

Dialogue on strategies to reduce food waste in Indore city

A SUMMARY OF KEY CHALLENGES, OPPORTUNITIES, AND EFFECTIVE STRATEGIES FOR CATALYZING COLLABORATIVE ACTIONS ON REDUCING FOOD WASTE

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BACKGROUND

India, a leading producer of various food commodities, faces a significant challenge with food waste. The increasing quantities of food waste have profound environmental, social, and economic consequences, necessitating immediate actions, revised practices, and policy reforms to curb its sources. The absence of comprehensive national-level government data on food waste and its impacts underscores a critical gap in understanding and managing this issue, urging concerted efforts from grassroots initiatives to policy reforms.

In collaboration with the Indore Municipal Corporation (IMC), WRI India organized a multi-stakeholder dialogue on March 12, 2024, in Indore, Madhya Pradesh. This event focused on strategies to reduce food waste, aligning with Sustainable Development Goal (SDG) 12.3's objective to halve global per capita food waste by 2030 across production, supply chain, retail, and consumer levels. This dialogue highlighted Indore's achievement in waste management and assessed current food waste management practices within the city. The primary objective was to identify the key challenges, opportunities, and effective strategies for reducing food waste to catalyze collaborative actions among stakeholders involved in food waste generation and management.

Over 100 participants, including decision makers, policymakers, food waste generators (households, hotels, restaurants, catering services, and retailers), and service providers, including food waste recovery agencies, and representatives from non-governmental organizations (NGOs) and academic institutions, attended the workshop. Their diverse perspectives and strategies

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aimed to drive transformative change and pilot innovative solutions to reduce food waste generation and optimize its management in Indore. This dialogue marked the beginning of a collaborative effort to develop evidence-based strategies for sustainable food waste management in the city.

SETTING THE CONTEXT

Dr. Ruchika Singh, Executive Program Director, Food, Land, and Water, WRI India, initiated the dialogue by emphasizing the organization's focus on food loss and waste. She underscored the importance of stakeholder consensus on the scale and impact of food waste, advocating for prevention at the source and redirection of surplus food for human and animal consumption as preferred pathways. She indicated that sending food waste to landfills, incineration sites, and disposal sites are the least preferred pathway.

Dr. Singh further highlighted Indore's advanced waste management system backed by collective public-private intent, and its potential to lead India's food waste reduction efforts, serving as a model for other cities.

R. Parasuram, former Chief Secretary, Government of Madhya Pradesh (GoMP) and Senior Fellow at WRI India's Food, Land, and Water program, emphasized the necessity for reducing food waste in India. He provided valuable insights into integrating food waste into Indore's well-established waste management system, highlighting the city's potential to significantly advance food waste reduction efforts. He also noted that Indore, with its participatory citizenship model and proactive city governance, is ideally positioned as a pioneer in addressing the challenge of food waste management.

SPECIAL ADDRESS

Harshika Singh, IAS, Municipal Commissioner, Indore, delivered a forward-looking address on food waste management in Indore. She emphasized its criticality amid urbanization and population growth, stressing the need for household-level awareness and clear definitions of food waste. Highlighting IMC's initiatives in waste segregation and home composting, led by women in the city's periphery, she she talked about her plans to develop standard operating procedures (SOPs) for food waste generators and conduct behavior change campaigns. She also outlined strategies, such as the food waste clock for awareness and integration of reduction efforts with sustainable practices, toward Indore's goal of becoming a zero-landfill city.

PANEL DISCUSSION 1: DRIVERS AND CHALLENGES IN REDUCING FOOD WASTE GENERATION

The first panel discussion focused on evaluating current approaches and identifying challenges associated with reducing food waste at the source level across households, hotels, restaurants, catering services, and retailers.

The panel included five distinguished speakers: Sumit Suri, Chairman of MP State Hotel & Restaurant Association Western India (HRAWI); Shanu Mehta, Director of President Group of Hotels; Ashok Puri Goswami, Senior Sous Chef at Lemon Tree Hotels and Member of Indian Federation of Culinary Associations (IFCA); Seema Jeswani, President of Greater Tirupati's Resident Welfare Association (RWA); and Mahesh Sharma, Senior Engineer at IMC. The discussion was co-chaired by Harshika Singh and R. Parasuram and moderated by Ritoja Basu, Program Head for Food Loss and Food Waste at WRI India.

The key takeaways from the panel discussion are summarized below:

Sumit Suri highlighted the challenge of bulk food waste generation at events, such as weddings and parties, stressing the need for education and the creation of awareness among attendees. Strategies discussed included controlling buffet plate sizes, packaging leftover food, and promoting redistribution through organizations such as the Robin Hood Army (RHA). He emphasized the importance of educating consumers regarding the quantity and impact of generated waste to foster a sense of responsibility as well as training hotel staff to minimize kitchen waste for economic savings.

Shanu Mehta outlined strategies implemented by the President Group of Hotels to reduce food waste, including preparing 30% less food than ordered for large events, to minimize waste and costs. She advocated for the pre-plated food model over that of the self-serving model to reduce over-serving and subsequent wastage.

Ashok Puri Goswami shared insights from Lemon Tree Hotels, where strategies such as staff-served meals (instead of self-served meals), reducing the number of dustbins, and building staff capacities through training have reduced kitchen waste from 0.8% to 0.22%. His ongoing efforts aim to further reduce waste to 0.15%. He estimated that approximately 800 g of food is wasted from food prepared for 400–450 individuals.

