Session 2: Community Perceptions and behavioral aspects for plastic management and promotion of countermeasures to address

Perception And Behaviour Towards Use Of Plastic And Its Management

Mumbai Story

Project Time frame:
October 2019 - March 2020

 Implemented by:
Mr. Manish B. Asodekar, Research Associate, TERI
Date: 14th May 2020
TERI’s Campaign under the Counter measures project

Elephanta Island

Legend
- Awareness Program
- Treasure Hunt for Bottles
- One to One Survey
- Clean Up Activity
- Treasure Hunt for Saplings
- MMR Boundary
Awareness and Training of Trainers

> 75 Trainers through these programs

35 Trainers conducted 17 awareness programmes

Treasure Hunt for Bottles and Saplings

> 2000 bottles collected

> 700 saplings collected through Treasure Hunts and planted in waste plastic bottles

Commitment for > 250 saplings through ‘Rethink Plastic’ App

World Wetlands Day 2020

> 300 participants

Read full report at:
https://www.worldwetlandsday.org/display-event?p_p_id=eventDisplay&eventEntryId=660400&redirect=https%3A%2F%2Fwww.worldwetlandsday.org%2Fevents%23event660400

For more details visit: https://www.teriin.org/project/rethink-plastic-unep-teri-joint-initiative-mumbai-region

Waste collection and segregation in Mangrove, Beach, Island and Creek Ecosystems

• > 100 Volunteers
• > 500 kg Mixed Waste collected

Round Table Discussion
30 experts from diverse domains

• > 2000 Pledge
• > 860 Perception Survey
By saving 7050 sheets of paper\(^2\) by using Google Forms

90.977 kg CO\(_2\) eq emissions avoided\(^1\)

Involving the differently abled
- 1 Braille Book
- 2 Touch and Feel Kits
Adoption of 100 saplings by Helen Keller Institute of Deaf and Deaf blind, Navi Mumbai
- Participation in World Wetlands Day 2020

A Webpage for the campaign
https://www.teriin.org/project/rethink-plastic-unep-teri-joint-initiative-mumbai-region

2000 waste PET bottles collected for Recycling
179.19 kg CO\(_2\) e emissions diverted by recycling\(^3\)

Summary Part 2

1 Google links for survey, pledge, registration sheet and feedback form
For more details visit: https://www.teriin.org/project/rethink-plastic-unep-teri-joint-initiative-mumbai-region

1 Android App
“Rethink Plastic”

3 QR codes

4 Google forms – Perception Survey, Pledge, Feedback form
Registration Sheet for World Wetland Day

WhatsApp Groups for Trainers
Diversity of Stakeholders
**Stakeholder Mapping**

**Academia**
- **Colleges** affiliated to the University of Mumbai and NSS unit
- Indian Institute of Technology – Bombay
- Central Institute of Fisheries Education

**Research Institutes**
- Thane Belapur Industrial Association
- IndusInd Bank
- Hindustan Unilever
- All India Plastic Manufacturers Association

**Industries/Corporates**
- Ferry Boat Owner’s Association
- Rag pickers
- Islanders (locals of Elephants islands)

**Grass root Organizations**
- Local Municipal Corporations
- Environment Department, Mantralaya
- Maharashtra Pollution Control Board

**Government**
- Hindu Times
- Maharashtra Times
- Loksatta
- E-papers

**NGOs / Foundations**
- Sagar Mitra Abhiyan
- Jyoti Care Foundation

**Media**
- Times of India
- Hindustan Times
- Sakal
- Maharashtra Times
- Loksatta
- E-papers

**Differently abled**
- Helen Keller Institute of Deaf and Deaf blind
A. Overall Strategy And Approach For Understanding Perception Towards Plastic Use And Its Management

1. Face to Face Interaction

2. Extensive use of social and electronic media
   
   A. Mobile Videography (10 Nos.)
   
   B. Google form and QR code (Perception Survey)
   https://drive.google.com/open?id=1A-VksO-GT6tZGDOF2cBr90GrTp83wohCPFyAIWyNDbM

   C. Link on Rethink Plastic Webpage

   >200 respondents surveyed @
   1. Elephant Island
   2. Gateway of India
   3. Workshops and Events

   > 600 respondents surveyed

3. Reaching out to festivals

   The standee was displayed at the Kala Ghoda Festival in Mumbai
• Participants: 15 **NSS volunteers** from K.C. College, Mumbai

• >100 respondents took part in a survey conducted in English and Marathi language.

• Respondents stressed on the need for well established waste management system on the island

• restaurateur and shop owners showed a willingness to give up plastic items if suitable and easily available plastic alternative are available.

