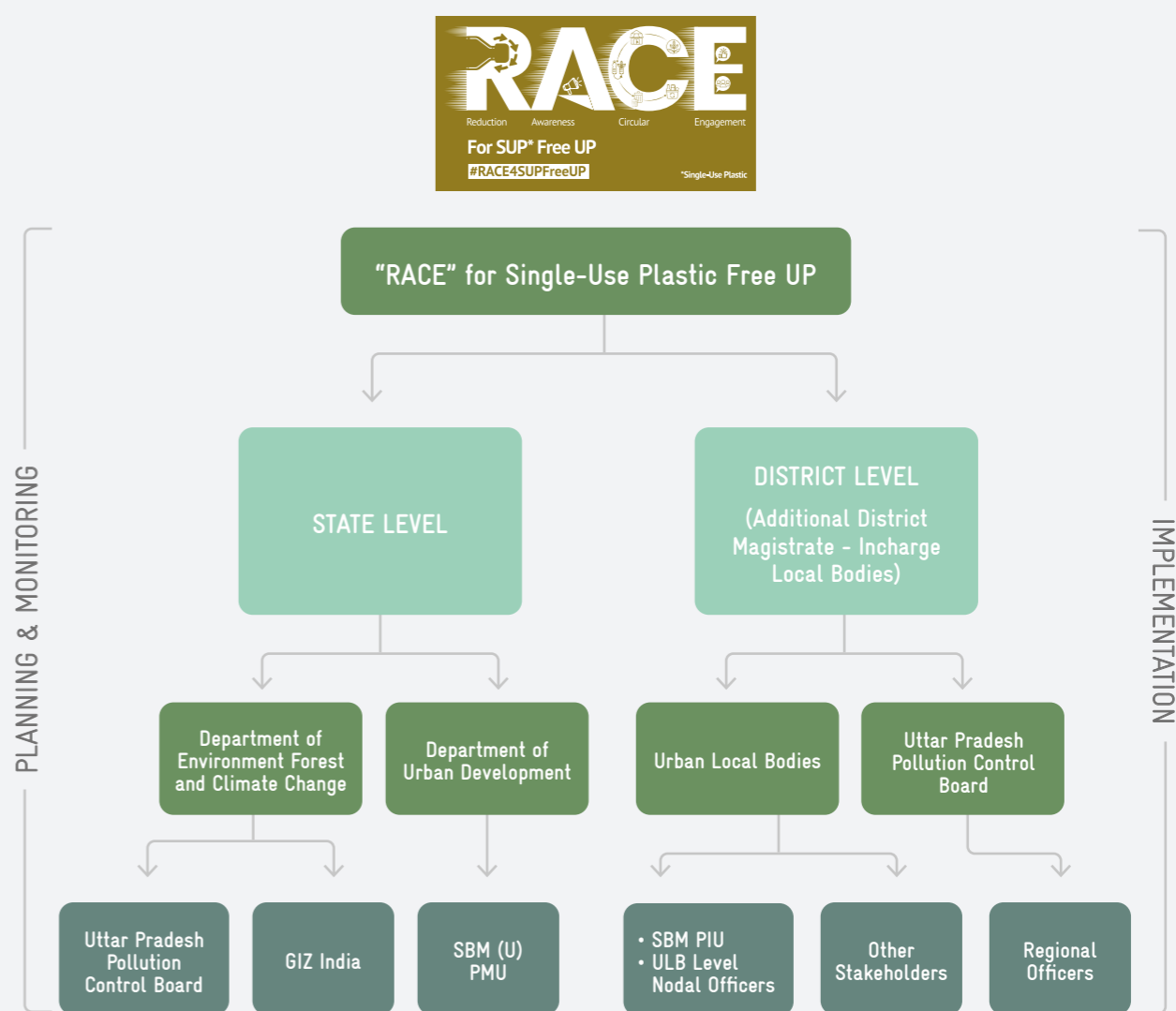


Figure 5: RACE Campaign Operational Structure

3.1 Media Briefing and Media Coverage

To increase the outreach of the week-long campaign, a Press Conference was organised on 28 June 2022 at Lucknow, Uttar Pradesh. Dr. Arun Kumar Saxena, Hon'ble Minister of State (Independent Charge), Department of Environment, Forest and Climate, Government of Uttar Pradesh unveiled the logo of the RACE campaign, officially, in the presence of all campaign organisers and media journalists. Dr. Saxena announced the launch of the campaign which were to be followed by a series of activities to be supported in the state by 734 Urban Local Bodies. The campaign primarily aims at promoting eco-friendly lifestyles and exploring alternatives to plastics amongst the citizens in the state of Uttar Pradesh.



Figure 6: Launch of RACE Campaign Logo at Media Briefing, 28 June 2022, Lucknow

Social Media

To increase the outreach of the week-long campaign, different social media handles of the RACE Campaign were created, including on LinkedIn (5,522 followers), Facebook (3,000 followers), Twitter (563 followers), and Instagram (4,789 Followers). Citizens, ULBs and partners were encouraged to share the green stories tagging State handle.

In total, over 500 plus social media posts were posted on various handles between 25 June 2022 to 3 July 2022. Unique hashtags such as #SwachhUP, #रीसाइकलकचियाक्या, #SUP_se_AzadUP, Graphic poster quotes and video bytes from all speakers were created and shared to support the campaign's success on social media. Livestreaming of the UP Plastic Waste Management Conclave was also carried out on YouTube, Facebook and Twitter with over 100 plus Live Tweets and posts across all handles during the event. The hashtag #RACE4SUPFreeUP was trending at 2nd position in India and ended at the 5th position by the end of the day on 3 July 2022.

Social Media Handles

The collage displays the following social media handles:

- Twitter:** Profile for @plasticfreeup, featuring a bio: "An initiative to make Uttar Pradesh single use plastic-free by spreading awareness and felicitating those who are contributing towards the cause." A tweet from July 4 mentions a "Plogging Drive" and includes hashtags #रिसाइकल_किया_क्या, #SUP_Se_AzadUP, and #SwachhUP.
- Instagram:** Profile for plasticfreeup with 4,788 followers. The bio includes the website www.raceplasticfreeup.in.
- YouTube:** Channel for SUP Free UP (@supfreeup6514) with 119 subscribers. The channel page shows a grid of video uploads, including "Strengthening Informal Supply Chains and Circular...", "Implementation of EPR in the state of Uttar Pradesh", "Uttar Pradesh- Single Use Plastic Action Plan...", "उत्तर प्रदेश प्लास्टिक वेस्ट मैनेजमेंट कॉन्क्लेव 2022", and "सिंगल-यूज प्लास्टिक मुक्त उत्तर प्रदेश के लिए आयोजित RACE कैम्पेन..."

