



PILOT PROJECT FOR MARINE LITTER

Literacy, Prevention and Removal

STATE OF THE ART

As it became well-known, marine litter, generated from a wide variety of sources, and covering an extremely wide variety of materials, is one of the most serious fast mounting environmental problems.

Periodic assessment, monitoring, evaluation of sources, dispersal, fate and specific issues from all sectors have to be addressed for a better cognizance of marine litter pollution in order to secure prevention and reduction procedures – and, as far as possible, translating knowledge into guidelines.

Policies should be aligned with a shared international responsibility to efficiently meet **international and intergenerational** duties, namely:

- Improving existing structures, policies and regulations to effectively align with international directives and commitments
- Integrating marine pollution prevention and control strategies into wider planning frameworks
- Raising public awareness about the importance of marine ecosystems to prompt behavioural change
- Strengthening multi-sectorial mechanisms and partnerships to address marine pollution, prioritizing and planning its prevention and control

Though plastic pollution is rising fast and is generating a wide range of complex concerns as a global problem, its sources and outcomes differ greatly from place to place, it's why, to fight the issue at a global level, local and regional inputs are basic.

Assuming the sensible purpose of triggering action and inform decisions on marine pollution, we attempt to provide knowledge endorsed by direct experience of groundwork, delivering reliable strategies to help decision-makers, officialdoms and stakeholders to get an overview of proficient solutions.

Incorporating impactful groundwork and common sense knowledge with scientific advances in the area, we wish to inspire, drive and ground policy-making on 3 main clusters – literacy, prevention, removal.

Thus, a probing and precautionary approach, based on ground knowledge and local experiences, is crucial before undertaking costly remediation measures that have shown over time to be ineffective upstream, building its strength and inspiring better decisions and better actions.

MEMORANDUM

Within such priorities, this **PROJECT FOR MARINE LITTER** was crafted to be acted by all those in duty to take decisions and trigger action – **our statutory authorities**. The extant proposal is a comprehensive tool for the assessment, prevention, collection, disposal and monitoring of litters on marine environment, so that a uniform protocol can be adopted in the entire State – based on simple, feasible and keen strategies for environmental friendly approaches, **involving all stakeholders to collaboratively solve the issues caused by marine debris**.

It addresses chronic problems through **stringent corrective measures** to institute a new setting through **foundational steps for infrastructural and mounting changes**, scalable and replicable, making available a common understanding of its scope among all stakeholders.

Current conditions, success factors, risks and constraints are presented, as well as stakeholders, roles, responsibilities, resources, strategies, new uplifting procedures, guidelines with check-list, along with corporate directions and timeline for its development are presented shortly in the **Executive Summary**.

1. BRIEF

Over the last decades, our marine environments have undergone massive dangerous degeneration. To reverse it we must pledge sustained action through higher resolves distinctly showing promptness to act.

The generation and prevention of marine litter depends on a variety of human activities and policy areas, such as waste management, fisheries and tourism policies, consumption, behavioural patterns and product design.¹ Marine litter can be efficiently prevented through better waste management, namely plastic waste, increased recycling, stern ban of single-use plastics and rigorous outreach campaigns. Stringent execution of waste laws is a must to avoid litter entering the marine environment.

Information, Education and Training are vital in any effort towards a more waste-wise society. A tailored approach has to be used for different sectors (tourism, fisheries, industry, business, general public, etc.) to raise a massive awareness on the sources and effects of marine litter and the ways to reduce it upstream, **intensively focus on the costs of inaction and on the costs and benefits of action**.

Campaigns must target business and citizens, embracing formal and informal education, with a particular emphasis on coastal communities – but not exclusively. To keep ocean clean and marine life safe is a matter of urgency for India, for all of us.

2. RATIONALE

The ocean is in a state of emergency: the problem of marine pollution is appalling, as the environmental impact of marine waste, especially plastics, has exceeded acceptable limits for possible regeneration of the oceans.

