SOLID WASTE MANAGEMENT KAP & BASELINE STUDY

16 October to 03 November 2022

Presentation with Type of SWM Modality

Cox's Bazar, Bangladesh

OBJECTIVES

- understand/identify gaps and barriers in the Knowledge, Attitudes, Practices & perceptions of the community (HHs) related to littering and waste segregation
- Obtain a baseline to measure impact/change of behaviors from current interventions and sector-wide SWM context overview
- bridge hygiene promotion-behavior change to an effective SWM infrastructure service delivery
- feed findings into existing resource tools and design behavior change interventions
- integrate KAP into the chain of SWM infrastructure services

WASH Sector Cox's Bazar

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PART-I

GENERAL INFORMATION

RESPONDENTS & LOCATION

- **477 household KII respondents**
- **28 Camps** (Unicef-8, UNHCR-10, IOM-10)
- **14 WASH Partners**
  (Unicef-5, UNHCR-2, IOM-6)
- **15 FGDs in 15 Camps**

(11, 12, 14, 15, 22, 6, 9, KTP-RC, 5, Nayapara Register Refugee Camp, 20 Ext, 20, 12, 8W, 8E & 19)

Total FGD participants: 148 females

(52 adolescent, 86 adults, 3 old age, 7 PWDs)

AFA	# Respondents
IOM	**180**
ACF	18
BRAC	18
DSK	54
NGOF	18
SHED	54
Sushilan	18
UNHCR	**152**
BRAC	78
NGOF	74
UNICEF	**145**
BRAC	18
CARE	36
DSK	18
NGOF	37
VERC	18
World_Vision	18
Grand Total	**477**

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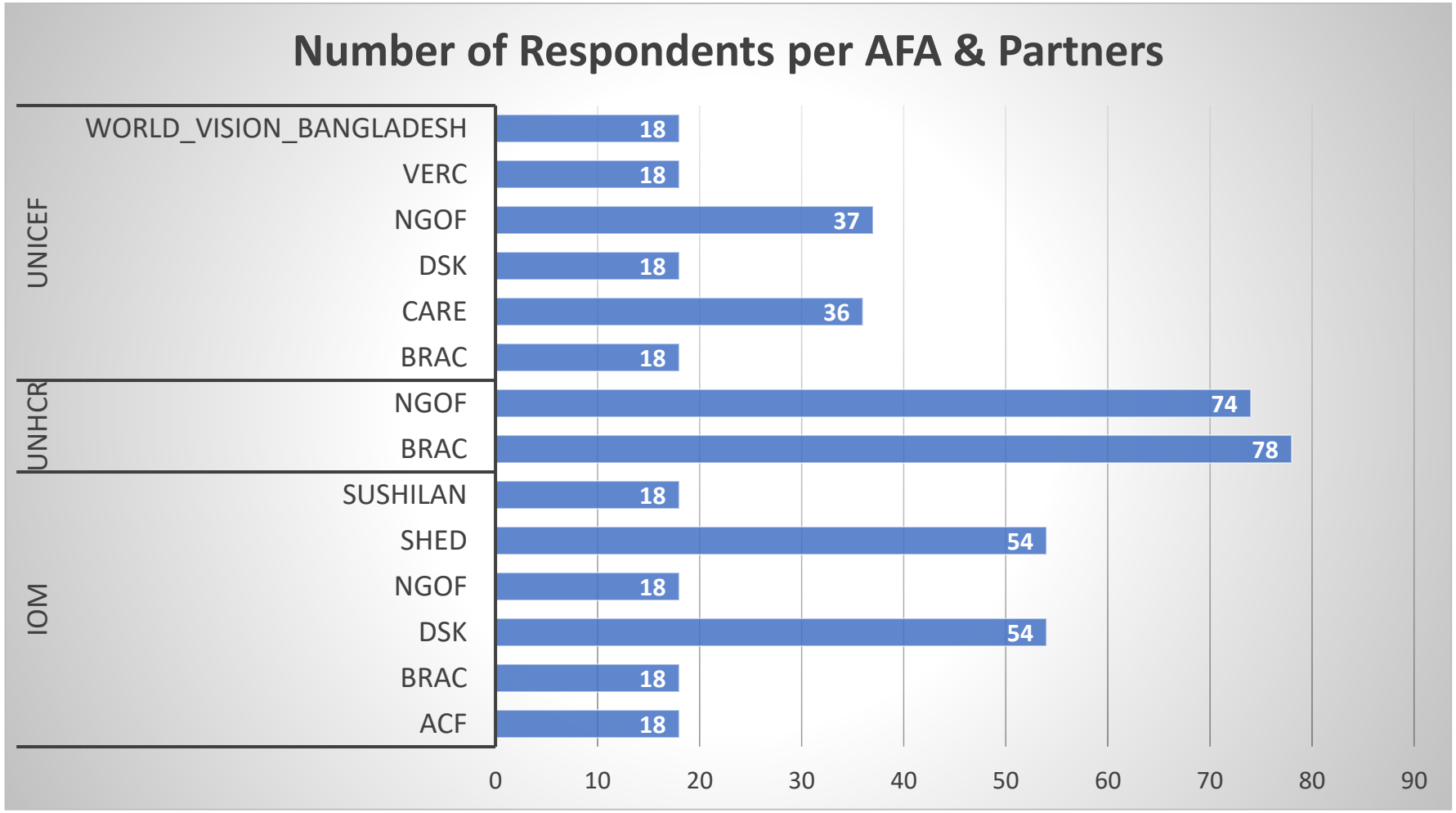
Respondents per AFA & Location

IOM	180
Camp_10	18
Camp_11	18
Camp_12	18
Camp_13	18
Camp_18	18
Camp_19	18
Camp_20	18
Camp_20_Ext	18
Camp_24	18
Camp_9	18

UNHCR	152
Camp_1W	7
Camp_21	18
Camp_26	18
Camp_2E	19
Camp_3	16
Camp_4	2
Camp_4_Ext	18
Camp_5	18
Kutupalong_RC	18
Nayapara_RC	18

UNICEF	145
Camp_14	18
Camp_15	18
Camp_16	18
Camp_22	18
Camp_6	18
Camp_7	19
Camp_8E	18
Camp_8W	18