3.2 RACE Campaign Day-wise Activities

The RACE campaign brought together 734 Urban Local Bodies, R&D and academic institutes, industry experts, entrepreneurs, start-ups, RWAs, NGOs, Youth Groups, Civil society organisations for carrying out the various pre-planned activities as per the 5-day thematic calendar.

29 June 2022: Day 1

MY PLASTIC FREE LIFE - CITIZEN LED INITIATIVE

Activities

- Launch of the RACE Campaign.
- Plog Run and cleaning drive in Lucknow with Mr. Ripu Daman Bevli (also known as Plog man of India).
- Workshops on LiFE and Sustainable Consumption lifestyles.
- Awareness activities with religious groups.
- Mass plastic donation drives, pledge drives and cleaning drives.



Figure 7: Plog Run and Mass Pledge Drive, Lucknow

This theme was chosen in order to raise awareness about the harm caused by single-use plastics, and to inform citizens of alternatives to single-use plastics. In addition, citizens were encouraged to use certain hashtags to promote their green stories on social media. The Department of Environment, Forest and Climate Change, Uttar Pradesh along with the Department of Urban Development organised a Plog run as part of the RACE campaign on Day 1, i.e. 28 June 2022. It was flagged by Shri A. K. Sharma, Minister of Energy and Urban Development, Government of Uttar Pradesh. This plog run was coordinated by Mr Ripu Daman Bevli, who is widely known for his persistent efforts and initiatives to make India litter free. Prior to the plog run, an oath ceremony was held for single-use plastic free Uttar Pradesh.



Figure 8: Plog Run and Awareness Drive, Prayagraj

30 June 2022: Day 2

3RS- REDUCE, REUSE, RECYCLE

Activities

- Mass plastic donation drives and cleaning drives.
- Upcycling workshops for sustainable use of disposed plastic items.
- Flash mob and other interactive activities on the theme “Story of Plastic”.
- Mass pledge drives.

This theme was chosen in order to encourage citizens to reduce, reuse and recycle plastics as well as to reduce the consumption of plastics. During this day, various upcycling workshops were conducted for information on creating usable items from discarded plastic items, to be sold at the Eco-Mela. Further, flash Mobs, street plays on the theme “Story of Plastic” were conducted at public places including malls, bus stops etc. as well as collection of SUP waste was also organised. Various mass pledge drives, plastic donation drives and cleaning drives were organised to collect plastic waste from transport hubs, railway stations, mandis, and market places.



Figure 9: Cleaning drives at Varanasi Railway Station

1 July 2022, Day 3,

LAUNCH OF PLASTIC FREE ZONES

Activities

- ☑ Installation of Plastic Banks, Jhola Bank and Bartan Bank.
- ☑ Engagement with commercial establishment and malls on set-up of SUP alternatives and promotion of zero waste lifestyles.

The purpose of this theme was to explore areas wherein the amount of single-use plastics could be reduced, at a large scale. In this regard, Plastic Banks, Jhola Bank and Bartan Banks were installed throughout the state under the RACE campaign. With a Bartan bank, utensils could be borrowed for minimal charges and returned after the event. This allows the same utensils to be used repeatedly. This initiative is not only reducing waste that is generated usually through disposable cutlery but this is also cost-effective for users. Bartan Banks were also installed in the state at district levels and in ULBs to promote this unique approach. Further, cloth bag distribution centres were also set up throughout the state to enhance awareness among the citizens on alternatives to plastics for prohibited SUPs in the state. The cloth bag distribution received a very encouraging response from the public for use of eco-friendly alternatives and its availability at a large scale in the state.



Figure 10: Installation of Bartan Bank, Ghaziabad

2 July 2022: Day 4

GHAT HAI TOH THAAT (घाट है तो ठाट है)

Activities

- ☑ Plog Run and Mass Ghat Cleaning Drive along the ghats and drains
- ☑ Cleaning of Screens/Bar Mesh at all storm water drains
- ☑ Art Installation at ghats
- ☑ Installation of Plastic Banks at ghats
- ☑ Mass Pledge Drive at schools, Offices, and other public places

Various Plog Runs and Mass Ghat Cleaning Drives were conducted around the ghats and drains across the state. Awareness activities were also performed to combat the growing threat of single use plastic pollution under the theme. CEED India organised a photo op activity and a street play in Assi Ghat and Prabhu Ghat in Varanasi as part of the RACE campaign, an initiative of government of Uttar Pradesh. Art installation and plastic bank installation were also set up at ghats for citizen awareness. Several educational and public institutions, offices also took part in the pledge drive along with public.



Figure 11: Mass Ghat Cleaning Drive, Varanasi

3 July 2022: Day 5

SWACHHTA SE SAMMAN (स्वच्छता से सम्मान)

The theme was planned to recognise the contribution and efforts of the informal sector and the sanitation staff in the state for effective waste collection and disposal. Urban Local Bodies organised an ECO-MELA under this theme to promote various alternative to plastics including jute, cloth bags, bamboo products.

3.3 RACE Campaign Monitoring

The RACE portal (<https://race4plasticfreeup.in/>) was created to monitor the overall activities organised during the RACE Campaign. The portal provided a platform for users to pledge their (online) support for the campaign and allowed ULB representatives to upload photos of different activities organised in different cities (Lucknow, Prayagraj, Mirzapur) under the 5-day thematic RACE Campaign Calendar.