In parallel with the criminal actions that have turned the sea into a global dump, there is a serious lack of decision threatening this common good, with unacceptable situations of environmental destruction, and disproportionate damage to the ocean.

- The volume of trash brought to the shoreline has exponentially increased, patenting a high input of fishery debris and inland waste.
- To protect the ocean, upstream prevention is preferable to downstream removal as strategy, but the current disaster does not give a choice, and we have to go for both.

¹ Not fully implemented, “Design for life cycle” and “Extended Producer Responsibility” (EPR) defy manufacturers and designers for the entire product’s life-cycle – its take-back, recycling and final disposal.

- All delays in removal imply unrecoverable losses especially due to micro and nanoplastics, already present in all natural systems, it is required rapid and robust action to halt the impact of their toxicity and to mitigate this irreversible tragedy.
- Though marine litter is a world-wide problem and a multisectorial mounting defy, in addition to this global situation, for India, with the economic axis of fisheries and tourism making the sea an essential resource, Marine Litter Policy for action is a priority.
- Now, because situations of negligent governance devastating the ocean cannot last, exist, or emerge, anymore, this project ventures to address the wretched failure to keep this natural capital, protect livings, citizens and next generations from huge health suffering brought by marine breakdown.

3. EXECUTIVE SUMMARY

The first of its kind, crafted in partnership with other environmental NGOs, this pilot project is about promoting a paradigm shift in the way community leaders and young people can become **multiplying agents of ocean stewardship** through their enormous potential to convey the leading message to trigger behavioral change.

We all have to ensure that the framework will be able to sensitize and trigger action by Local Bodies (Urban and Rural), civil society groups, community based organizations and line concerned departments of statutory authorities such as Ecology and Environment, Fisheries, Tourism, Rural Development, Social Welfare, Education, etc. – **representatives and administrators**.

The large amount of abandoned or lost fishing gears present on marine milieu shows that financial incentives/disincentives have to be fixed for fishermen to bring them to shore. Moreover, the Govt (within its Blue Economy Policy) must introduce **EPR** and **PPP** for fishing gear, and all the plastic components of the sector, to ensure its due collection and disposal, financing its environmentally sound waste management. The penalties for their mismanagement shall be effective, proportionate and dissuasive. The fight against marine litter has to be a joint effort between competent authorities, producers and consumers. Understanding the sense and role of marine **environmental rules** is of paramount importance for our representatives to get involved and prioritize efforts to prevent, reduce, control and/or eliminate marine ruin from inland and marine activities.

The remediation of this environmental disaster demands frontrunners with superior knowledge, superior understanding, superior skills to locally conduct the Strategic Plan (District wise), but also to raise awareness, to sensitize, to instruct, to educate, all that are, in a way or another, in position to harm natural habitats or natural conditions, by doings – or no-doings.

It is not simply necessary to educate the 'public', the students, the children.

It is crucial to **involve all local governors as key Stakeholders** – from GPs and ULBs to MLAs, ZPs & Municipal Councilors.

Understanding the role and meaning of environmental regulations is crucial for bureaucrats and politicians to get involved and prioritize **efforts to prevent, reduce, control and/or eliminate marine ruin** from inland and marine activities. The project seeks also to incite representatives to prompt outreach prevention campaigns and clean-ups, advancing from their side suitable regional strategies to fight marine litter, as every piece of litter removed from the shoreline, backwaters, rain drains and riverine streams, mitigates the hazardous contamination of the ocean.

As **Education and Training** are keys for an environmentally alert, concerned and proactive

society, we need a strong investment on formal and informal education. Thus, further to a general syllabus for environmental literacy, a tailored approach for coastal communes, privileging marine literacy is mandatory, as the only way to endorse a paradigm shift in community behavior **towards an oceanic environmental stewardship**.

