

*National Policy Workshop Webinar Series*

*On*

*Countermeasures for Riverine and Marine Plastic Litter in India*

*12 -22 May 2020*

*Session 3: Activities and Best practices to counter plastics litter by sustainable waste management and circularity*

Innovative systems and technologies to address ocean plastic pollution and market creation for soft plastic

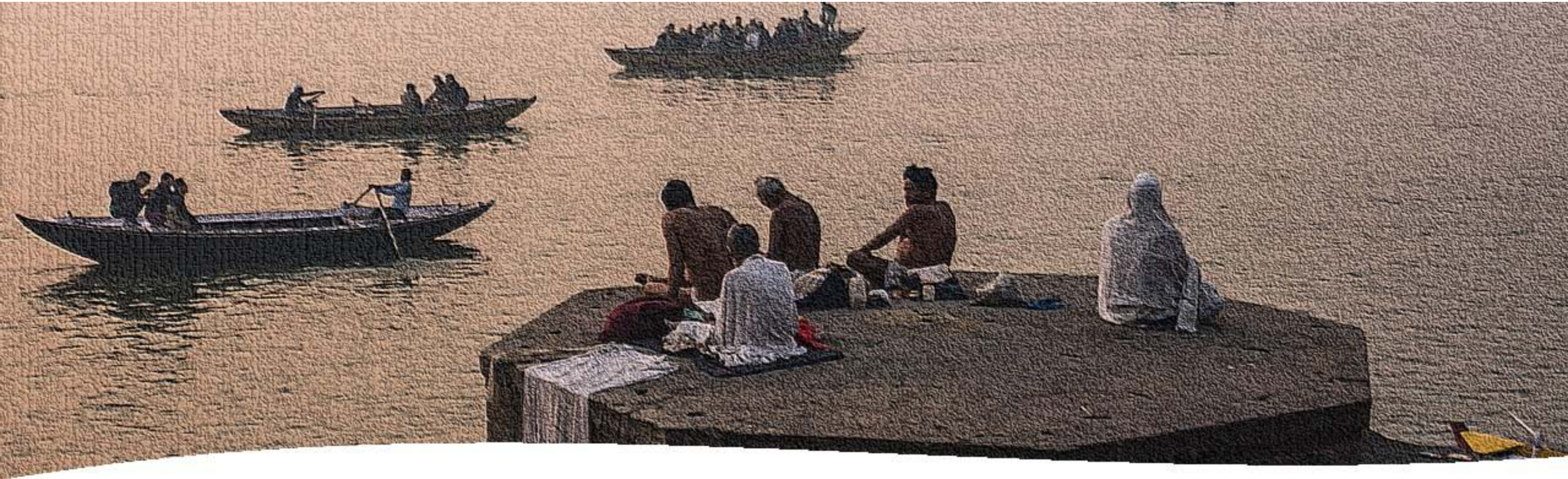
# Renew Oceans Foundation



- *Who? are we*
- *What? do we do*
- *Why? do we do it*
- *Where? do we do it*
- *How? do we do it*
- *Roadmap*
- *Challenges*



# What ? do we do



We establish systems and use technology to reduce ocean plastic pollution where it begins—in populous river-adjacent communities in the developing world.



Innovative systems and technologies to address ocean plastic pollution and market creation for soft plastic