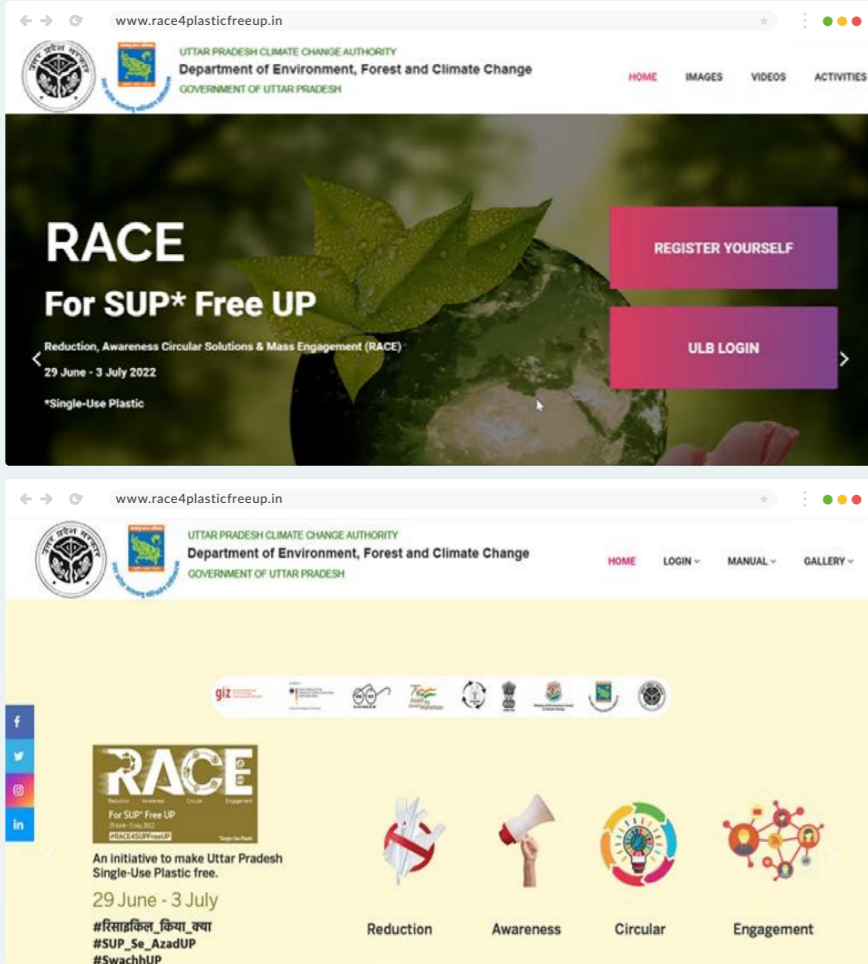
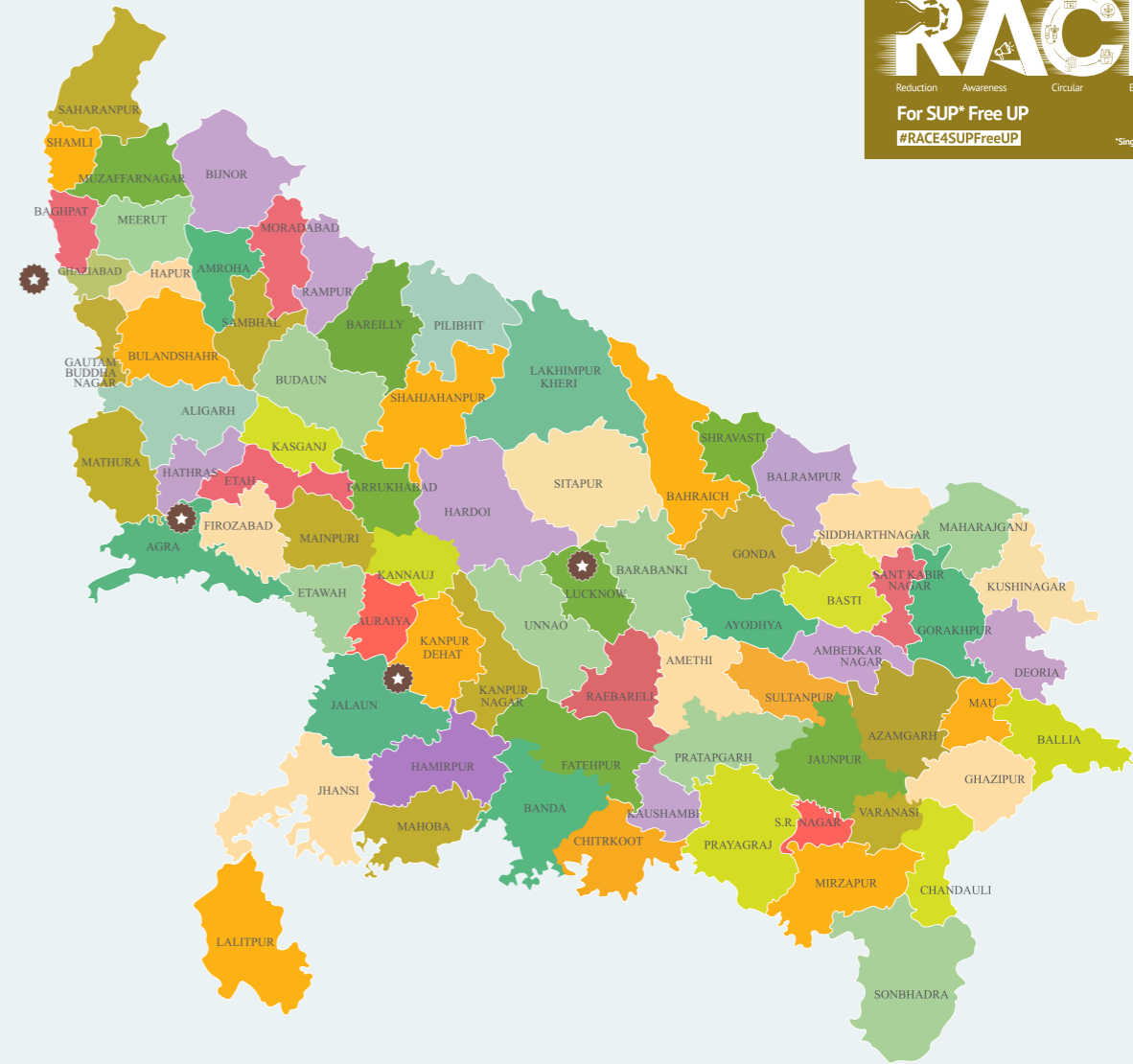


Figure 12: RACE Campaign Portal
Credit: RACE Theme Song - Viol Media (Opc) Private Limited



RACE Campaign
THEME SONG



510 TONNES
TOTAL PLASTIC
WASTE COLLECTED



1,22,573
TOTAL PEOPLE
TAKEN PLEDGE



4,22,905
TOTAL CITIZEN
PARTICIPATION

26,200 TREES PLANTED IN LUCKNOW TO OFFSET 39.29 tCO₂e OF CARBON EMISSIONS GENERATED DURING THE UP PLASTIC WASTE MANAGEMENT CONCLAVE 2022

Source: <https://all-free-download.com/free-vector/vector-uttar-pradesh-map.html>





Figure 13: Inaugural address by Hon'ble Chief Minister of Uttar Pradesh, Shri Yogi Aditya Nath

3.4 Uttar Pradesh Plastic Waste Management Conclave 2022

The state of Uttar Pradesh has 734 urban local bodies that annually generates over 1.6 lakh tonnes of plastic waste (as reported in the annual PWM report 2019-20). The state government is taking necessary actions to address the concern of rapid growth in plastic production, consumption, and its impact on the environment. Effective from 2 October 2018, the use, manufacture, sale, distribution, storage, transport, import or export is banned on all kinds of plastic carry bags, single-use plastic and thermocol in all urban, rural & industrial areas. However, there is a need for collaborative efforts by all stakeholders for the behavioural change on SUP, effective enforcement of rules and guidelines to manage plastic waste and development of recycling ecosystem. To address this concern, The Department of Environment, Forest and Climate Change, Government of Uttar Pradesh in collaboration with GIZ India organised the Uttar Pradesh Plastic Waste Management Conclave 2022 in Lucknow on International Plastic Bag Free Day i.e., 3 July 2022.