4. ASSESSMENT of SNAGS of CHRONIC GROUND PROBLEMS

INCEPTION – Without a comprehensive and detailed assessment of the situation [KP proposal]¹ and a systemic approach to tackle it, any move will be crushed and lost.

1. **Thousands of unlicensed buildings and unlicensed tourism operators** (resorts, homestays, hotels, etc.) within CRZ breaching S&LW rules, dumping in the ocean, indulging in plastic pollution, waste burning, sewage, encroachment of drains, roads, etc., being utterly ignored by Administration.
2. **Inaction of Local Authorities related to PWM Rules** allows massive use of all illegal plastics, reaching the drains and the sea, breaking into micro and nano particles
3. **Blatant breach of PRA and SWM Rules by GPs** related to all types of Waste, with absence of SWM Plan and proper SWM charges.
4. **Legacy waste from GPs on illegal open dumping** at seashore and Forest areas
5. Common **open waste dumping (or burning)** not met by Police authorities
6. **Lack of enforcement of legal & penal frameworks** to stop waste from entering the ocean
7. GPs of coastal region (with higher Tourism incidence), do not have SWM plans, SWM facilities, nor guidance from Environmental Experts to manage wastes.
8. PDOs, unaware of such SWM Plans, are unconcerned with the existing rules on SL&PWM rules and related Byelaws
9. Widespread illiteracy on Wastes Management and on Marine Litter issues

5. KEY CHALLENGES for PROJECT'S DEED

1. The **achievement of strict and proficient time-bound actions** to close the assessed gaps and for meeting environmental norms
2. The **lack of identification of coastal regional issues by the State Governing Bodies**, and of the constraints for implementation of Environmental rules
3. The **unavailability of skilled/semi skilled technical staff at Local Bodies** crafting huge trouble to the Waste Management system
4. The **dearth of protection of seashore/marine areas** despite the responsibility assigned to Coast Guard.

PROJECT LAYOUT/OUTLINE

A – PRE-OPERATIONAL PROVISIONS by SECTORIAL GOVERNANCE

1. Call the foundation of State **Policy for Marine Literacy**
2. Design policies for **disposal of fish gears**, regular **“fishing for plastics, schemes for fishnet trade**, fish market packaging, fish breaks composting, etc.
3. Direct KSTDC to submit a **District-wise Master Plan for Blue Tourism** targeting prevention and removal of marine waste devising needful tools to hold coastal tourist spots clean

4. Instruct all Govt **Departments involved in tourism activities** to correctly plan and report on the management of all wastes produced
5. Instruct Coastal Local Bodies (**DMA, UD, RDPR**) to pass a bylaw for **Seashore Waste Management Plan** resorting to needful **MBIs, EPR, PPP, etc.**²
6. Mandate all Local Bodies to yearly submit an accurate **Action Plan for averting waste to enter water bodies** before monsoon.
7. **Fill vacancies of the crucial posts directly responsible for S&LWM works**
8. Direct Karnataka Temples Endowment Commissioner to submit a District-wise **Coastal Waste Management Plan**, to make all temples and surroundings zero-waste
9. **Urgently create permanent positions for Environmental Engineers and Health Inspectors** to implement & monitor S&LWM rules & projects in the Rural sector, must struggling with lack of qualified staff for suitable procedural guidance (**RDPR**)
 - a) 1 Environmental Officer to each DUDC and to each Taluk
 - b) 2 Environmental Officers to each Zilla Panchayat
 - c) 1 Health Inspector and 1 Sanitary Landfill for 10 Gram Panchayats
10. **Create at Coast Guard Department a separate wing explicitly to safeguard marine environment** from waste pollution, including technical and monitoring staff expert in marine pollution.
11. **Enforce a longstanding stern Plastic Ban**
 - a) order the removal of all Flex banners at the entire State
 - b) order Local Bodies to strictly stop plastic suppliers/distributers
 - c) Instruct a stern plastic control by LBs, Police, Food, Excise & Revenue Dept., etc.
12. Deliver allocation of **specific grants to GPs to develop infrastructure for S&LW Management** (e.g., sanitary landfill sites, waste collection vehicles, processing facilities, etc.)
13. Call **summit of outstanding Environmental Experts (EEs, EOs, MB, Fisheries, etc.) to propose a Multi-sector Strategic Plan** with key solutions for the assessed coastal problems.
14. Fix **EPR for glass bottles, fishnets & all fisheries plastic items**
15. **URGE DCs, ZPs & TPs to immediately provide operational data**, expressly
 - a) Identifying illegal sewage discharge at the coastal areas and action taken by ZPs & DUDCs
 - b) Identifying all CRZ encroachments