Seema Jeswani highlighted that consumer behavior, consumerism, and buying capacity are key drivers of household food waste generation. She mentioned that trends such as flash sales and 'Buy one and get one free' offers often lead to over-ordering and a higher generation of food waste. She proposed organized grocery shopping, surplus food redistribution channels, and awareness campaigns targeting children through schools and women through residential welfare associations (RWAs) to change behavior and reduce food waste.

Mahesh Sharma emphasized demographic preferences within families as a key factor in food waste generation, advocating for weekly meal planning and citizen engagement to minimize household food waste generation.

FIGURE 1 | Panel discussion on challenges in reducing food waste generation



Source: WRI India.

The panel concluded that reducing food waste requires educational initiatives, behavioral changes, systemic efficiencies, strategies, and targeted interventions across sectors. Emphasis awareness and behavioral nudges can influence food preparation, services, and consumer behavior and reduce waste generation, with quantification and monitoring playing crucial roles in assessing socioeconomic and environmental impacts.

PANEL DISCUSSION 2: CHALLENGES AND OPPORTUNITIES FOR FOOD WASTE RECOVERY AND MANAGEMENT

The second panel discussion reflected on various aspects of food waste recovery and management, emphasizing collaboration to reduce food waste at its source, challenges in food waste estimation, and addressing issues, such as food safety and community engagement.

The panel included five experts: Gunjan Sachdev, City Representative of RHA; Sameer Singh Gour, Co-Founder of MIC Organisation India; Jwalant Shah, Co-Founder of Swaaha Resource Management Pvt. Ltd. (Swaaha); Palani C., Plant Head of Indore Clean Energy Pvt. Ltd. (ICEPL); and Sunpreet Singh, Owner of Human Matrix Services (HMS). The discussion was co-chaired by Harshika Singh and R. Parasuram and moderated by Dr. Ruchika Singh.

The key takeaways emerging from the panel discussion are summarized below:

Gunjan Sachdev shared her experience in recovering surplus food and ensuring its safe distribution to those in need. She emphasized the need to scale up these efforts in Indore, noting that the food wasted in the city daily could feed the needy for three days. Challenges include maintaining food safety during redistribution and the transport infrastructure. To address these, recovery agencies adopt a ‘taste-to-check’ approach, where volunteers taste food before collection and distribution, and unsafe food is redirected to waste processing or composting units.

Sameer Singh Gour stressed the importance of quantifying food waste to understand its environmental impacts, particularly methane emissions. He noted that some households prepare more food than they consume, contributing to food waste. Biogas digesters were highlighted as a viable solution for managing surplus food that is unsafe for consumption at both village and city levels.

Jwalant Shah observed that high-income societies and high-end restaurants generate more food waste than low-income societies and street food hubs. Low-income areas, however, show faster adoption of new practices and approaches. He highlighted that food waste composition varies among different actors, and that establishment, size, and seasonal factors also influence waste generation. Food waste data for RWAs are available; however, hotspots need to be identified. Household food waste typically includes prepared and discarded food waste, whereas unused cooked food is more common in hotels, restaurants, and catering services.

Palani C. emphasized the importance of strengthening the network between food waste recovery organizations and needy communities for efficient surplus food distribution. He advocated the development of a mobile application for surplus food distribution and talked about the challenges of waste segregation during treatment.

Sunpreet Singh highlighted the role of incentives in encouraging positive behavior toward waste reduction and their potential to influence consumer behavior. Drawing on Indore’s waste management journey, he highlighted the pivotal role of incentives in driving the implementation of waste segregation and home composting initiatives. He emphasized the importance of systematically collecting data on food waste to design effective reduction strategies.

It is crucial to encourage and expand the recovery and distribution of surplus food within cities. This helps transition from the least preferred to the most preferred pathway in the food waste recovery pyramid, ensuring nutritional security and environmental safety. Strengthening networks between recovery organizations and communities, incentivizing waste reduction, and data-driven strategies are essential for an effective food waste management system.

FIGURE 2 | Panel discussion on challenges and opportunities for food waste recovery and management



Source: WRI India.

CONCLUSION AND CLOSING REMARKS

R. Parasuram, Former Chief Secretary of GoMP, and Senior Fellow at WRI India, summarized the session, and Amit Dubey, Project Coordinator (Swachh Bharat Mission) at IMC, thanked all the participants for their active involvement. Special appreciation was extended to WRI India for initiating a dialogue on food waste reduction efforts.

The discussions highlighted the importance of collective efforts to address food waste. There is a collective urgency to reduce food waste, from understanding the drivers of food waste generation to exploring recovery and management strategies.

Translating these discussions into action involves promoting behavioral change and awareness toward reducing food waste generation. Developing SOPs for different food waste generators, leveraging data, and creating mobile applications for surplus food distribution can streamline food waste recovery efforts. Systematic data collection on food waste generation and composition is crucial for food waste reduction interventions.

In conclusion, addressing the food waste challenge requires comprehensive and concerted efforts from all the stakeholders. By working together and leveraging collective expertise and resources, food waste can be minimized, while also supporting national food security and reducing the environmental impact.

FIGURE 3 | Participants contributed to a dialogue on strategies to reduce food waste in Indore city



Source: WRI India.

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ABOUT WRI INDIA

WRI India, an independent charity legally registered as the India Resources Trust, provides objective information and practical proposals to foster environmentally sound and socially equitable development. Our work focuses on building sustainable and liveable cities and working towards a low carbon economy. Through research, analysis, and recommendations, WRI India puts ideas into action to build transformative solutions to protect the earth, promote livelihoods, and enhance human well-being. We are inspired by and associated with World Resources Institute (WRI), a global research organization. Know more: www.wri-india.org



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