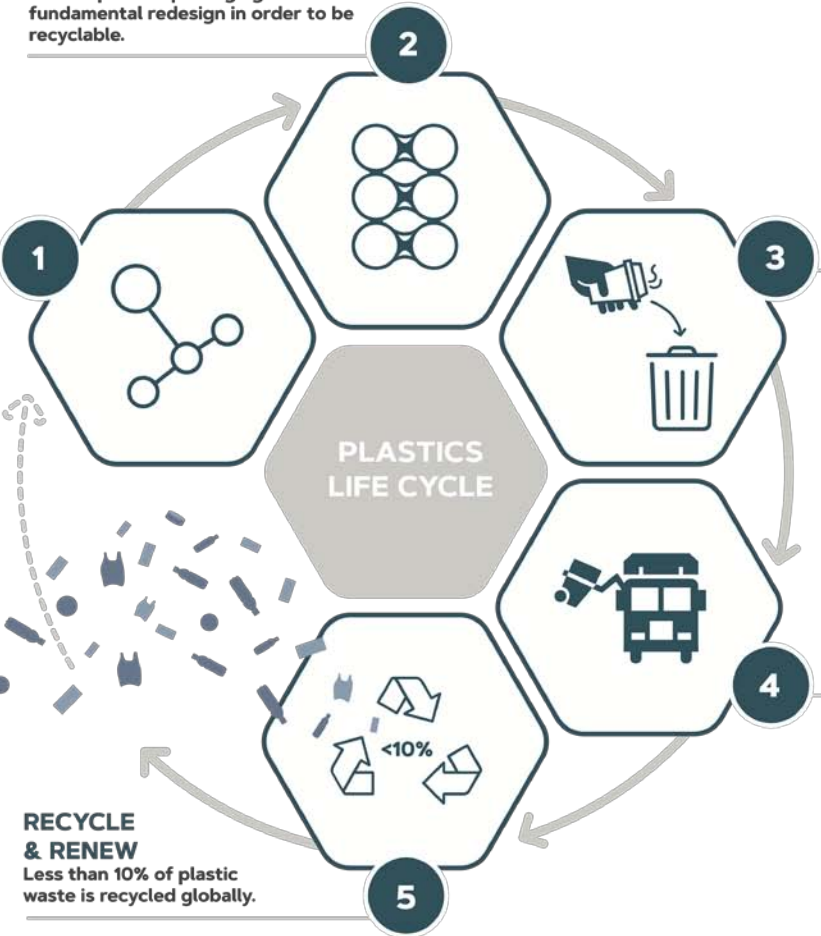
# Why? do we do it

**MONOMER & PLASTIC PRODUCTION**  
4% of global oil production is used for plastics.

**DESIGN & FABRICATION**  
30% of plastics packaging needs fundamental redesign in order to be recyclable.

**PLASTIC CONSUMPTION**  
36% of plastics produced are single use.

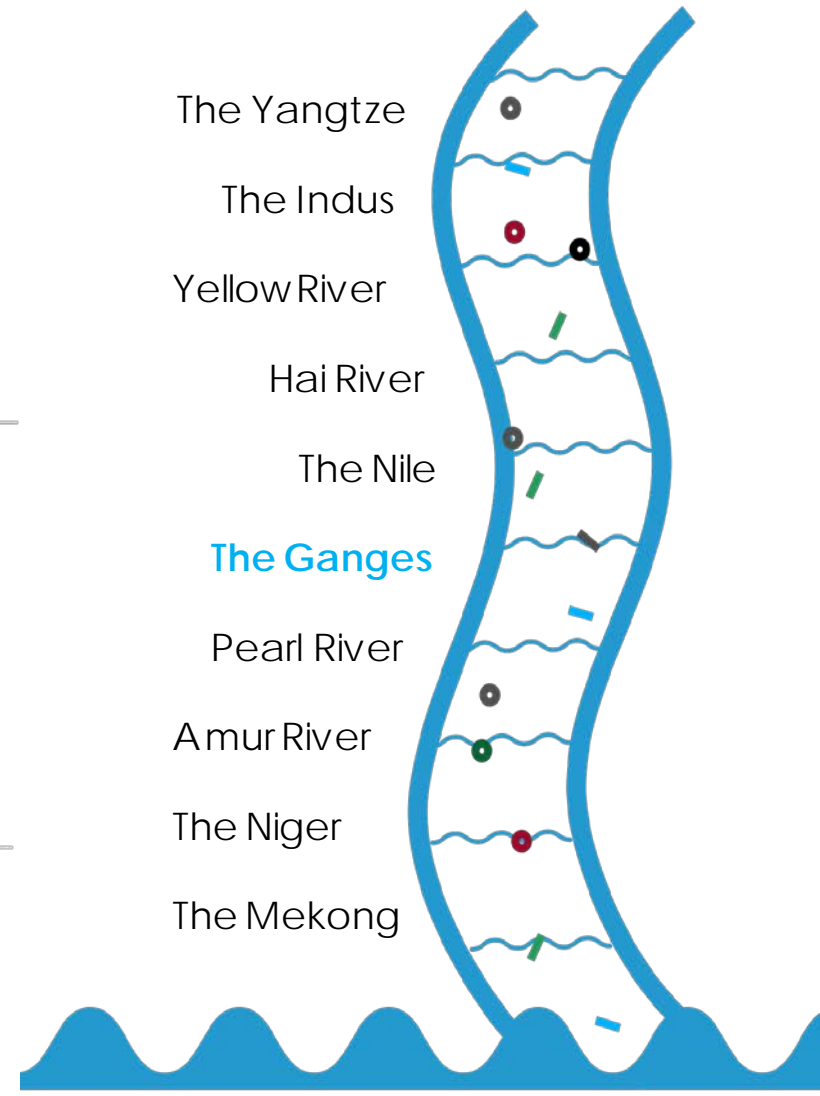
**COLLECTION & CLEAN UP**  
25% of people lack access to recycling collection.