AFA, partners & respondents

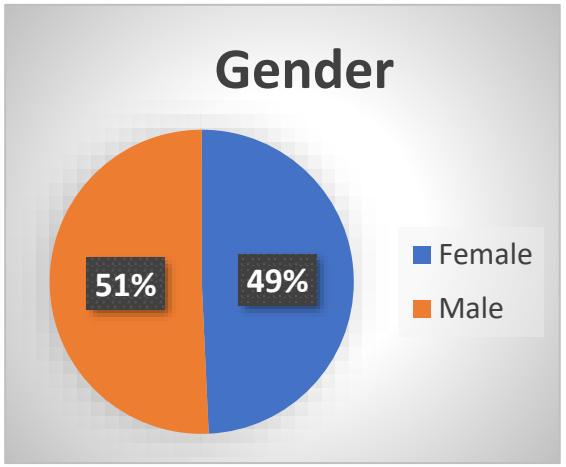


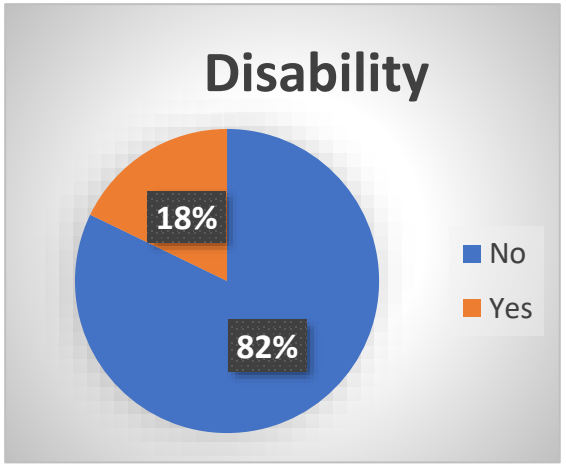
5 WASH Partners

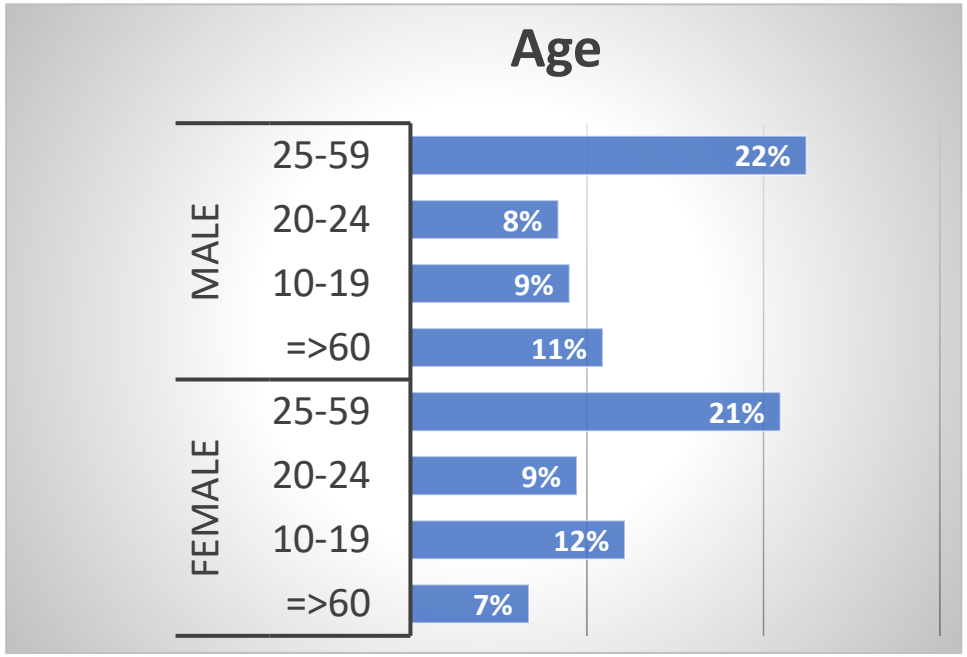
2 WASH Partners

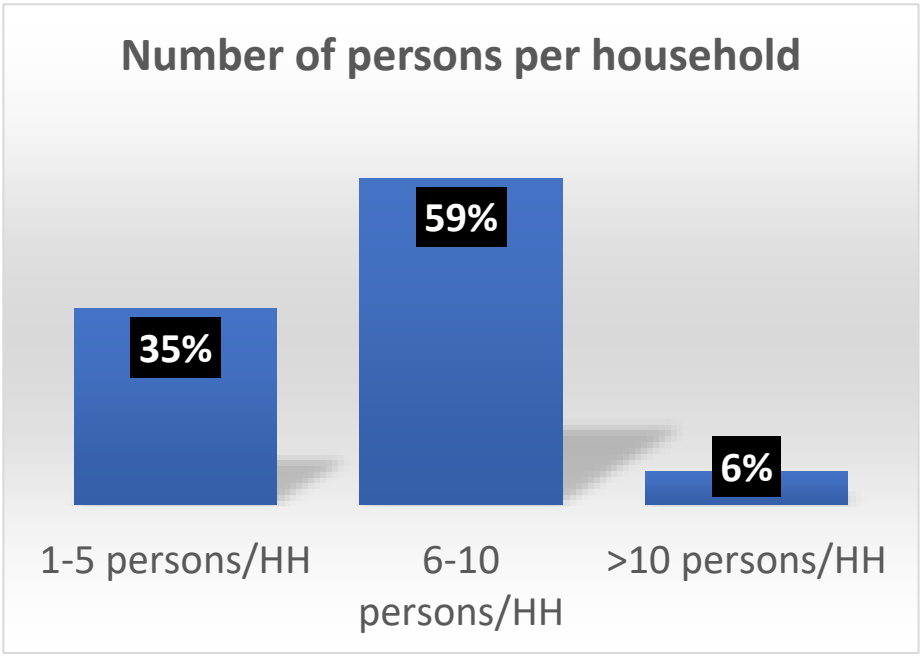
6 WASH Partners

Gender, Age, Disability & persons per households





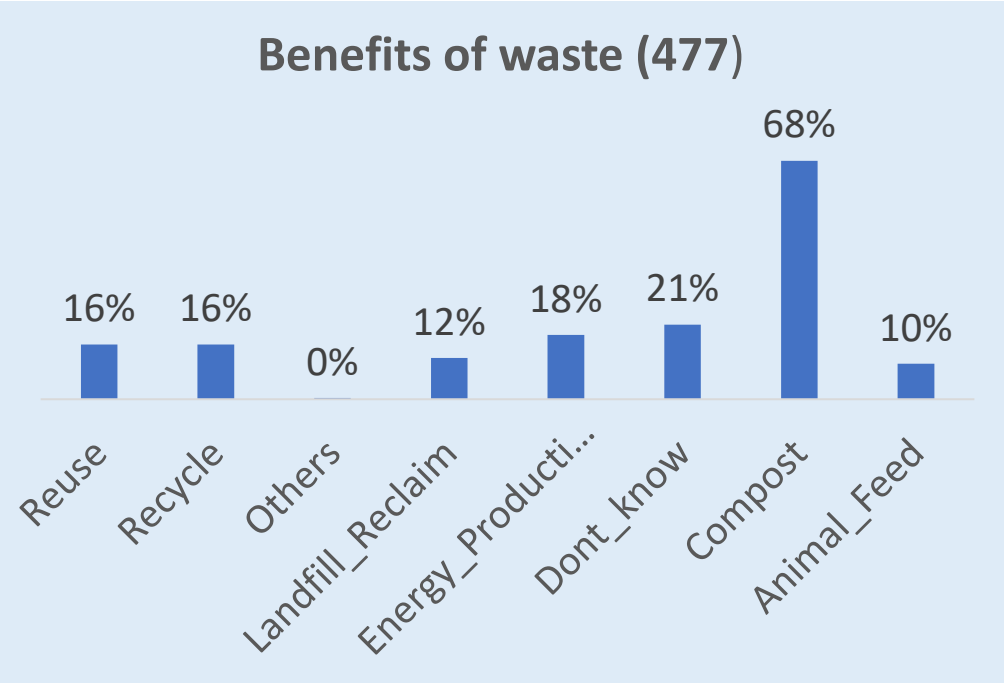


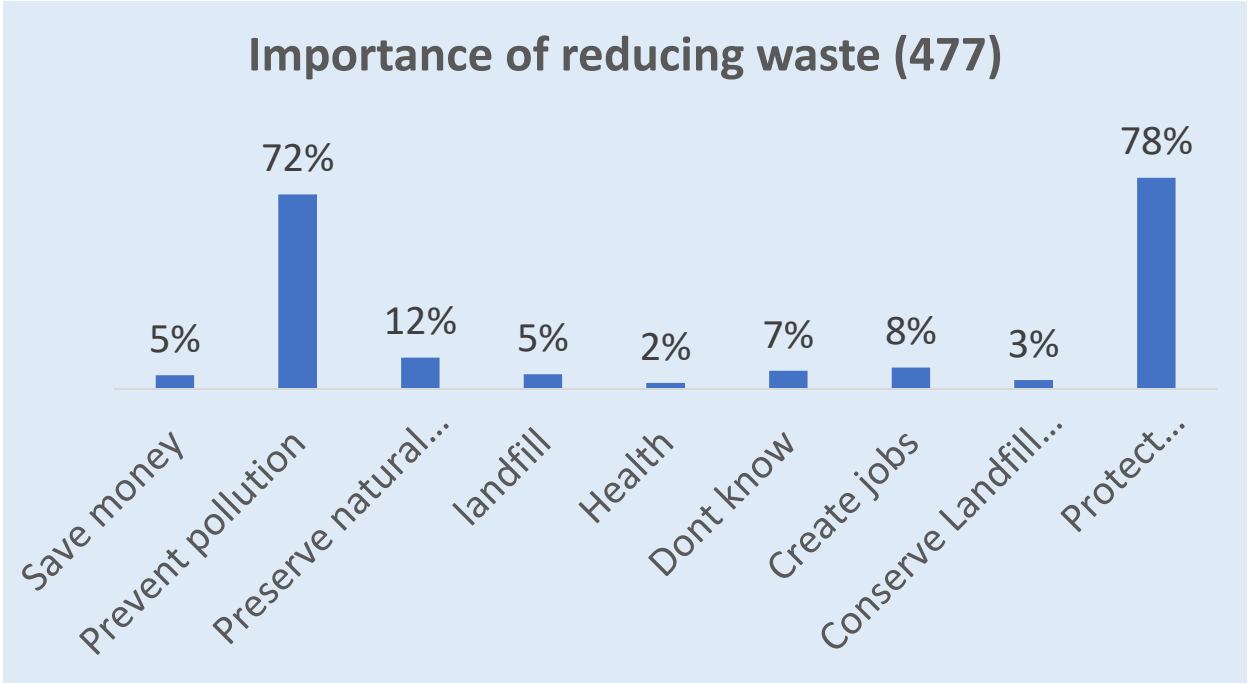


PART-II

Benefits, importance & effects of Waste

