

# Global to local – marine litter prevention through Community Mobilization on Source Separation of Solid Waste at Households level in the island city of Port Blair, India



Aviral Saxena\*, Carla Nadal Rossitto\*\*, Vaishali Nandan\*\*\*

\*Waste Management Advisor, Indo-German development cooperation - GIZ GmbH, Port Blair, 744101, India

\*\*Technical Advisor, Indo-German development cooperation - GIZ GmbH, New Delhi, 110001, India

\*\*\*Project Head, Indo-German development cooperation - GIZ GmbH, New Delhi, 110001, India

Presenting author email: aviral.saxena@giz.de

## Introduction

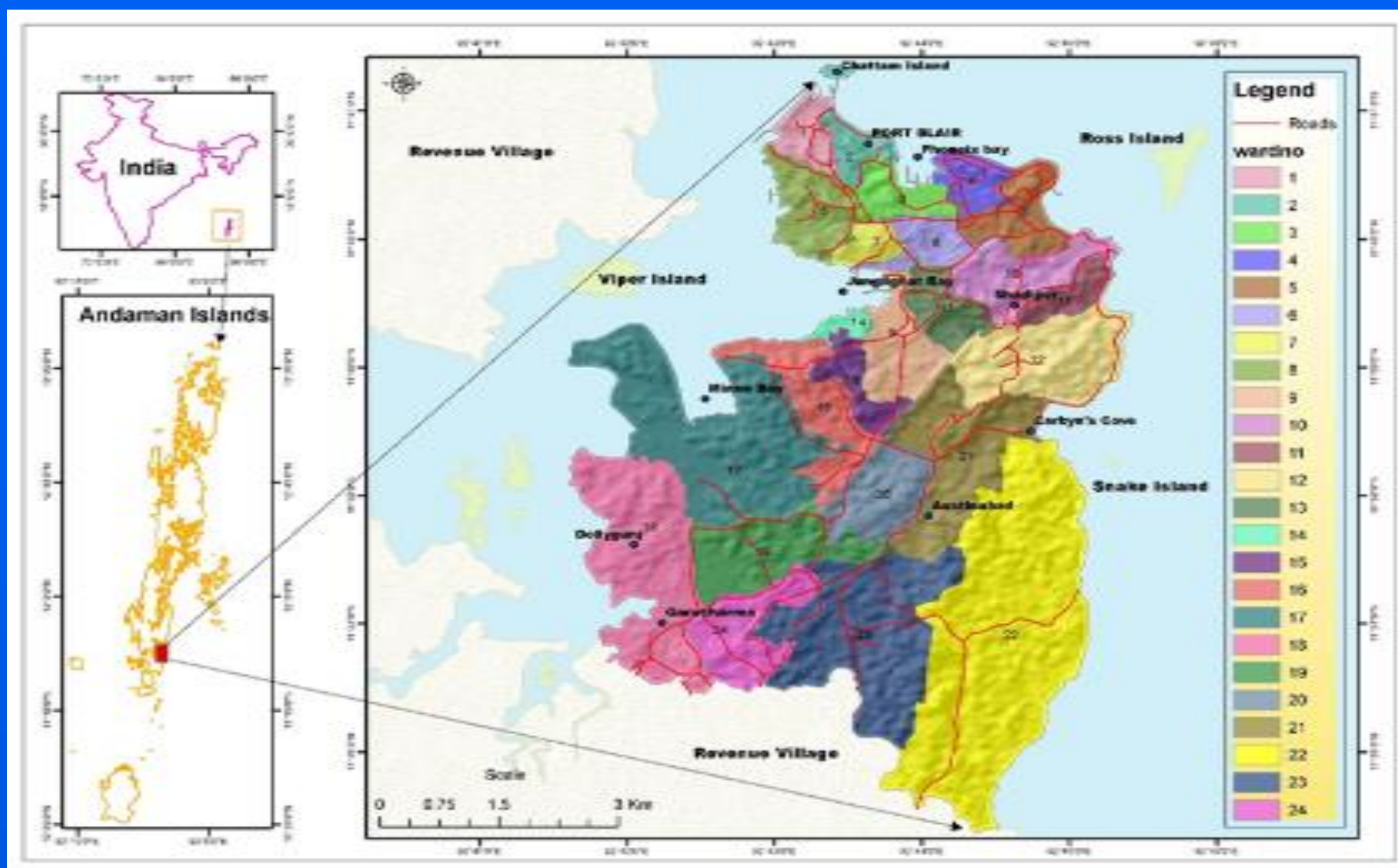


Figure: Location study area – Port Blair, India

This study is related to Andaman and Nicobar Islands (ANI's), a Union territory belonging to India (Fig-1) and the assessment and mitigation of hotspots areas on waste leakage into the marine environment in the capital Port Blair. Three hotspot areas are selected namely, Junglighat Fish Landing Area (Fisherman community) (Ward No-14), R.K. Mission area (House Holds & officials, Ward no-10) and Carbyn's Cove-Austinabad (Urban Households and shopkeepers Ward no-22).