The Conclave was organised to identify and explore potential synergies for implementing technological solutions for eliminating gaps and leakages in the plastic value chain by promoting environment friendly lifestyles (LiFE) and exploring opportunities to strengthen the plastic waste management system of the state while promoting single-use plastic alternatives supporting the recent SUP ban.

The Hon'ble Chief Minister of Uttar Pradesh, Mr Yogi Aditya Nath in his inaugural video message greeted the audience and urged citizens to embrace the national ban on single-use plastics for protecting the nature and serving the humanity. The Hon'ble Chief minister appreciated the efforts by all Urban Local Bodies, government departments and citizens for being part of the campaign.

- सिंगल-यूज प्लास्टिक के कचरे का दुष्प्रभाव पूर्ण रूप से पूरे विश्व के लिए चिंता का विषय है। यह कचरा नदियों, महासागरों के साथ साथ समूची प्रकृति के लिए घातक है। ●●

श्री योगी आदित्यनाथ
मुख्यमंत्री, उ. प्र.



The Uttar Pradesh Plastic Waste Management Conclave was inaugurated by Shri Arvind Kumar Sharma, Hon'ble Minister, Department of Urban Development and Department of Energy, and Dr Arun Kumar Saxena, Hon'ble Minister of State (Independent Charge), Department of Environment, Forest & Climate, Government of Uttar Pradesh Government of Uttar Pradesh. Ms Sanyukta Bhatia, Mayor, City of Lucknow, Mr Manoj Singh, Additional Chief Secretary, Department of Environment, Forest & Climate, Mr K. P. Dubey, Principal Chief Conservator of Forest, Wildlife, Mr Ashish Tiwari, Secretary, Dept. of Environment, Forest & Climate, Mr Ranjan Kumar, Secretary, Urban Development Department, Ms Neha Sharma, Director, Urban Local Bodies, Dr Antje C. Berger, Counsellor, Climate and Environment, Embassy of the Federal Republic of Germany, New Delhi and Dr Rachna Arora, Team Leader, CES project were also present during the inaugural function of the RACE Campaign.

Dr Regina Dube, Director General, Department of Water Management, Water and Soil Protection, Marine Protection, BMUV, in her video message during the inaugural session, applauded the efforts of the state government to implement a mass movement for plastic-free Uttar Pradesh.

“ **UTTAR PRADESH PLASTIC MANAGEMENT CONCLAVE 2022 IS A MOST TIMELY AND RELEVANT. IT COMES AT A TIME WHEN APPROXIMATELY 300 MILLION TONS OF PLASTIC WASTE ARE PRODUCED EVERY YEAR.** ”

DR REGINA DUBE
Director General, BMUV

“ **I AM IMPRESSED WITH THE NATIONAL BAN ON SPECIFIED SINGLE-USE PLASTICS, THIS IS A FIRST STEP INTO THE RIGHT DIRECTION, AND I AM VERY IMPRESSED WITH THE MASS MOVEMENT IN UTTAR PRADESH FOR BANNING SINGLE-USE PLASTICS AND THE UTTAR PRADESH PLASTIC WASTE MANAGEMENT CONCLAVE 2022 WITH ALL THE HONORABLE MINISTERS WHICH SHOWED HOW UTTAR PRADESH IS ADDRESSING THIS ISSUE.** ”

DR ANTJE C. BERGER
German Embassy

The state's unique opportunity for investments and industry initiatives for waste management was mentioned during the inaugural session. The best performing Urban local bodies who participated in the RACE campaign for waste collection and management were recognised and awarded on 3 July. The first position was awarded to Lucknow Municipal corporation, followed by Kanpur Municipal Corporation in the second position, and Agra and Ghaziabad Municipal Corporation sharing the third position.



Figure 14: Awards given to best performing ULBs in the RACE Campaign



Technical Session 1

UTTAR PRADESH SINGLE-USE PLASTIC ACTION PLAN: CHALLENGES, OPPORTUNITIES, & STRATEGIES

Uttar Pradesh generates 1.6 lakhs tonnes of plastic waste annually. The state of Uttar Pradesh is one of the many states in the country to have announced an early ban on single-use plastics, with effective from 15 July 2018. However, imposition of the ban on single-use plastic combined with effective integration of all stakeholders in the plastic value chain is required to ensure its implementation and sustainability in the long-run.

The first technical session covered the challenges, opportunities and strategies to develop an implementable single use plastic action plan for effective enforcement of rules and guidelines to manage plastic waste and development of recycling eco-system. The discussion in the session aimed at creating a deeper reflection on:

- ☑ What policy interventions are required to develop a roadmap for managing single use plastic waste, in a circular manner?
- ☑ What parameters need to be aimed to create a tangible timeline to meet national commitments?
- ☑ What mechanism to be adopted for Inventorization and conformity assessment of SUP notification?
- ☑ How to strengthen the governance and monitoring mechanism for ban implementation?
- ☑ What are the suitable business models available to captivate investment for innovative alternatives?

The session was chaired by Mr Manoj Singh, Additional Chief Secretary, DoEFCC, Govt. of Uttar Pradesh and moderator was Dr Rachna Arora, Team Leader, CES Project, GIZ India. Key panelists of the session were Mr Ashish Tiwari, Secretary, DoEFCC, Govt. of Uttar Pradesh, Mr Shiv Sharanappa G.N., Municipal Commissioner, Kanpur, Mr R.K. Singh, Regional Director, North Zone, CPCB, Mr Shailesh Vickram Singh, Founder- Massive Fund, Climate Angel Investor, Climate Angels, Mr Sebastian Frisch, Managing Director Black Forest Solutions (BFS), Dr Abhinav Akhilesh, Partner, KPMG, Mr Purav Desai, Co-Founder, Refillable Model, and Dr Divya Sinha, Divisional Head and Scientist ,E' CPCB, New Delhi.