• A restaurateur even showed willingness to work with TERI to mitigate plastic problem on the island
A3. Perception towards Plastic

1. Use of Plastic

- **Reasons for preferring plastic products**
  - Affordable/cheap: 22%
  - Light weight: 20%
  - Durable: 14%
  - Easily available: 28%
  - Lack of alternatives: 26%
  - All of the above: 38%

- As per the respondents:
  - **Cannot completely avoid** plastic use
  - Even manufacturing of plastic alternatives would **require huge resources** such as wood, bamboo, metal

- **Proper waste segregation and disposal** is the main key to tackle waste problem including plastic waste

- It should be coupled with **recycle and reuse** and **use of alternatives** (an extent to which it would not become a burden on local resources)

- **Reuse of Plastic bags**
  - Yes: 66%
  - No: 11%
  - Often: 12%
  - Rarely: 11%
A huge opportunity for making change in behavior.

What can be done???

• Awareness through workshops/events
• Introduction and practicing waste segregation from school level
• Imposing heavy fines on plastic use especially single use plastic

- Need for housing societies to tie-up with plastic recyclers in the vicinity to promote proper segregation and management of plastic waste
- Collective efforts by the government, NGOs and citizens

Perception- Need of pricing of plastic carry bags

- Yes, it will reduce usage of plastic bags: 75%
- No: 17%
- Not sure: 8%
B. TERI’s approach to validate stakeholder behavior towards plastic pollution
B1. Cleanup drives to understand stakeholder behaviour

Charkop cleanup site (Creek Ecosystem) ..That's just 1 leakage point...

Micro Plastic Leakage Points present in various ecosystems in Mumbai
First hand reaction of Volunteers after participating in cleanup drives

• A sense of outrage seeing the Actual Ground Reality

• Took A Pledge To Not Use Single Use Plastic

• Committed Self To Engage In Such Activities Regularly (A Group Of Students Actually Got Connected With A Group Of Mangrove Marshals Who Conducts Weekly Cleanup In Mangroves Of Vashi, Navi Mumbai).

• Promised To Share their experience with other Stakeholders.
B2. Training and beyond…

TERI conducted

• 5 Awareness and sensitization workshops (520 participants)
• 3 TOTs – created a batch of 78 trainers

Response received from stakeholders

• Out of 78, 35 trainers conducted 17 sessions and trained other colleagues thereby created a chain of trained professionals and increased a scope of creating awareness among the youths.
• Same chain is to be continued further
• > 700 native saplings collected and planted in waste plastic bottles
• >300 participated in awareness activities during World Wetlands Day 2020 event
• >2000 waste plastic bottles were collected and given to the recyclers.

• Commitment towards avoiding single use plastic received from stakeholders from different fields
Enthusiastic responses from stakeholders

Interaction with Mentors/Experts

Discounted journey by Ferry boat owners

Making part of syllabus – Assigning marking system

Saplings commitments by colleges through app

Active Participation of NSS students and Like minded stakeholders

Contributing treasure (950 waste plastic bottles) by school students

Enthusiastic stakeholders - Differently Abled

100 saplings being raised and nurtured further by Differently Abled

***Continuous activity being carried out by the students of the institute (Helen Keller Institute of Deaf and Deaf Blind)...so there is a continuity and sustainability in the process.
C. Towards making a concrete roadmap against plastic waste management
Around 30 stakeholders from different background discussed key points like

- Their Experiences/ Research Findings
- Identification of Strengths And Loopholes in Existing Policies
- Suggesting Better Policy Interventions And Discussing Practical Action At The Individual/ Organizational Levels

Event: Round Table Discussion (23.12.2019)
Location: University of Mumbai campus, Fort, Mumbai
Theme: Plastic pollution and Role of Stakeholders
Chaired by: Hon’ble Vice Chancellor, University of Mumbai

Primary objectives:
- Initiate Policy dialogue
- understand the policy status in Maharashtra
- use inputs to develop roadmap
C2. Discussion Highlights: Key Gaps/Improvements Needs To Be Addressed

Awareness and Data gaps

- Level of awareness
- Lack of Transparency in data availability

Research on Life Cycle Assessment of Plastics and Micro-plastic

- Innovation
- Focus on sustainability and environmental impact
- Lack of affordability and accessibility of the required technology

Policy dimensions

- Identifying hotspots
- Incentivize plastic recycling
- Prompt Implementation of bans and laws
- State wide Action Plan/Roadmap
Thank You

In case of queries/contact

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