1) Benefits & importance of wastes (Knowledge)





There is some knowledge of the SWM- 3Rs benefit and the importance of protecting public health and the environment.

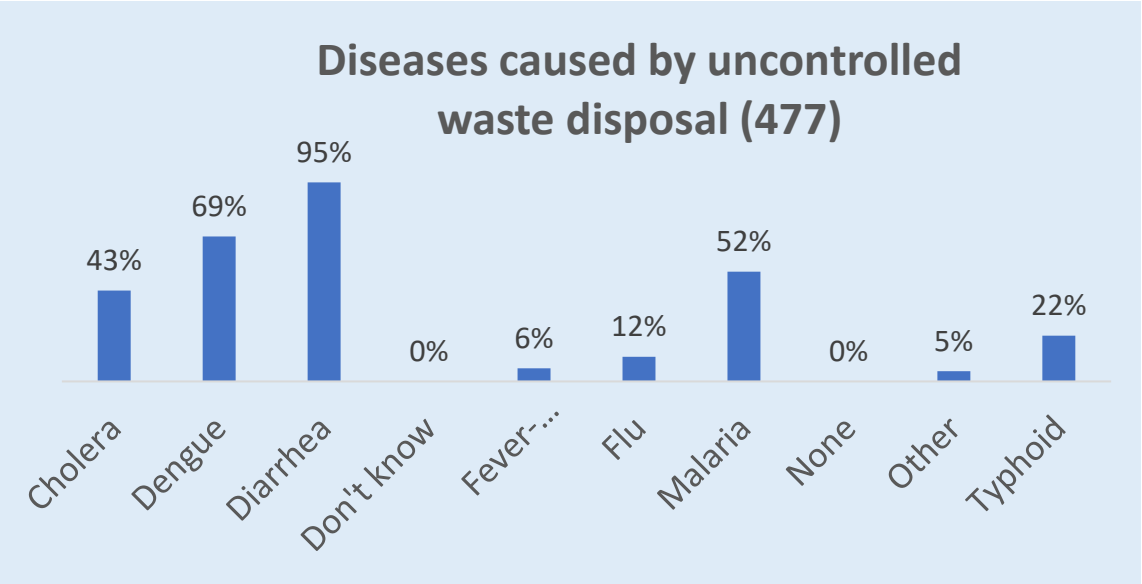
Benefits of waste: Compost 68%, Energy 18%, Reuse 16%, Recycle 16%

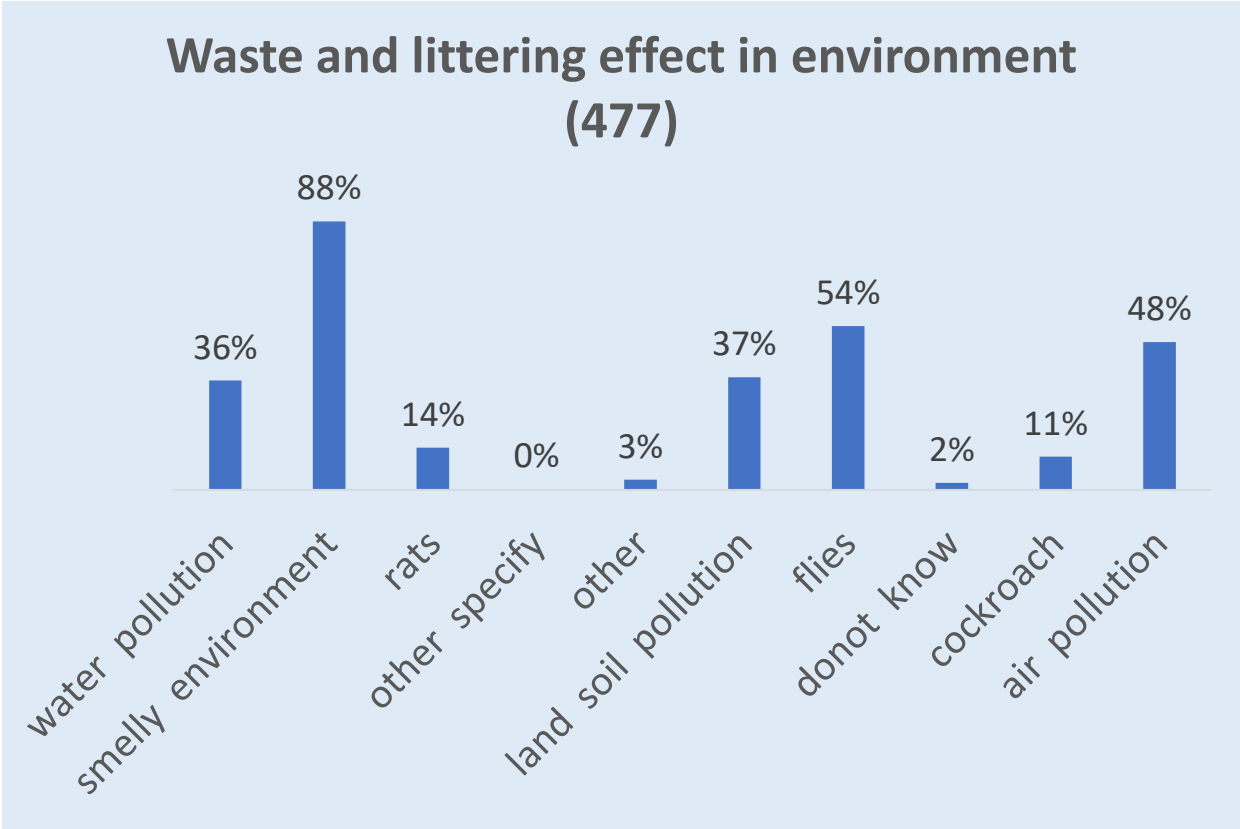
Importance of reducing waste: Protect environment 78%, Prevent pollution 72%,

