

International Coastal Clean-up (ICC) Day 2023 Sagar Island Beach, West Bengal, 16 September 2023

The International Coastal Clean-up (ICC) Day 2023 was successfully conducted on 16 September 2023 at Sagar Island Beach, South 24 Parganas district, West Bengal. The event was coordinated by Dr. Punarbasu Chaudhuri, Department of Environmental Science and Genetics, University of Calcutta, in association with the National Centre for Coastal Research (NCCR) under the Ministry of Earth Sciences, Government of India.

ICC Day is a global environmental initiative observed annually on the third Saturday of September, coordinated internationally with support from UNEP and SACEP. In India, the Indian Coast Guard has led ICC activities since 2006. The initiative aims to restore coastal ecosystems, raise awareness about marine litter, promote responsible behavior, and collect data to support coastal management policies.



Fig. 1 Participants raising awareness around the Coastal Clean-up Day.

Study Area

Sagar Island Beach is located at the confluence of the Bay of Bengal and the Muriganga River, approximately 130 km south of Kolkata. The beach holds immense ecological and cultural importance, particularly due to the Gangasagar Mela, which attracts several hundred thousand pilgrims annually during Makar Sankranti, resulting in high waste generation.

The cleaned stretch covered 300 m length and 50 m width, amounting to a total area of 15,000 m². The beach is sandy, remote in category, and used for tourism, fishing, and religious activities. The beach ends with a seawall and road, and contains numerous food, souvenir, and entertainment stalls. Routine cleaning is carried out daily by the Gangasagar Bakkhali Development Authority, primarily through manual methods.



Fig. 2 Clean-up area, Sagar Island Beach.

Objectives

The key objectives of the clean-up program were:

1. Removal of litter and pollutants to restore coastal environments
2. Awareness generation and environmental education
3. Community engagement and participation
4. Collection of data on marine litter to support research and policy formulation

Participation and Execution

A total of 53 participants took part in the clean-up activity, including:

- 38 members from the University of Calcutta
- 14 school students from the local NGO *Sagar Block Paribesh Unnayan O Seva Samiti*
- 1 representative from NCCR

Participants were provided with safety gear and were trained in waste segregation, safety protocols, and data recording. The volunteers were divided into small groups and systematically cleaned the beach by scanning

designated strips. Waste was segregated into categories such as plastics, glass, paper, rubber, cloth, wood, and others, and later classified according to the NCCR questionnaire format. The collected waste was transported to the segregation ground with support from local authorities and disposed of appropriately. Awareness sessions were conducted by experts from the Ministry of Earth Sciences and other scientific institutions. Posters and interactions with the public helped spread awareness regarding marine pollution and responsible waste disposal.

Findings

The clean-up resulted in the removal of **80.14 kg** of waste counting a total of **742** litter items. The collected wastes are:

- Plastic: 51.89%
- Wood: 22.47%
- Rubber: 9.36%
- Glass: 6.86%
- Paper: 5.67%
- Cloth: 3.12%

Common plastic items included polythene carry bags, food wrappers, plastic bottles, straws, cups, fishing gear, sachets, and foam materials. Other waste consisted of glass bottles, rubber footwear, cloth fragments, wood debris, and small quantities of electronic waste. The findings highlight tourism, religious gatherings, and improper waste disposal as major contributors to beach pollution.



Fig. 3 Segregating (A) fishing net, (B) Plastic wrappers, (C) Plastic medicine bottles, (D) Plastic straws, (E) Plastic Covers, (F) Appliances and electronics, (G) Syringe and medicine tablets, (H) Plastic cups

Key Achievements

- Successful removal of over 80 kg of marine litter
- Active participation of students, local communities, and institutions
- Collection of valuable baseline data on waste types and sources
- Increased public awareness through outreach and media coverage

Challenges

The program faced challenges such as limited long-term funding, logistical constraints in remote areas, and the persistent issue of changing public behavior related to littering and waste management.

Recommendations

To enhance future coastal clean-up initiatives, the following measures are suggested:

1. Securing sustainable funding and logistical support
2. Strengthening environmental education and awareness campaigns
3. Using collected data to advocate for stricter waste management policies and reduction of single-use plastics
4. Enhancing collaboration with local communities, vendors, and temple authorities

Conclusion

The ICC Day 2023 coastal clean-up at Sagar Island Beach demonstrated the effectiveness of collaborative action in addressing marine pollution. The initiative not only improved beach cleanliness but also fostered environmental awareness and community responsibility. With sustained efforts, policy support, and community involvement, such programs can significantly contribute to long-term coastal conservation.

Acknowledgement

The organizers express sincere gratitude to NCCR, the Ministry of Earth Sciences, local authorities, volunteers, community organizations, and media partners for their invaluable support and participation in making ICC Day 2023 a success.