**OCEAN & ENVIRONMENTAL POLLUTION**  
32% of plastics enter the ocean and environment.

**RECYCLE & RENEW**  
Less than 10% of plastic waste is recycled globally.

- The Yangtze
- The Indus
- Yellow River
- Hai River
- The Nile
- The Ganges**
- Pearl River
- Amur River
- The Niger
- The Mekong



1.2 billion pounds of plastic enters oceans via river Ganga every year



# Where? do we do it

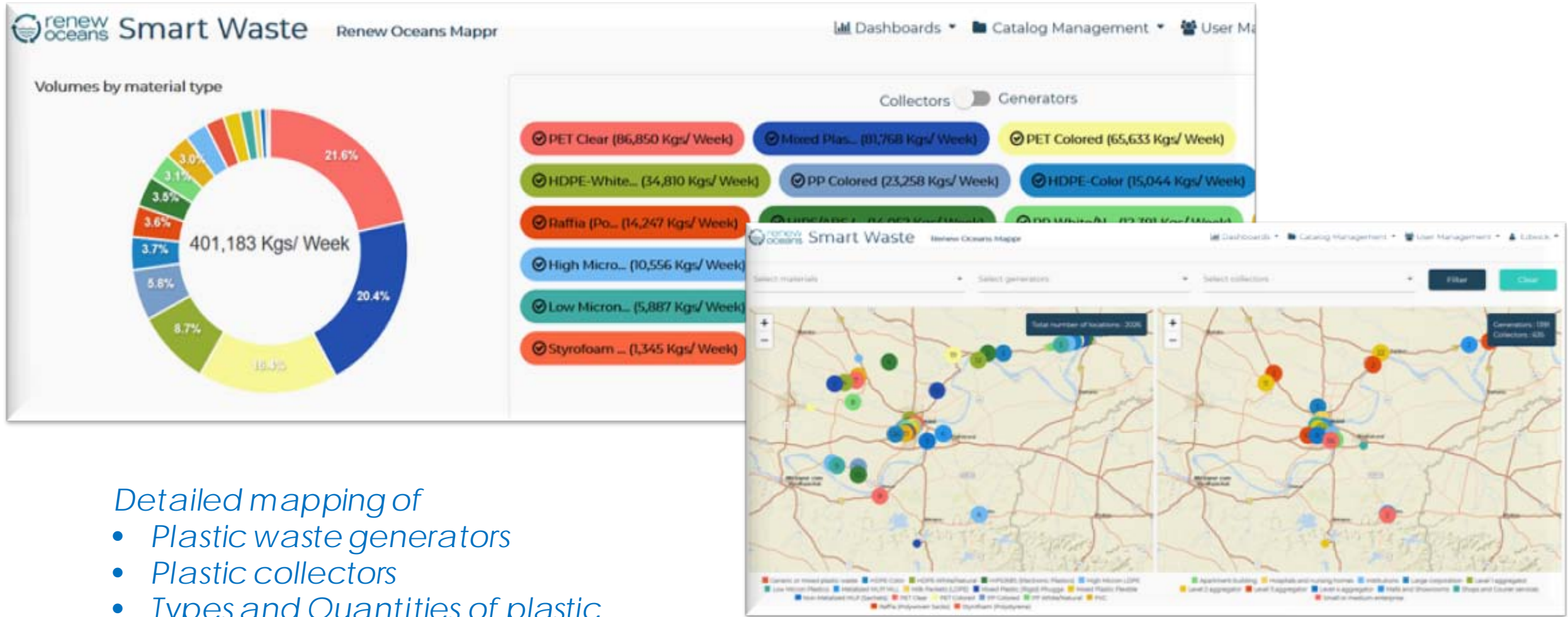


- Varanasi population ~ 14+ lakhs
- Waste generation ~600-650 TPD
- 7-8% of generated waste is plastic

*Waste collection numbers and factors on the ground @Varanasi indicate a significant scope for improvement in segregation and collection mechanisms*



# Data collected



Detailed mapping of

- Plastic waste generators
- Plastic collectors
- Types and Quantities of plastic at various zones



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# How? – **Collection**, Conversion & Community (3Cs)



*We adopt both  
Land & Water based  
interventions*

- Trash removed from Assi river (leading to river Ganga) using water based interventions in year 2019-20' from just 5 locations is **134.8** tons.
- ~40% of removed waste is plastic!