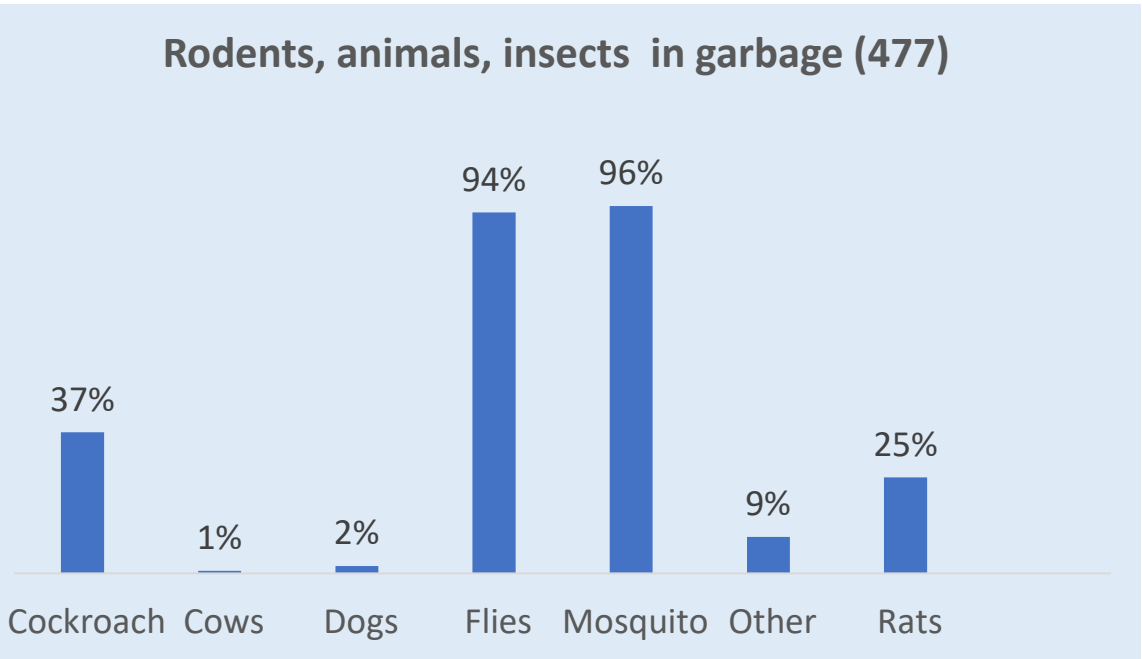
- To change the community's behavior towards waste segregation & littering, the community must understand that SWM is not just about accepting or tolerating solid waste pollution. ''SWM is about protecting public health and the environment.'' (source: WASH sector SWM Strategy). The community needs to know this to relate their actions to the negative impacts caused by the lack of proper SWM.

Proposed action: Review the information shared during the HP activities. Emphasize ''What are the negative impacts of lack of proper SWM'', ''Why waste segregation is important'', then demonstrate this in ''Action – How to segregate'' and ''How to stop littering''.

2) Disease, littering effect (Knowledge)







Disease: Diarrhea 95%, Dengue 69%, Malaria 52%, Cholera 43%
Rodents/animals: Flies 94%, mosquito 96%, cockroach 37%
Waste/litter effect to environment: smell 88%, flies 54%, air pollution 48%, water pollution 36%

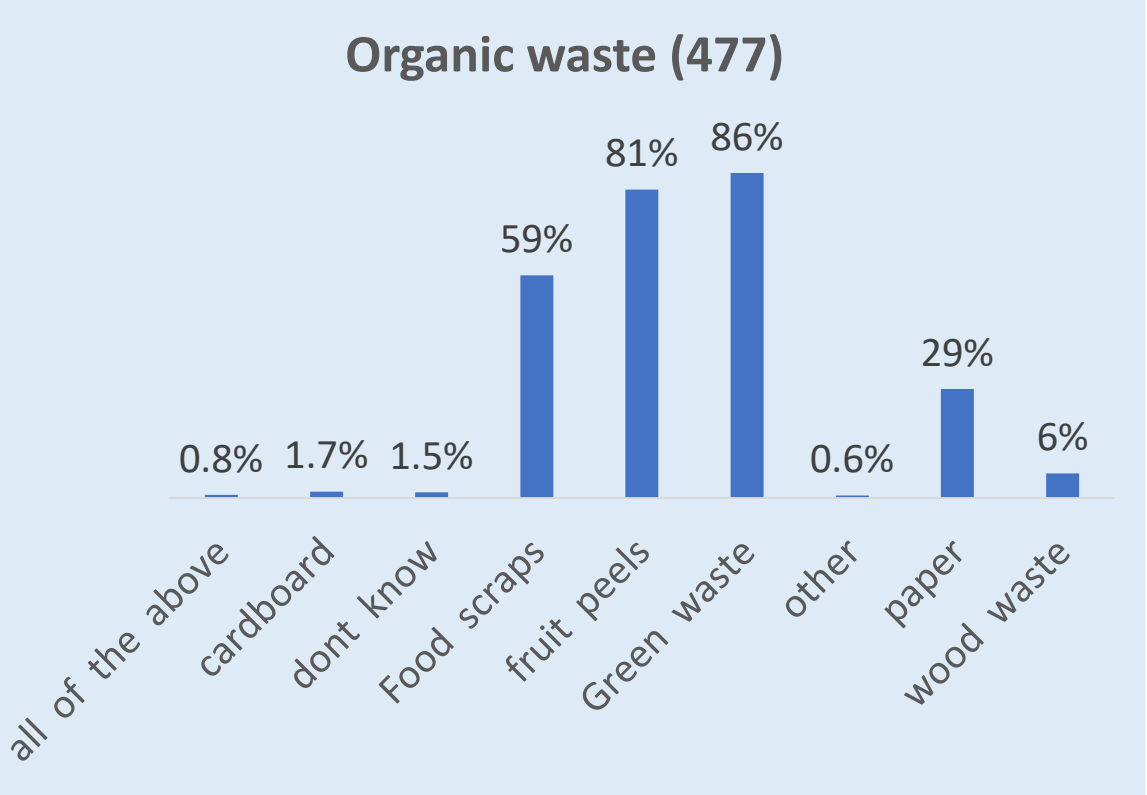
3) Why is it important to reduce the amount of waste we create in our households - FGDs