2 Principles to be adopted

- **Ecosystem approach**
- **PPP** (Polluter Pays Principle)
- **PAYT scheme** (Pay As You Throw)
- **EPR** (Extended Producer Responsibility)
- **IPP** (Integrated Product Policy)
- **MBIs** (**Market Based Instruments**)

MBIs offer a complimentary approach to address the marine litter issue along with awareness and legal framework. These economic tools include taxes, charges, penalties, liability and compensation schemes, subsidies, incentives. They incorporate the PPP and the User/Beneficiary Pays Principle (U/BPP), acting as incentives to change behavior, ensuring also true cost of environmental impact.

SAMPLE of MBIS

- Deposit-refund programs on plastic and glass bottles –to reuse the bottles and reduce litter
- Tourist taxes, car parking fees (e.g., near seashore), and seashore business charges.
- Award-based incentives for coastal villages
- Incentives to fishermen for reporting on/and remove debris
- Financial and technical support to install waste management system on fishing vessels

- c) Listing traders on the coastal line and identify their licensed status
- d) Tallying all Coastal Tourism Operators with identification of their licensed status
- e) Identifying legacy waste dumped by LBs in coastal and adjacent forest area
- f) Listing GPs which have framed and implemented S&PWM byelaws
- i) Reporting on coastal LBs fitness on Solid & Plastic Waste Management
- j) Reporting on Solid & Plastic Waste Management cases penalized, fined, booked by LBs and the other liable authorities
- l) Broadly listing volunteer associations involved in seashore cleaning and migrant fish/coastal workers paid under MNREGA
- m) Identifying legacy waste kept in coastal villages and action prepared to handle it
- n) Indicating the official/s in charge of S&L Waste Management at each LB
- o) Indicating the status of identification and allotment of land to villages for SWM

B – FOUNDATIONAL STEPS

to be prompted immediately by the **PROJECT HEAD**, after forming the **Steering Committee**, and initiate the collection of ground data to assess the specific coastal issues to properly start the Projectⁱⁱ

1. Create an Extraordinary Committee to design and implement an **Action Plan for Prevention & Removal of Marine Litter**
2. Create a **Centre for Interpretation of Marine Litter** to assess waste streams & sources
3. Appoint an Environmental Professional as **Project Director** for implementation of the Project and coordination of DCs
4. Assign a **Seafaring Spark Force** to implement the Strategic Plan & start action³
5. Appoint a **Seashore Managing Team** for each specified stretch with accurate assigned tasks⁴
6. Urge apt Government agencies to design and conduct adjusted **Marine Literacy Program** for Coastal Communities
7. Raise environmental alertness of coastal stakeholders
 - a) Create a marine literacy syllabus for coastal communities (**DDPI**)
 - b) Run education campaigns, awareness and capacity building to ensure sustainable governance of marine litter by all stakeholders (**Directorate of Mass Education**)
 - c) Spark stewardship of coastal communities for discarded fishnets & domestic waste
8. Foster **KSTDC Master Plan for Blue Tourism** to all stakeholders
9. Monitor the implementation **Coastal Waste Management Plan** of Temples Endowment