Despite mandate by the Solid Waste Rules 2016, Government of India, and massive awareness activities about waste segregation supported by the national level, implementation of waste segregation at source still is a challenge for many Indian municipalities. The objective of the study is to understand the current practice and knowledge about waste separation & its management in households' level for the implementation of measures and impact of household women involvement during community mobilization in source separation of waste & its management.

## Results & Discussion

The study employed six data collection methods which are:

- waste characterization study,
- review of route map for waste collection,
- interviews with community,
- door to door monitoring of waste collection & segregation,
- mobilization of community for waste collection & segregation and
- measurements of waste and conducted in three identified hotspot areas;



Figures: Data collection methods

Table-1 shows the average solid waste generation rate for households of Port Blair was 0.23 Kg/capita/day in High Income Group, 0.20 Kg/capita/day in Middle Income Group & 0.19 Kg/capita/day in Low Income Group respectively. In terms of the waste composition, organic waste constitutes the highest composition value. The 68% of organic waste was found in the household study.

Table 1 S. No	Area	Income Group (Average Waste Generation(Kg/C/Day))		
		HIG	MIG	LIG
1	Carbyn	0.247	0.203	0.149
2	Junglighat	0.258	0.274	0.245
3	R K Mission	0.200	0.140	0.174
Overall Waste Generation in all areas		0.235	0.206	0.189

The knowledge assessment survey was conducted in 1451 households. It was found that 86.78 % households having any type of bins or storage system to store the waste, 93% of the household respondents stored the waste and handing over to waste collector, 77.55% household having segregation practice, only 4.56% households dumping their waste nearby street or drains and 74% of respondents aware about negative impact of littering in dumping and drains.

Minimum 10 days monitoring and mobilization activities was conducted in 1505 households of all 03-hotspot area, Table-2 shows improvement in waste collection, un-segregation and segregation practice which was observed during monitoring and mobilization in the field (at least 10 days).

Table 2 Activity	Initial days of activity (Monitoring)	After involvement of household women (Mobilization)
Households not providing waste to waste collector	39%	18%
Unsegregated waste to waste collector	30.44%	16.46%
Source segregation	31%	65%
Composting at Home	-	1% (16 nos.)