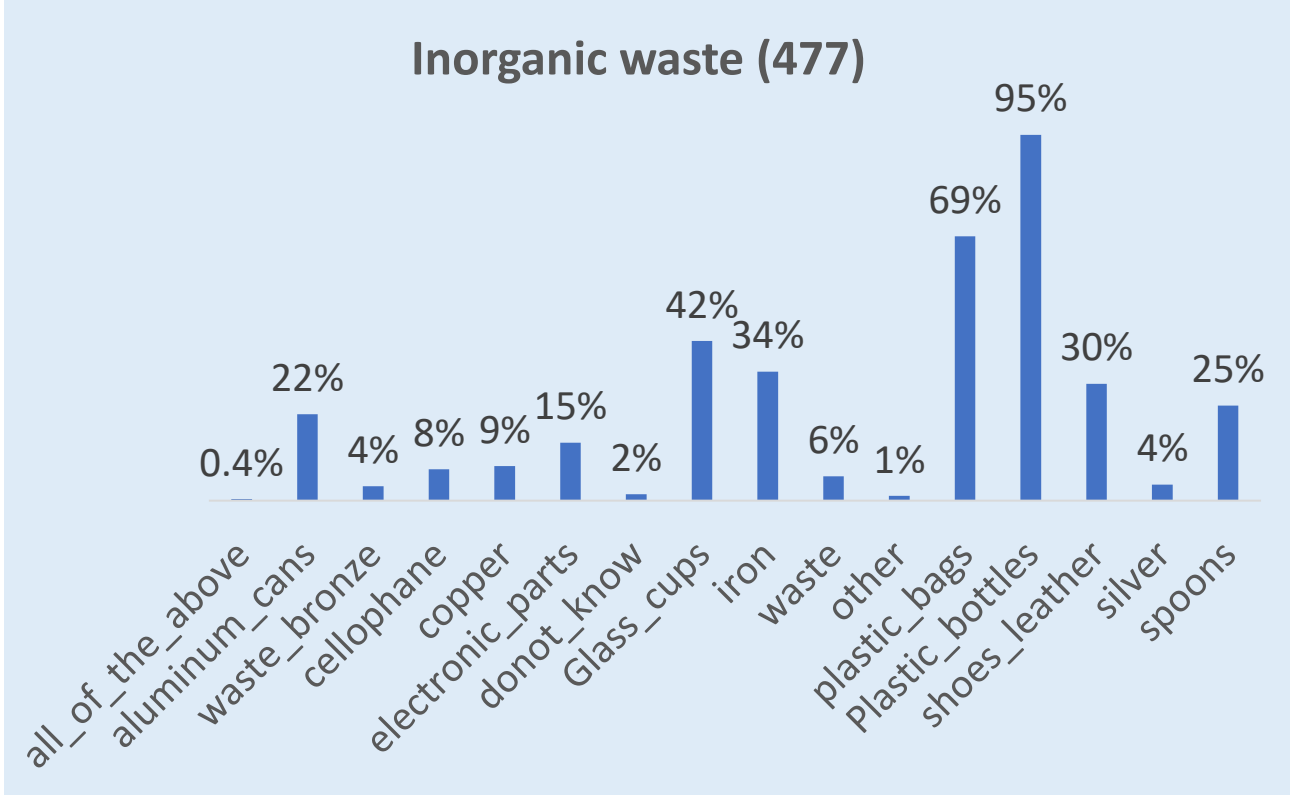
Reduced waste importance	Respondents in 15 FGDs	Knowledge gap
Protect them from spread of diseases e.g. scabies, AWD, malaria, cholera, and diarrhea; waste is the primary source of vector breeding esp mosquitoes, flies, and insects.	Common in all 11 FGDs majority of respondents said	Rodents, rats related disease common in camp
Increased household waste create odor, flies and insects, hence it is important to reduce it.	8 FGDs – majority of respondents	Uncontrolled solid waste can: ▪ contaminate both drinking water and food sources ▪ solid waste enters into water bodies/ oceans (marine plastic pollution) ▪ emission of greenhouse gases ▪ can lead to blocking of drainage system and flooding. *Recommendations: address the knowledge gap in hygiene promotion & behavior change activities*
Important to save and protect the environment, clean community households and surrounding areas.	5 FGDs majority of respondents	
"As we live in very congested place, if we reduce the amount of waste then the space will remain clean and we will get extra space to live because waste takes over a lot of space'', adult woman. Due to land scarcity in the camp, we should reduce household waste.	2 FGDs – some women	
Reduced waste prevents the drains from being blocked caused by polythene or other garbage.	1 FGD only	
Can save money from reducing waste	1 FGD only	
Can prevent soil pollution	1 FGD only	

PART-III

Organic-inorganic waste segregation & disposal

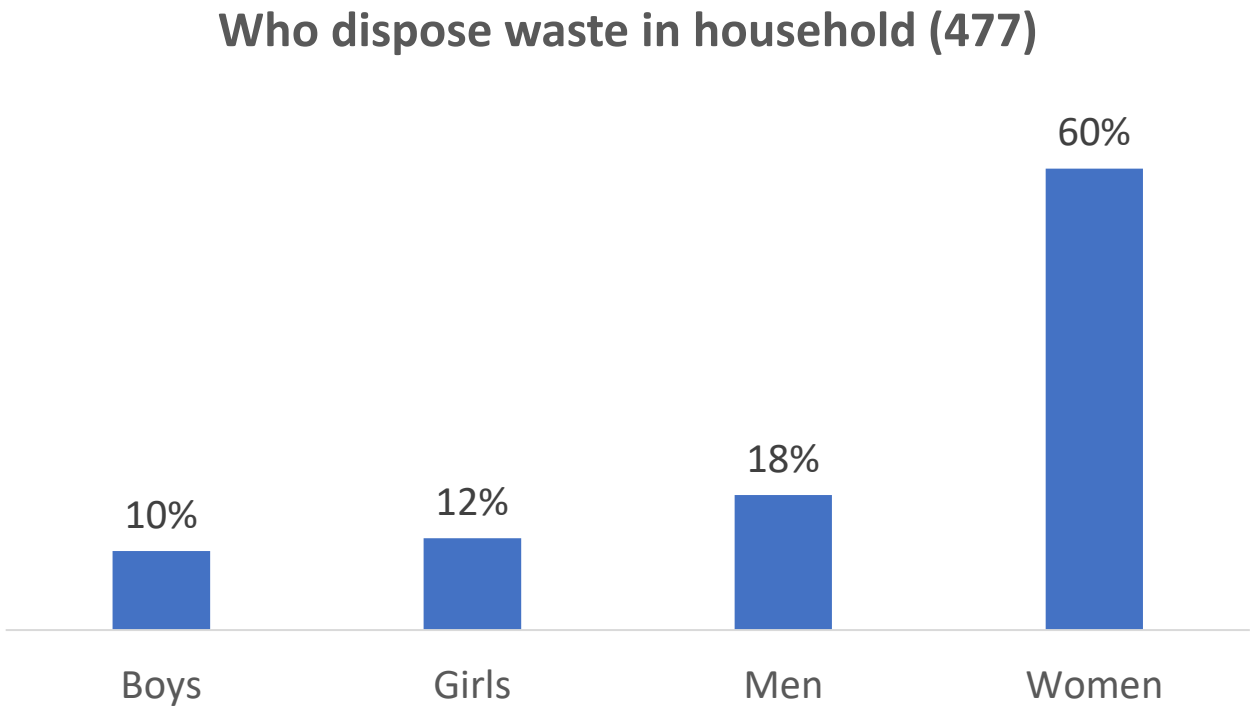
1. Organic & Inorganic waste (Knowledge)