³ (Board comprising Chairman of DLSCs, DCs, SPs, CEOs, ACs, Tahashildars, KSPCB, KSTDC, EOs and PDs of DUDC)

⁴ **Seashore Managing Team**

- a) to assess the waste producing activities, the waste streams and its clearance
- b) to identify coastal legacy waste dumpsites
- c) to identify situations where litter “escapes” into the marine environment
- d) to identify schools and colleges willing to participate in the programs
- e) to train youths, students, community based organizations (CBOs) and volunteer groups in driving seashore clean-ups and monitor its sanitation

10. Direct coastal **LBs** to pass a byelaw for a **Seashore Waste Management Plan** [including chronic dumps and catchment areas], fixing needful **MBIs** (Market Based Instruments), EPR and PPP to decrease marine litter

11. Monitor the implementation of the **Plan for cleaning water bodies** and water flows before monsoon (e.g., cleaning of drains, nalahas, channels, the install of appropriate traps/meshes to drains connecting to water bodies, the passage of waste water to water bodies) through ULBs and TPs Officers reports.

12. Instruct Coastal **GPs** and **ULBs** to **fix warning boards** (with info on penalty) at the most vulnerable places to avoid littering and dumping

13. Monitor Coast Guard survey and penalty of waste disposal at seashore areas

14. Request **increase of patrols at sea** to monitor waste disposal from fish farms and boats

15. Direct **random surveillance** of the most vulnerable places lead by Police, LBs, PCB

16. Call all **press media for a continual coverage** of the project development

17. Create a online platform, a forum for public to exchange experiences and ratings on **good cleaning practices** adapted by traders at seashore (also riverbanks, catchment areas, ports and inland waterways), monitoring traders performance and evaluating them focused on eco-friendly alertness, waste management, customer care, etc. Being publicly available on Internet, such evaluation will help all traders to be attentive, knowing that better performers are recognized and awarded.⁵

C – ENACTING STEPS to be accomplished by the **PROJECT DIRECTOR** through specific stakeholders for specific **CLUSTERS**

1. FISHERIES – Deputy Director of Fisheries

- a) Operationalize the disposal system of fish gears ordering fishermen to remove all abandoned, lost and otherwise discarded fishing gear (ALDFG), handing them to LB
- b) Launch Incentive schemes for fishnet trade (e.g., discount on purchasing new fishnet if returning **x** discarded ones), for fish market packaging, for fish breaks composting, etc.)
- c) Mandate regular **“fishing for plastics”** to trawl operators at all the coast
- d) Create a scheme (e.g., *Fishing for Litter*) for fishermen to collect and bring waste to land handing it to Local Body
- e) Foster environmental alertness workshops for fishermen, fisherwomen & all fisheries sector

2. TOURISM (& LOCAL BODIES)

- 1.** Provide waste bins at visitors areas (tourist and pilgrim)
- 2.** Levy waste collection fees from coastal visitors and traders
- 3.** Where development infrastructure is made by **KSTDC**, joint maintenance system with Local Body should be strictly ensured, annually certified by KSPCB on ecological features.

⁵ Private Online platforms are available on internet (e.g., Tripadvisor, Agoda, Google Review, etc.), widely used by public to select hotels, restaurants, resorts, etc., based on their customer feedbacks and ratings. Traders consider this system seriously and always try to improve their ratings by upgrading quality of service. Considering it as a case study, similarly, if a online platform is created by GOVT. where public/customers can gauge the handling wastes, environmental concerns, forest conservation, rain water harvesting, etc. along with customer care by service providers, such traders will be kept attentive and motivated. Best performers shall be awarded yearly based on annual public feedback results.

