

**DESIGN IMPACT >>>>
>>>>>>>>>>>> MOVEMENT**

A Social
Initiative by



SUSTAINING CLEANLINESS AT BEACHES



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THEME: COASTAL WASTE MGMT & MARINE PLASTICS



SUSTAINING CLEANLINESS AT BEACHES

STAKEHOLDER

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Core Issue

Manual deep cleaning of beach waste is labor-intensive, inefficient, and unsustainable. While staff are deployed for cleanup, there is little public accountability in maintaining beach hygiene. Waste continues to wash ashore from estuaries, adding to non-seasonal dumping sites. Volunteers and staff face challenges in coordinating efforts, tracking waste types, and accessing the necessary tools and support.

Constraints

- No real-time mapping of waste accumulation zones.
- Manual labor dependency limits the speed, coverage, and frequency of cleanups.
- Cultural habits toward littering reduce public accountability.
- Unpredictable waste inflow from estuaries adds to the complexity of maintaining consistent cleanliness.
- Limited integration between on-ground cleanup teams and municipal waste disposal services.

Context

Beaches in Mangaluru face seasonal surges in waste due to tourism, tides, and local activities, especially near estuaries. Volunteers often rely on WhatsApp groups or word-of-mouth to organize cleanups. There's no digital infrastructure to guide teams, allocate resources, or log progress. Waste segregation is inconsistent, and disposal logistics are streamlined only in Blue Flag beaches. Public awareness is low, and engagement is sporadic.

Groundwork to be considered

- Current coordination of volunteers, schedules, and cleanup zones.
- Improving waste segregation at collection points.
- Integrating cleanup with municipal disposal logistics.
- Sustaining public participation year-round.
- Creating an open data log for waste and volunteer metrics.
- Long-term strategies to shift public mindset.



Existing Systems

- Manual beach water waste collection using floating boxes over 10-meter stretches.
- Volunteers physically enter the water to collect waste, often without protective gear or coordination in non Blue Flag beaches.
- No centralized system to track waste zones, types, or volunteer safety.
- Cleanup efforts are fragmented and rely on informal communication (e.g., WhatsApp groups).

Resources

<https://picvisa.com/waste-on-beaches-a-failure-of-civic-responsibility/>