### **Working on :**

- Design improvements
- AI based alerts.



# How? – Collection, **Conversion** & Community (3Cs)

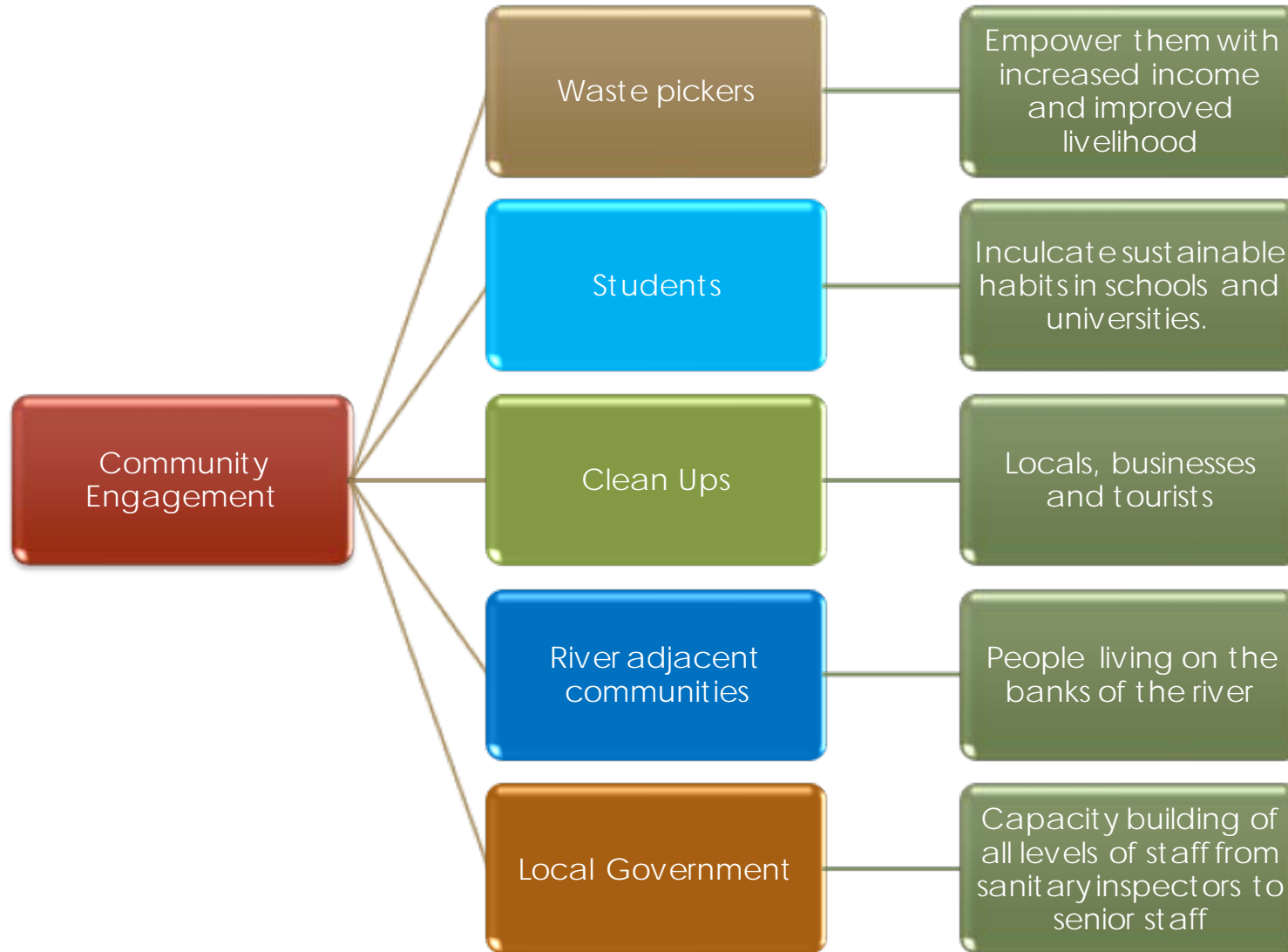


- *Renew One - Prototype installation of a 100kg/day capacity conversion unit of soft plastics @ IIT BHU. Unit converts soft plastic into Diesel and Light oil*
- *Plans to install a 1 Ton/day capacity conversion unit in 2021.*