Figure 15: Panel Discussion under Technical Session "Uttar Pradesh Single-use Plastics Action Plan: Challenges, Opportunities & Strategies"

Outcomes:



For supplying prohibited items, strict laws including fines and imprisonment will be imposed.



Raw material substitutes should be green and economical.



The private sector shall take the lead in changing behavior.



To prevent the sale of banned items, enforcement should be used.



The government sector should focus not only on policy formulation but also on policy implementation and support.

“ पांच दिनों में पूरे उत्तर प्रदेश में अभिनव प्रयास हुआ है। हमने पांच हजार क्विंटल प्लास्टिक इकट्ठा किया है। अगर इसी गति से अभियान चलता रहा तो प्लास्टिक बचेगा नहीं। ”

श्री मनोज सिंह

अपर मुख्य सचिव, पर्यावरण, वन एवं जलवायु परिवर्तन, उ.प्र

Technical Session2

IMPLEMENTATION OF EPR IN THE STATE OF UTTAR PRADESH

The Extended Producer Responsibility (EPR) is an important tool of circular economy of the plastic waste. The concept of EPR promotes the principle of “Polluter Pays” and a broader insight has been made with the release of EPR rules by MoEFCC, Govt. of India in February 2022. EPR guidelines incorporate circularity and give producers substantial responsibility for the collection, treatment and disposal of post-consumer plastic waste.

The panel discussed how EPR can be used as a financial and policy tool for implementation of effective plastic waste management in the state of Uttar Pradesh. The session covered:

- ☑ How EPR can be instrumental in managing plastic waste effectively in Uttar Pradesh.
- ☑ How can a successful EPR model be operationalised in Uttar Pradesh?
- ☑ What policy interventions are required effectively implement EPR?
- ☑ What is the role of local bodies in EPR implementation?
- ☑ How EPR can strengthen the Plastic Waste Value Chain.
- ☑ Effective models of engagement of PIBOs with local bodies.

The session was chaired by Mr Ashish Tiwari, Secretary, DoEFCC, Govt. of Uttar Pradesh and moderator was Mr Gautam Mehra, Deputy Team Leader, CES Project, GIZ India. Key panelists of the session were Ms Geetanjali Vats, Global Plastic Sustainable, Lead, Asia & ANZ Unilever, Mr Tushar Patnayak, Corporate Head-EHS, Dabur India Limited, Mr Himanshu Tilwankar, Advisor, RSPL Group, Mr Amit Patel, Head EPR and Circular Economy, NEPRA Resource Management Pvt. Ltd, Mr Saurabh Palsania, Executive Director, Dalmia Cement Bharat Ltd.

Outcomes:



Standard SOPs should be in place, with compliance requirements at SPCB levels, including aspects for ULBs.



Due to their position as major stakeholders who may be linked to the PROs collectively, ULBs play a crucial role.



EPR circuits can be developed locally to improve collection and develop strategies for connecting educational institutions.



In order to lessen environmental littering, plastic discarded in the market in any form must be recovered in the equivalent quantity.



Figure 16: Panel Discussion under Technical Session “Implementation of EPR in the state of Uttar Pradesh”

Technical Session3

STRENGTHENING INFORMAL SUPPLY CHAINS AND CIRCULAR BUSINESS MODELS FOR PLASTIC WASTE MANAGEMENT

Dealing with plastic waste simply requires every stakeholder to play its own individual roles. Limiting the consumption is an aspirational goal which requires a behavioural change and correct awareness. The proposed discussion explores the successful and recognised models of managing plastic waste focusing on circular economy. The session will also highlight the available alternative in Indian market and new potential opportunities.

The session was chaired by Mr Lalit Sharma, Technical Expert, CES Project, GIZ India. Key panelists of the session were Mr Banchhanidhi Pani, Municipal Commissioner, Surat, Mr Nikhil Tikaram Funde, Municipal Commissioner, Agra, Mr Mahendra Singh Tanwar, Municipal Commissioner, Ghaziabad, Dr Robin R S, Scientist- C, National Centre for Sustainable Coastal Management, Mr Jatin Takkar, Head-Product Safety & Regulatory, Siegwirk-India, Ms Wilma Rodrigues, Founder & CEO SAAHAS- Zero Waste, Mr Purushotham Adoni, Director, Ecolastic Products Private Limited.

Outcomes:



Standard SOPs should be in place, with compliance requirements at SPCB levels, including aspects for ULBs.



Due to their position as major stakeholders who may be linked to the PROs collectively, ULBs play a crucial role.



EPR circuits can be developed locally to improve collection and develop strategies for connecting educational institutions.



In order to lessen environmental littering, plastic discarded in the market in any form must be recovered in the equivalent quantity.



Figure 17: Panel Discussion under Technical Session “Strengthening Informal Supply Chains and Circular Business Models for Plastic Waste Management”

3.5 Technology Exhibition

A Technology Exhibition for showcasing single-use plastic alternative solutions was also organised as part of the RACE Campaign at Indira Gandhi Pratishthan, Lucknow on 3 July 2022. The Exhibition witnessed participation by 21 alternative manufacturers and solution providers from across the country. They showcased and displayed unique alternative products derived from natural fibres such as bagasse, rice, and wheat bran, plant and agricultural waste, coconut leaves etc. during the Exhibition. Below is a short summary on the different exhibitors:



21 Century Polymers

21 Century Polymers is a community led, integrated plastic waste recycler designing waste management systems and conducting feasibility studies for waste collection and processing systems. For more details: www.21centurypolymers.com



Amplepac Earth Packaging & Systems Pvt. Ltd.

Amplepac designs and manufactures customised packaging fitted with RFID, that are lightweight yet durable, and can be reused 50+ times. For More Details: www.amplepac.com



Bhadra Polymers LLP

Bhadra Polymers LLP are in the sector of plastic recycling, they recycle pet bottles/HDPE/LDPE, and is operational at Lucknow region, Uttar Pradesh.



Bio Craft Innovation Pvt. Ltd.

Bio Craft Innovation technology PVT. Ltd. (IBANSS) makes certified home compostable bamboo-based granules that are alternative to plastics, compliant with Indian and International pollution control norms. For More Details: www.ibanss.com



Dharaksha Ecosolutions Pvt. Ltd.

Dharaksha Ecosolutions is an environment conscious start-up specialising in biodegradable packaging material. Based in Delhi, incubated at RCB (Regional Centre for Biotechnology), the start-up provides alternative to thermocol packaging material. For More Details: www.dharaksha.com



Ecolastic Products Pvt. Ltd

Ecolastic Products Pvt Ltd is a bio-plastics manufacturing and research company, established in January 2020 to innovate, design, develop and manufacture differentiated bioplastic, biodegradable, and compostable products. For More Details: www.ecolastic.in



Ecoware Solutions Pvt. Ltd

Founded in 2010, Ecoware converts common crop waste into sustainable alternatives to single-use plastics which have caused untold damage to the environment and adversely impact human health. For More Details: www.ecoware.in



Imaga Trade & Craft Pvt. Ltd.