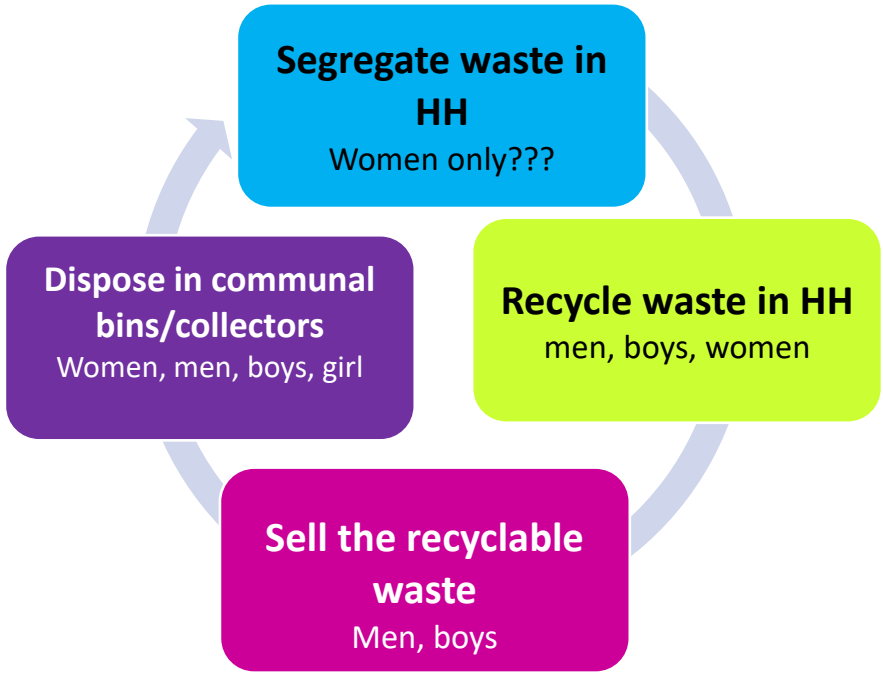


- Knowledge of organic waste – green waste 86%, fruit peels 81%, food scraps 59%
- Knowledge of inorganic – plastic bottles 95%, plastic/bags 69%, glass cups 42%,
- For behavior change, it is important that households understand the common type of waste they have in the community/households, followed by ''Why it is important to separate'' and Action on - ''How to separate and dispose of it''.

2. Who dispose waste in HHs (Practice)

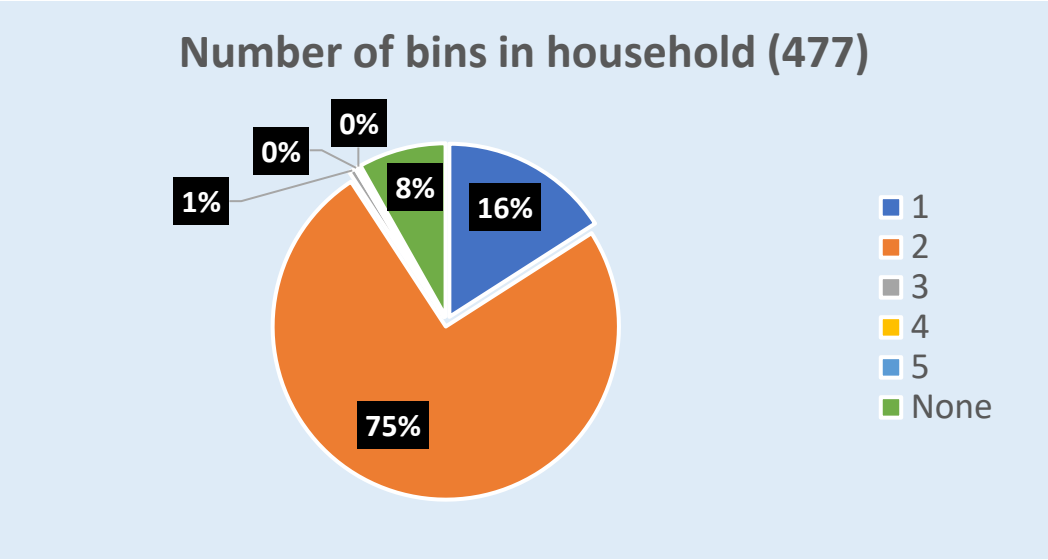


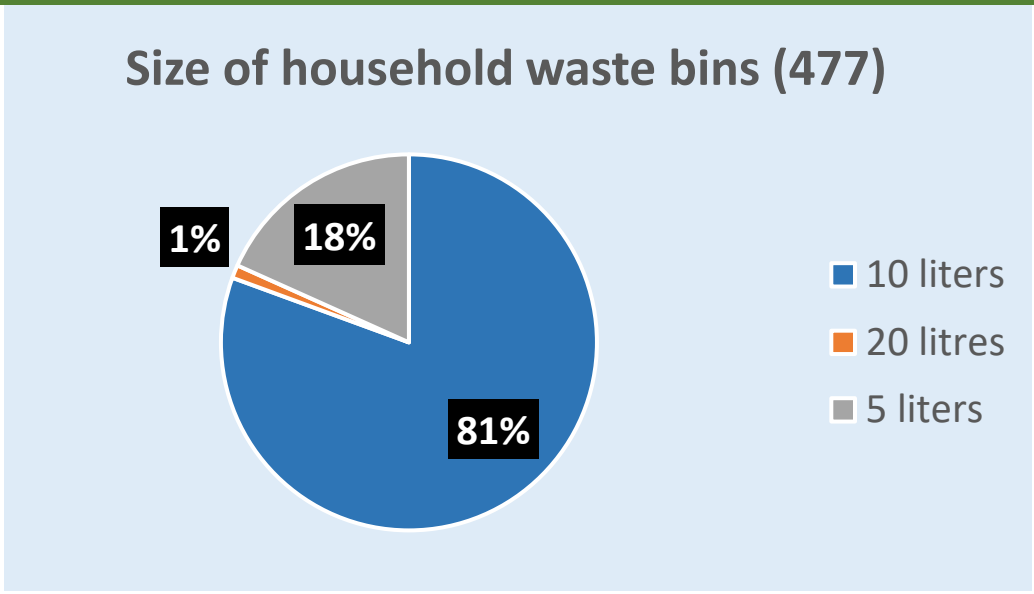
The SWM -3Rs existing practice chain at the households with specific groups involved