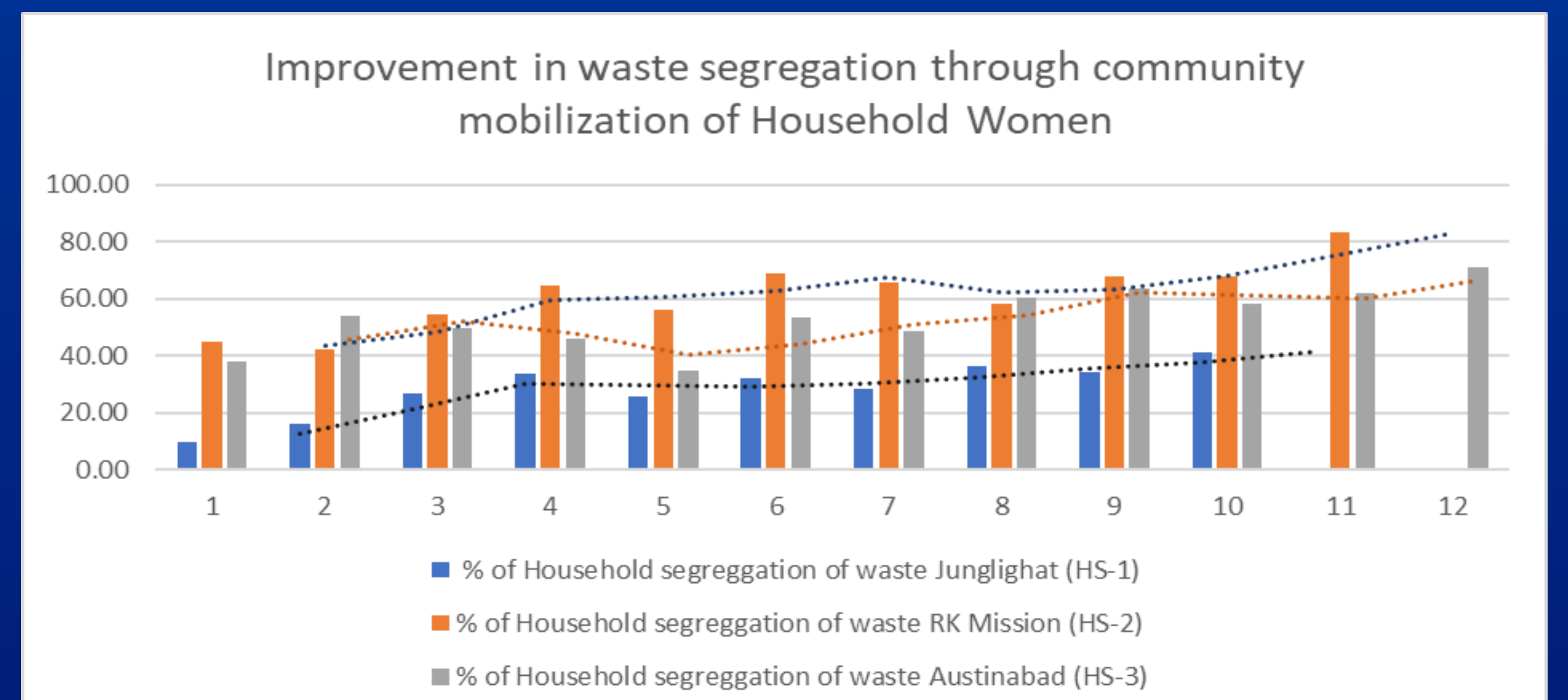
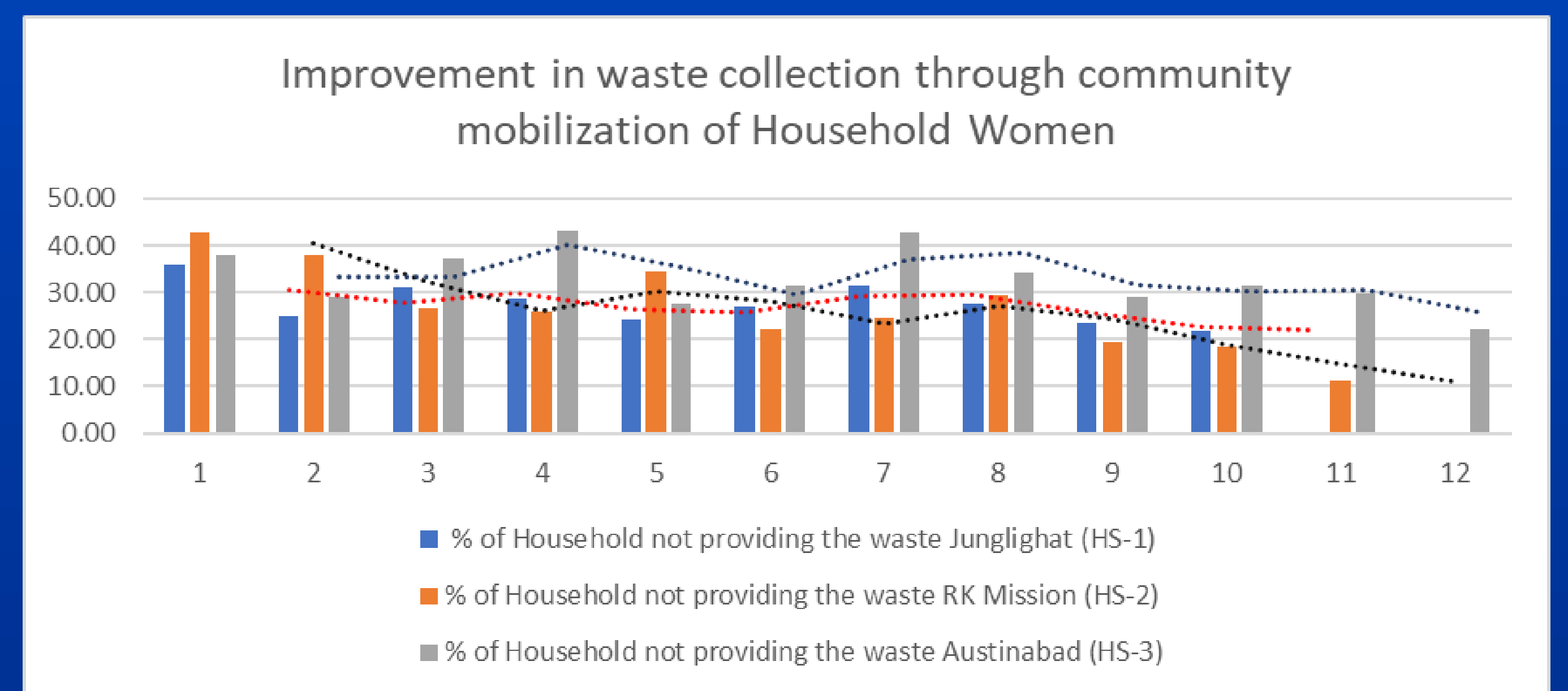


Figure: Example Chart

## Conclusions

There is a difference in perception (77.55%) and attitude (31%) for segregation of waste, this study tried to highlight the importance of household's women in waste segregation at source. Proper monitoring of waste collection service and enforcement of municipal bylaws play an important role for success of waste collection & segregation at source. The municipality should educate and target the women of the households about the importance of waste segregation and provide relevant training to encourage households to segregate their waste. Through involvement of women in mobilization, we achieved the average 31% to 65 % of waste segregation at source.

This study was conducted under the project Cities Combatting Plastic entering Marine Environment (CCP-ME), an initiative of the Ministry of Housing and Urban Affairs (MoHUA), India, in partnership with the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) with technical support from the German development cooperation, through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. ).