IMAGA works to combat plastic waste in the food service industry by driving adoption of plastic alternatives. For More Details: www.getbumboo.com



Ecopak

Ecopak specialises in Bio-based and compostable products manufacturing (Extrusion and Thermoforming) in India. Ecopak has a variety of products ranging from cups, lids, plates, containers and are also engaged in developing products as per customised requirements. For More Details: www.ecopakonline.com



National Centre for Sustainable Coastal Management

The National Centre for Sustainable Coastal Management (NCSCM) was established by the Ministry of Environment, Forest, and Climate Change (MoEF&CC) in 2011, as an autonomous institution to support the protection, conservation, rehabilitation, management, and policy advice of Indian coasts. For More Details: www.ncscm.res.in



National Centre for Sustainable National Research Development Corporation

National Research Development Corporation (NRDC) was established in 1953 by the Government of India, with the primary objective to promote, develop and commercialise the technologies/know-how/inventions/patents/processes emanating from various national R&D institutions/Universities NRDC has also developed processes for manufacturing of graphene from plastic waste. For More Details: www.nrdcindia.com



Qudrat

Qudrat manufactures 100% biodegradable disposable tableware (plates, bowls & spoons) made from agricultural residue and waste such as rice husks and rice bran. For More Details: www.qudrat.co.in



Recity Network Pvt. Ltd.

Recity Network Pvt. Ltd. modernises municipal waste management systems through use of digital technologies for possible circular plastic packaging. They track the flow of plastics across the supply and value chains and provide end-to-end traceable high-quality recycled materials to brand owners. For More Details: www.recity.in



Refillable Circular Solutions Pvt. Ltd.

Refillable is a Maharashtra based company, providing portable convenience stores at doorsteps by making available eco-friendly and sustainable home care products. The company also provides zero waste refillable services. For More Details: www.refillable.store



Cupable

Cupable is a sister entity of Refillable Circular Solutions Pvt. Ltd. and manufactures reusable packaging made from crop waste. The reusable products are dishwasher safe, toxin-free, microwave safe, and 100% recyclable. For More Details: www.recube.co.in/cupable



ReKart Innovation Pvt. Ltd.

Rekart is a leading producer responsibility organisation (PRO) working with a vision of managing waste in 100+ cities through a technology-enabled integrated approach. For More Details: www.rekart.co.in



SS Innovation Pvt. Ltd.

SS Innovation Pvt. Ltd. is an art studio that collects waste from local communities, landfills and local entities, and further processes the plastic waste to create useful works of art like chair, bench, planter, wall clock, plastic trash mural, and also the largest plastic trash keyboard.



Saahas Zero Waste

Saahas is a non-profit organization working in the field of waste management. Since 2001, they have been helping communities across rural and urban India to manage waste at source by reducing, reusing, and recycling waste and achieving 90% resource recovery. For More Details: www.saahaszerowaste.com



Srishti Lifescience Pvt. Ltd.

Srishti Lifescience's mission is to create a business ecosystem of sustainable, hygienic and healthier bottled water at affordable prices to empower consumers to shift their choices from single-use plastics to zero waste and a circular economy based environments-friendly reusable water bottles. The company offers sustainable glass and metal based reusable packaging with blockchain based technology systems such as a) Ecosystem: Device for in-house (point-of-use) bottling of water in returnable bottles with IoT and AI-based returnable bottle sanitation and water quality tracking and reporting b) Herbal H2O: Reusable glass bottled water.



Brown Reed Agri-Waste Innovations

Brown Reed Agri-Waste Innovations manufactures biodegradable drinking straws and eco-friendly writing from naturally dried fallen coconut leaves by women at state-of-the-art facilities in rural India and marketed worldwide under the brand name of SUNBIRD. For More Details: www.sunbirdstraws.com



Shakti Plastics Industries

With an experience of over 53 years, Shakti Plastics Industries is committed to recycling plastic waste. Through end-to-end waste management services that cater to individual collectors, companies, retailers, manufacturers, municipalities, NGOs, and small businesses, they help to transform plastic waste into newer products of greater value. For More Details: www.shaktiplasticinds.com



Figure 18: Technology Exhibition, Uttar Pradesh Plastic Waste Management Conclave 2022



OUTCOMES AND WAY FORWARD

4.

4.1 Single-Use Plastic Ban in India and EPR Framework for Plastic Packaging

India is committed towards acting against pollution caused by plastic leakages in ecosystems especially through single-use plastics. The Ministry of Environment, Forest and Climate Change, Government of India has notified the Plastic Waste Management Amendment Rules, 2021 with the aim of phasing out single-use plastics by 2022. This also includes the ban on identified single-use plastics with low utility and high littering potential such as ear buds, plastic sticks, plastic flags, candy sticks, decorative thermacol items, plastic cutlery, wrapping or packing films around sweet boxes, invitation cards etc. with effect from 1st July 2022.

Furthermore, the Rules mandate the responsibilities of producers, brand owners, local bodies, gram panchayats, waste generators, retailers and street vendors to manage plastic waste. The enforceable Rules promote the concept of “Polluters Pays” for strengthening circular economy of plastic packaging waste. To promote development of sustainable plastic economy, the concept of Extended Producer Responsibility (EPR) was introduced in Plastic Waste Management Rules 2016. Extended Producer Responsibility is applicable to both pre-consumer and post-consumer plastic packaging waste. EPR policy in India plays a crucial role in encouraging producers and brand owners to gradually decrease the quantum of plastics they bring into the economy by adopting alternatives such as paper, glass, metal etc. EPR policy also bounds the producers to establish a system of collecting back the plastic waste generated for ensuring recycling of end-of-life post-consumer waste. In this regard, the state of Uttar Pradesh is one among the other states in the country to have announced an early ban on single-use plastics on 15 July 2018.



EXTENDED PRODUCER RESPONSIBILITY POLICY BOUNDS THE PRODUCERS TO ESTABLISH A SYSTEM OF COLLECTING BACK THE PLASTIC WASTE GENERATED FOR ENSURING RECYCLING OF END-OF-LIFE POST-CONSUMER WASTE.