4. Instruct all **Departments involved in tourism activities** to accurately plan the management of all wastes produced and, based on established marks, certify the best performers in a given stretch, publicly announcing them
5. Label guest-houses & hoteliers according to their performance on Wastes Management offering bonds based on public feedback system
6. Enforce **Solid & Plastic Waste disposal Plans** for all projects **promoting coastal eco-tourism** (as beaches with higher Tourism incidence are under GPs jurisdiction, lacking SWM Plans, facilities & technical guidance)

3. DCs (& LOCAL BODIES)

1. Implement the **Control Rooms** notified by NGT
2. Ensure appropriate and lawful disposal facilities to all Coastal LB
3. Ensure a flawless system waste management for collection, transportation, treatment, storage and disposal of solid waste, inclusive of the informal sector
4. Plan exhaustive removal of accumulated trash along the seashore (fixed by guidelines for collection and disposal, with performance check-list)
5. Fix rewards for coastal clean villages & clean beaches based on public feedback system

4. WIDE SCOPE CLUSTERS

1. Design and implement a **Good Practices Chart** for **Port Authorities** (civil & military), and for fishermen and fisherwomen (e.g., **India Navy, Mogaveera Samyuktha Sabha & DWCD**)
2. Call meetings of grassroot people (of defined coastal stretches) to present the Action Points and steps for Project implementation (**GPs, ULBs, DWCD, CDPO, NGOs**)
3. Monitor the Project 's implementation by the **Seafaring Spark Force**

POINTS FOR STAKEHOLDERS ASSESSMENT OF COASTAL CONDITION

1. REGIONAL DIRECTORS FOR ENVIRONMENT OF COASTAL DISTRICTS

1. Indicate the number and matter of Applications for clearance of permissible activities, under CRZ Notification 2011, submitted at the Districts.
2. Indicate the number and matter of Clearances of permissible activities, under CRZ Notification 2011, given at the Districts.
3. Identify by sectors and categories all the running prohibited activities/units within CRZ at the Districts

2. COASTAL ZYLLA PANCHAYATS

1. Provide full report on the works connected to waste collection and S&L waste management accomplished under MGNREGA scheme at the Coastal Talukas
2. Provide list of all licensed and unlicensed tourist operators (guesthouses, homestays, lodges, shacks, hotels, rooms, etc.), both for tourists and pilgrims, at the Coastal Talukas

3. COASTAL TALUK PANCHAYATS

1. Provide reports on the implementation of Gram Panchayat S&L WM Bylaw
2. Provide detailed report on the supervision made by Taluk Panchayat, during the last 4 years, for the implementation of
 - a) Solid Waste Management Plan (under SWM rules 2016)
 - b) Plastic Waste Management (under PWM rules 2016)
 - c) Hazardous and E-waste (under E-Waste & Hazardous Waste rules 2016)
3. Indicate steps taken by Taluk Panchayat for the implementation of Control Room advised by NGT
4. Provide detail of all measures taken by Taluk Panchayat, for the last 4 years, to stop the massive circulation of illicit plastics in Taluk area
5. Report on the measures taken by Taluk Panchayat
 - a) to provide the needful Waste Collection Vehicles
 - b) to provide needful staff
 - c) to ensure effective schedules and trips

4. COASTAL GRAM PANCHAYATS

1. Indicate number of licensed & unlicensed permanent buildings existing within CR Zone
2. Indicate the number of licensed & unlicensed tourism operators at Gram Panchayat area (hotels, restaurants, resorts, homestays, lodges, etc.)
3. Indicate the number of households
 - a) with toilet and septic tank
 - b) without toilet
 - c) with toilet and without septic tank.
4. Indicate all the decisions made by GP within the frame of **Panchayat Raj Act** related to
 - a) Solid Waste
 - b) Liquid Waste
 - c) Plastic Waste
5. Report the number of cases filled by Gram Panchayat against shops and traders for illegal plastic use along with the amount of seized material and the penalty imposed
6. Provide detailed Solid Waste Management Plan under SWM rules 2016.
7. Indicate if the Control Room advised by NGT was already set up, and if not, the hindrance faced
8. Indicate the total amount of the SWM fee collected up to date from waste producers