# How? – Collection, Conversion & **Community** (3Cs)

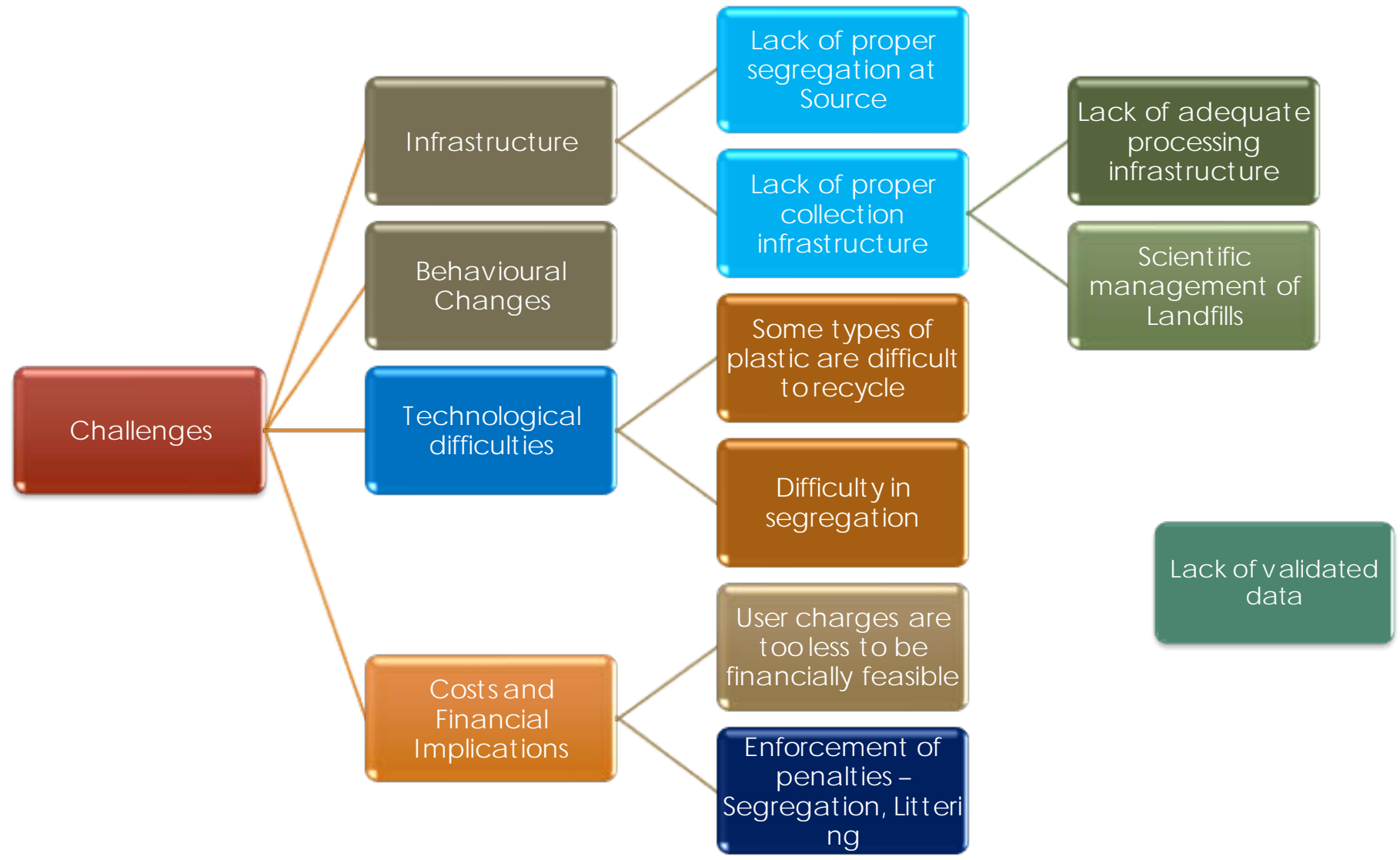


# Roadmap 2020

- Divert 200,000 lbs of plastic from reaching river Ganga in 2020 @Varanasi
- Install Refences at 3 more locations along the drains leading to Ganga
- Setup reverse vending machines for collecting soft plastic
- Feasibility study to setup a 1T/day capacity of plastic to diesel conversion plant
- Expanding operations to other river-adjacent cities
- Active Community engagement of 10000 participants
- Financial and Environmental impact assessment of interventions – 3Cs



# Challenges



# Suggestions

Apart from improving segregation, collection and associated infrastructure, these are some areas that require close attention -

- Coordinating research projects and execution projects for improved data collection nationally
  - NGOs & NPOs
  - Municipal bodies
  - Private players
- Use of technology – AI, drones, image processing, block chain etc to improve data transparency and accuracy
- Standardizing messaging for behaviour change across the country



# Contact us

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