UTTAR PRADESH CHARTER ON PLASTIC WASTE MANAGEMENT



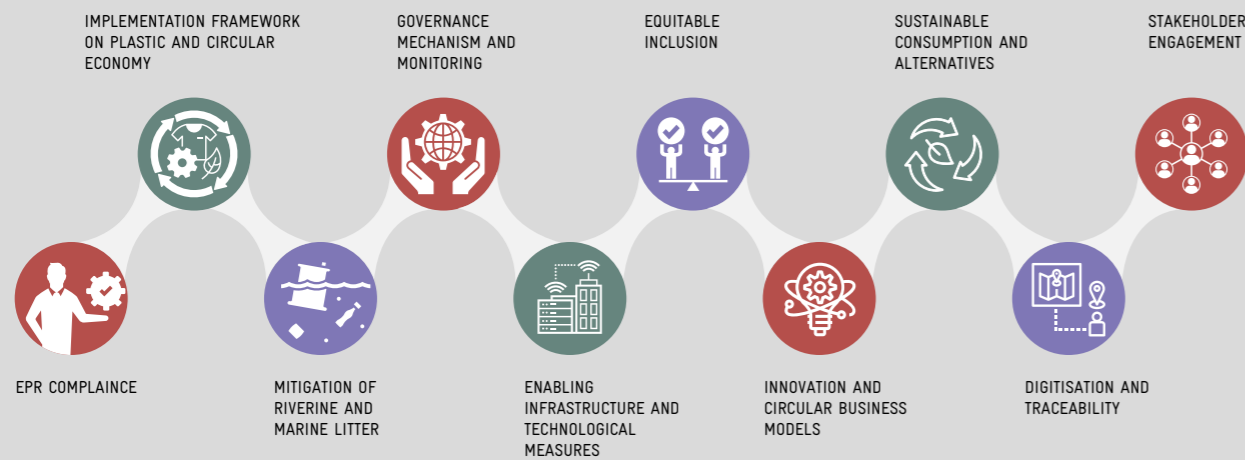
4.2 Uttar Pradesh Charter on Plastic Waste Management

The Uttar Pradesh Charter on Plastic Waste Management was released during the Uttar Pradesh Plastic Waste Management Conclave 2022, in order to fulfil the larger objectives and vision to close the material cycle of riverine litter and reduce plastic pollution in the state. The charter was prepared based on numerous consultations and technical sessions held during the Noida Roadshow 2021. The 4R philosophy of „Reduce, Reuse, Recycle and Recover“ is adopted for raising awareness among all stakeholders. The Charter seeks to close gaps in the plastic value chain and enhance collaboration and partnership between the government and private sector stakeholders for achieving the large objective of plastic-free Uttar Pradesh through integrated circular economy solutions.

The Charter is aligned with three Sustainable Development Goals (SDGs) that address the marine litter problem: SDG 12 (Sustainable Production and Consumption), SDG 13 (Climate Action) and SDG 14 (Life Below Water). The key strategies proposed under the Uttar Pradesh Charter on Plastic Waste Management to prevent marine litter are depicted in the following illustration.



Figure 19: Release of the UP Charter on Plastic Waste Management, 3 July 2022, Lucknow



4.3 B2B Meet to Promote Single-Use Plastic Alternative Solutions

A B2B meet to promote SUP Alternatives in Uttar Pradesh was organised, in continuation to the Technology Exhibition, Uttar Pradesh Plastic Waste Management Conclave 2022, and as a way forward to the discussions from the workshop Invest for Plastic Free Uttar Pradesh, an ecopreneur meets to showcase solutions for alternative to single-use plastics held on 2 July 2022.

The B2B meet created a platform for exchange and dialogue on innovative solutions for single-use plastic alternatives, including potential collaboration and partnership opportunities – B2B and B2G as well as Research and Development support for plastic alternatives in the state of Uttar Pradesh. This event looked into packaging alternatives, eco-design, policy and governance support for scaling- up plastic alternatives with industry experts, start-ups, single-use plastic innovators and key government stakeholders. The B2B meet explored potential opportunities of piloting solutions in the state of Uttar Pradesh to ensure circularity in plastic value chain while providing a platform to innovators and start-ups who are supporting with economical single-use plastic alternatives. A wide range of alternatives were displayed during the B2B meet. During the event, a booklet on Single-use plastic alternative innovators was released by the Department of Environment, Forest and Climate Change, Government of Uttar Pradesh.



Figure 20: B2B Meet for SUP Alternatives Solutions, 5 September 2022, Lucknow

4.4 UP Plasticathon 2022

To address the challenges associated with Plastic Waste through innovative solutions, the Department of Environment, Forest and Climate Change Government of Uttar Pradesh in collaboration with GIZ India and Environmental Management Centre Pvt. Ltd. announced the UP Plasticathon Challenge on 5 June 2022 (World Environment Day). In line with the honourable Prime Minister’s vision and commitment to phase out Single-Use Plastic (SUP) by 2022, UP Plasticathon 2022 was launched with the objective of crowdsourcing workable circular solutions for sustainable plastic waste management from start-ups and innovators. It was officially launched by Shri Giriraj Singh, Hon’ble Minister of Rural Development and Panchayat Raj, Government of India, during the landmark event Conference of Panchayats 2022.

The UP Plasticathon 2022 focussed on:

- ☑ Mentorship sessions with industry experts for selected innovators and start-ups through structured sessions for improving business models and preparing powerful pitches on business plans.
- ☑ Handholding support for preparation of action plan for pilot implementation in the state of Uttar Pradesh for the winners of the challenge.



Figure 21: Launch of the UP Plasticathon 2022



Figure 22: UP Plasticathon 2022 Award Ceremony, 17 November 2022, Lucknow

A total of 67 applications were received from entrepreneurs, early-stage start-ups and innovators across India, and 20 start-ups shortlisted for specific mentorship sessions with industry experts on circular business models.

On 17 November, the UP Plasticathon results were announced by Shri Ashish Tiwari, IFS, Secretary, Department of Environment, Forest and Climate Change, Government of Uttar

Pradesh during the Award Ceremony in Lucknow. The winners are InfinityBox, Saltech Design Labs Pvt Ltd., Arani Ecosteps and InstaGood. The event also provided an opportunity for the winners to pitch their winning ideas to key government stakeholders in the state. This was followed by a Special Address by Dr Regina Dube, Head of Department of Water Management, Resource Conservation and Adaptation to Climate Change, German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Climate Protection (BMUV), Germany. Further discussions were held with key representatives in the private and public sector on the topics of standard operating guidelines for EPR implementation in Uttar Pradesh, sustainable interventions for reducing plastic packaging through refillable models and technological solutions for capturing riverine litter to address plastic pollution by single-use plastics in the state.

4.5 Networking for Sustainable Plastic Waste Management

The Department of Environment, Forestry and Climate Change has targeted to bring together all stakeholders in the plastic waste value chain under the mass RACE campaign. From government stakeholders like the Uttar Pradesh Pollution Control Board and Urban Local Bodies to private sector stakeholders who are deeply integrated in the plastic value chain, this brings in the advantage of access to innovation, finance, skills, and expertise, as well as improved operational efficiencies for sustainable waste management. RACE for Single-use plastic free Uttar Pradesh is seen as flagship event to promote collaboration among PWWs, start-ups, innovators, investors, and government stakeholders working in the space of plastic waste management, and created channels and scope for identifying partnerships and collaboration (co-creation) in moving towards the overarching goal of reducing plastic pollution, promoting LiFE sustainable lifestyles and single-use plastic free Uttar Pradesh.



4.6 Circular Plastic Waste Management Model

A crucial initiative intended to reduce marine litter in the riverine ecosystem for the reduction of land-based litter is the Pilot demonstration of technical solutions in the city of Agra to improve waste management with key focus on EPR and Circular Economy. This Model streamlines the participation of women self-help groups, coastal communities, local scrap shops, and waste pickers to address and strengthen current waste management systems backed by technical measures, approaches at selected pilot demonstration sites. The chosen wards in the city of Agra will be the location for piloting the technological innovations. Here, manufacturers and recyclers will be involved as well as the usage of cutting-edge technology. The model aims to be sustainable and institutionalised through appropriate mechanisms, guidance and support from the state government.

4.7 EPR Based Business Models for Co-Processing of Non-Recyclable Plastic Waste

Under the Indo-German technical corporation project “Circular Economy Solutions Preventing Marine Litter in Ecosystems (CES), GIZ India together with partners is promoting circular economic solutions for waste materials derived out of legacy waste in the state of Uttar Pradesh. The Business Model on Legacy Waste proposes to figure out the required solutions for non-recyclable plastic waste (seen as legacy waste) within the dumpsites around the city of Prayagraj and build an implementable co-processing solution model for replication in other locations of the state and country.

In the business model, a detailed procedure is charted out to hold out the sampling and additionally the analysis of the collected samples from the dumpsites to realise an inexpensive and factual assessment of the constituents present within the dumpsites so as to build a viable business model, taking into consideration the Extended Producers Responsibility (EPR) framework provisions as well as the standard of non-recyclable combustible materials present in the dumpsites.



4.8 Refillable Model

In close collaboration with the Departments of Environment, Forest, and Climate Change and Lucknow Municipal Corporation, the development and implementation of Refillable models are planned to be piloted and implemented in Lucknow in order to encourage sustainable consumption practises and reduce consumer use of plastic packaging. By minimising the amount of packaging used for the items, it is possible to ensure the reduction of the amount of plastic waste produced by households and reduction of recycling operations. One-time (or limited-use) containers (totes, boxes, and bins) are replaced by refillable packaging models, advocating for a transition from a throw away economy to a reuse-refill economy. The goal of this model is to reduce the amount of plastic waste that leaks into surrounding natural ecosystems.



Figure 23: Launch of Refillable Model by Dr Arun Kumar Saxena, Hon'ble Minister of State (Independent Charge), DoEF&CC, GoUP, 29 December 2022, Lucknow

4.9 Promoting Eco-Design

The state of Uttar Pradesh for sustainable plastic waste management is promoting the concept of Eco-Design for transition from a Linear Economy to a Circular Economy to manage plastic packaging waste. Inks and coatings are crucial for the aspects of recycling of plastic waste. For the transition to circular packaging, industries are required to shift to Monomaterial packaging (mono plastic & paper) for increased recyclability and also ensure deinking to improve recycled content quality.

PLASTIC HEROES



Kanpur Ploggers

Dr Sanjivini Sharma is the founder of Kanpur Ploggers, an NGO that has been cleaning the ghats of Ganga River in Kanpur City, every Sunday for the last 90 months. Another project of Kanpur Ploggers is to collect, clean and dry plastic packets from homes and send them to a local recycle facility.

 <https://t.co/FAshg8Q4VX>

 <https://twitter.com/Kanpurploggers>



Shri Krishnanand Rai "Bhojpuri Kavi"

Krishnanand Rai, a Bhojpuri poet, gives the message of saving the environment to the people through his poems. He, a resident of Lucknow, Uttar Pradesh, is 62 years old but even today, every day he travels many kilometers by bicycle to make people aware of environmental pollution.

 <https://www.facebook.com/profile.php?id=100063910932834>

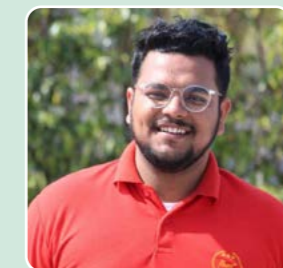


SarfarazSakshi Innovation Pvt Ltd

SarfarazSakshi Innovation Pvt Ltd are the recycler of plastic waste. Out of waste plastic, they create exquisite works of art and useful items.


 https://instagram.com/sarfaraz_sakshi

 <https://www.linkedin.com/in/sarfarazsakshi-innovation-207172229>



Swapna Foundation

Swapna Foundation is a youth based nonprofit organization founded by Achyut Tripathi, which strives every day to make the society a cleaner place to live for all living beings. To raise awareness among the citizen, they carry out various plog runs, and riverbank cleanliness drives.

 <https://instagram.com/ourswapna>
https://Instagram.com/the_bhunitra_initiative

www.ourswapna.org

JHOLA & BARTAN banks

RACE CAMPAIGN for

SUP free UTTAR PRADESH

734 ULBs in the STATE

Concluded on 3 July 2022

Launch of PLASTIC FREE ZONES

more than 4 LAKH CITIZENS participated

The CAMPAIGN brought together representatives from the CENTRAL, STATE & LOCAL GOVERNMENTS, R&D and ACADEMIC institutes, INDUSTRY Experts, ENTREPRENEURS, START-UPS, RWAs, NGOs, YOUTH GROUPS, CIVIL SOCIETY ORGANISATIONS to address the challenge of reducing SUPs



ECO MELA

PLOG RUN and MASS GHAT cleaning drive

around 500 TONNES of PLASTIC WASTE was COLLECTED and sent for RECYCLING

PLASTIC Collection Drive



Graphic recording done by Agalaya G.S., Founder, Noun&Verb, Bangalore. She is a visual coach, graphic and process facilitator, focuses on creative collaboration with individuals, groups and teams towards collaborative vision in organisations.