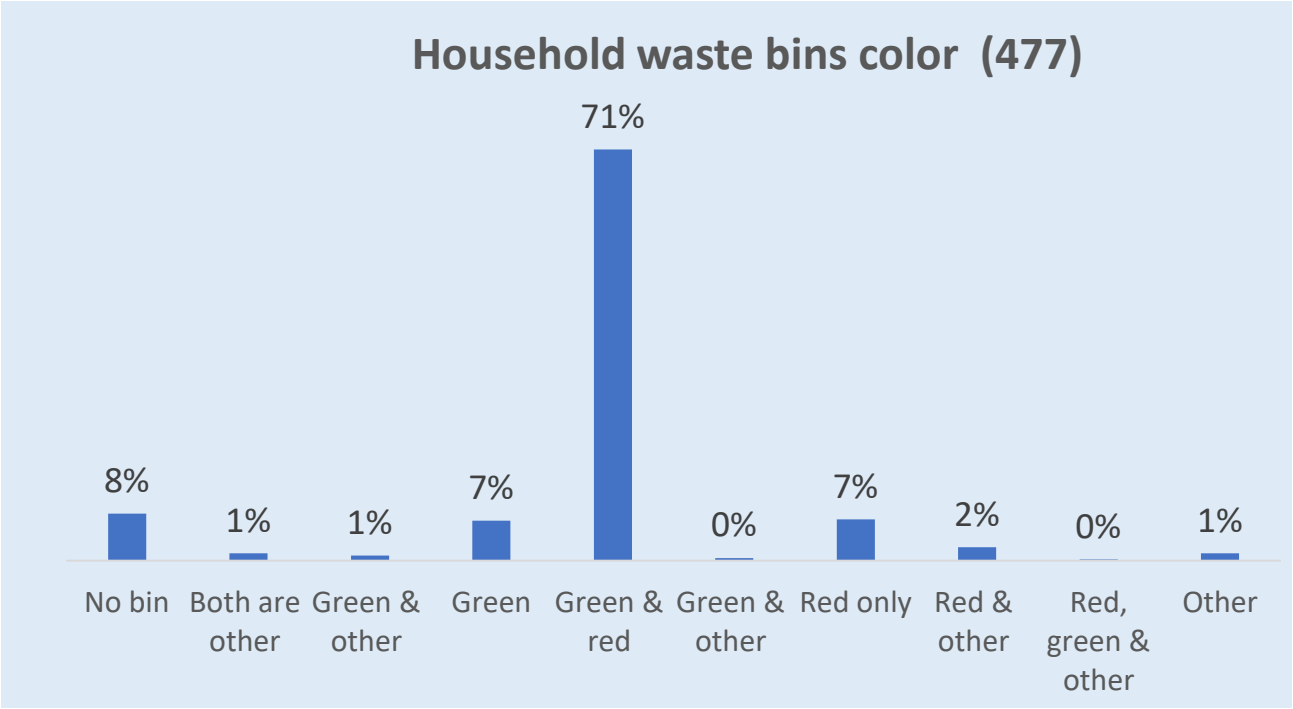


- There is some involvement by men (18%) and boys (10%) in disposing of waste. Therefore they should be targeted for behavior change. Also an opportunity to reduce 'stereotypes' & protect females from GBVs. Look at their knowledge-practice gap (in other sections of this analysis) for more behavior-appropriate communication and information-sharing methods to this group.
- Same for women, refer to the knowledge-practice gap for a more targeted behavior approach.
- Improve 3R behaviours for targeted groups in each cycle.

3. Number, size & color of bins (Access/Enabling)







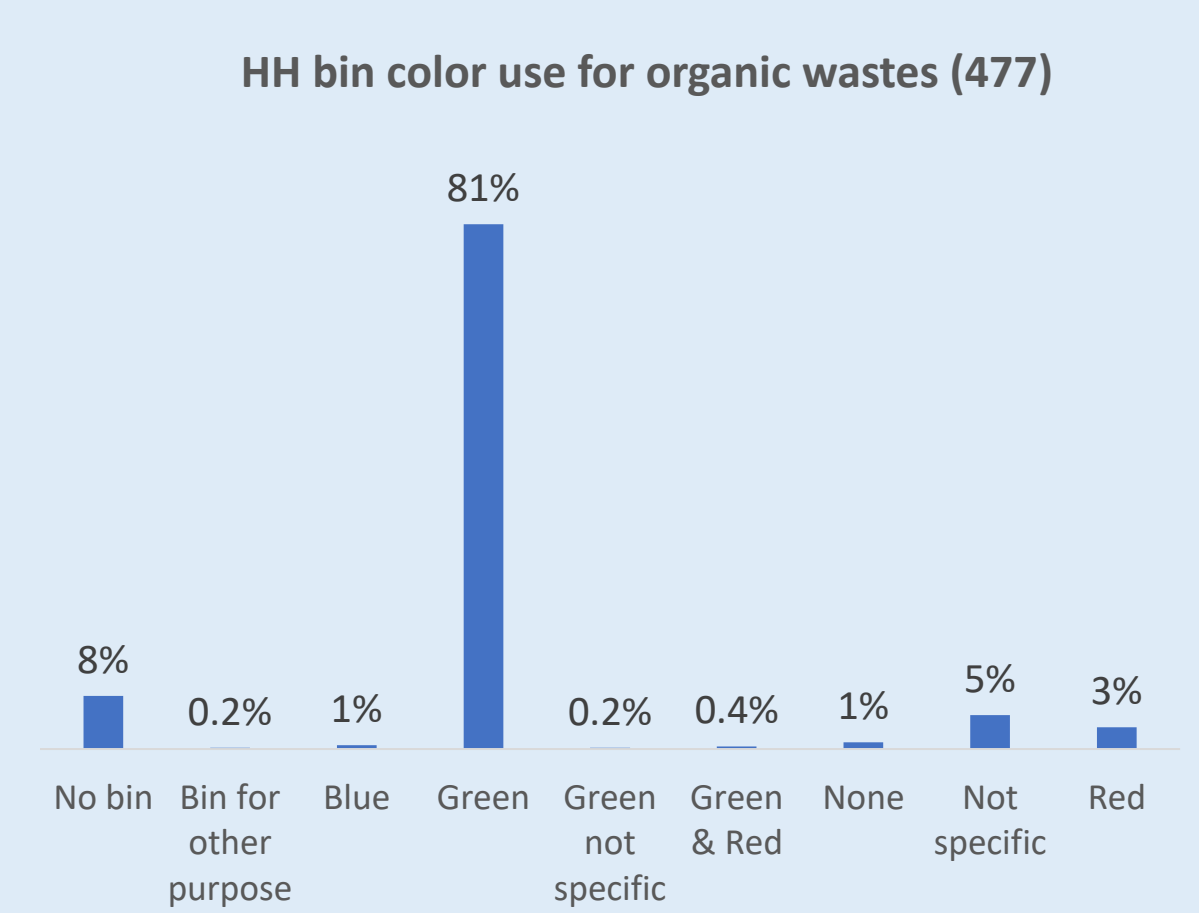
Access:

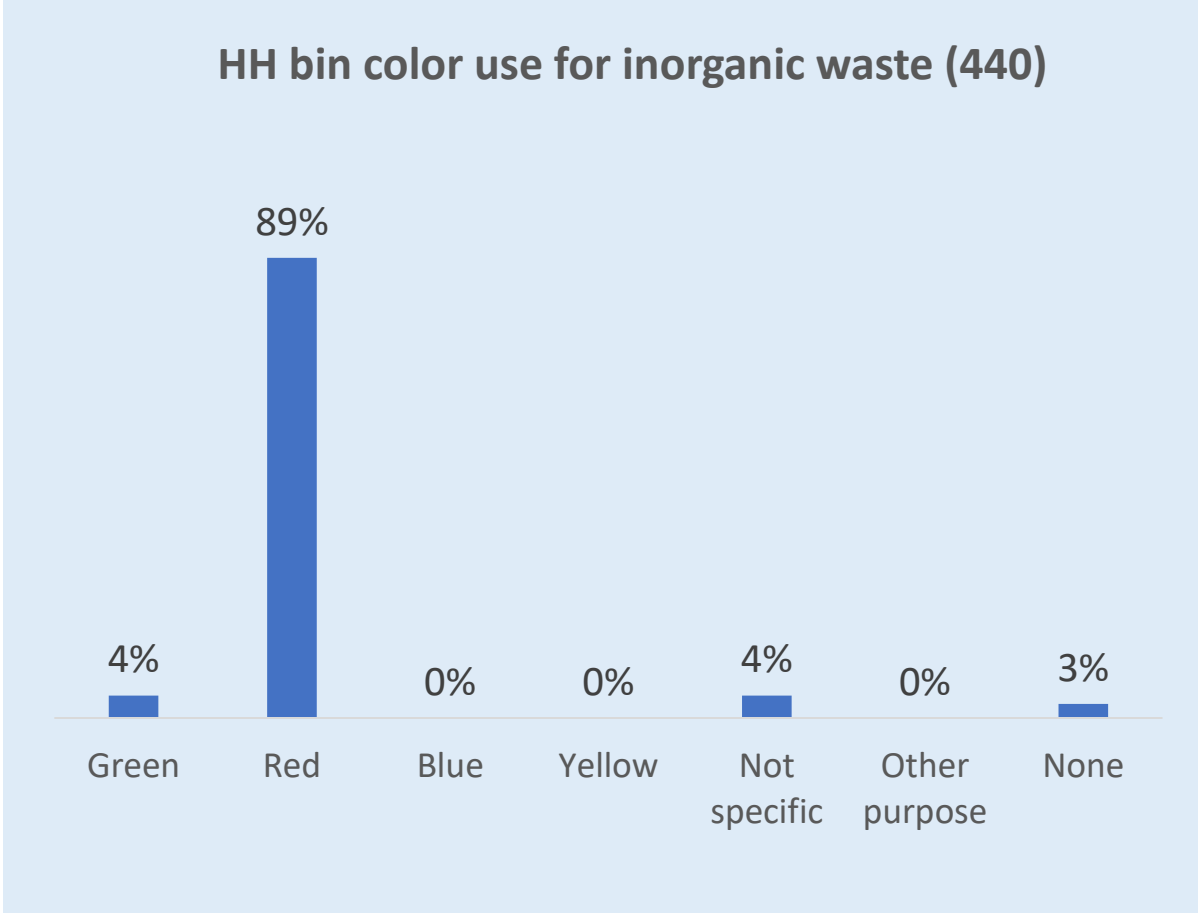
- 71% of households have red and green (complete set)
- 75% of households have two bins
- 81% have 10-liter bins

Gaps:

- 16% gap bins (HHs with only 1 bin)
- 7% have red only
- 7% have green only

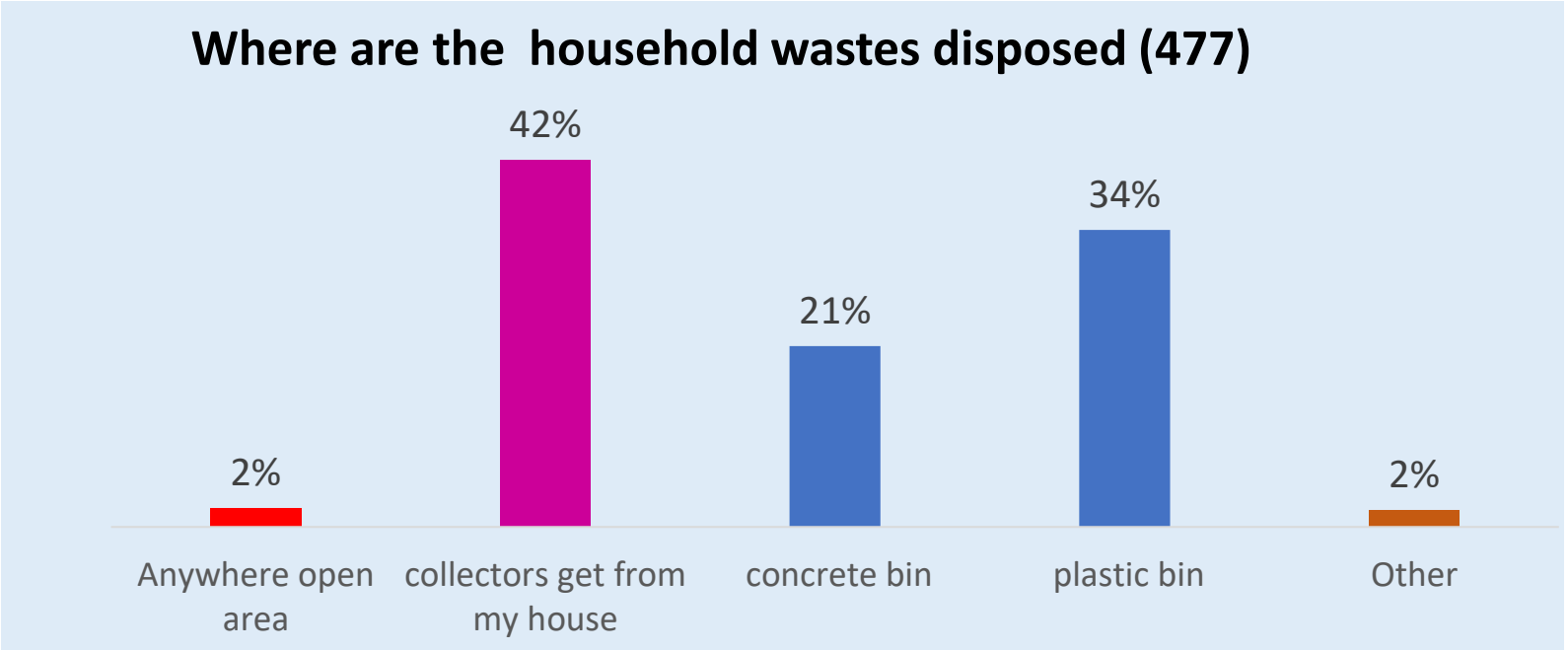
4). Organic & Inorganic bin separate use (Practice)





- 81% of 477 HHs use the green bin for organic waste
- 89% of 440 HHs use the red bin for inorganic waste

5) Waste Collection & Disposal (Practice)



- 42% (180 HHs) of 477 HH wastes are collected door-to-door by IOM
- 21% (98 HHs) of 477 HH wastes are disposed of communal concrete bins (UNHCR)
- 34% (161 HHs) of 477 HH wastes are disposed of communal plastic bins (119 Unicef & 42 UNHCR)

6) Menstrual hygiene material disposal (Practice)

Communal bins are not appropriate to dispose of menstrual material (in 9 FGDs)

Reasons: social norms, religious, stink of menstrual material, shame, social barriers arise. Not allowed to keep in HH bins either.

Common disposal: either by burning or burying in soil, wrapping in a paper, polybag

What they propose:

- Need a separate room close to the bathhouse for disposing of menstrual materials or chamber in latrines/bathhouse.
- To have a sub-block MHM pit to dispose of the waste

"I have never disposed my menstrual material in communal or household bins. It is shameful, even just thinking about it.''
"Menstruation is a forbidden period for women, and menstrual materials are impure. We cannot throw such impure things in open bins."
"It's impure blood, if we throw them in such open places, it can spread diseases. Moreover, if any male member of the community sees this, it will be a great insult"

Over half of respondents said communal or household solid waste bins are appropriate to dispose of menstrual material (in 7 FGDs)

- Only if it is properly functioning and with a lid.
- They dispose MHW in the red bin as inorganic waste.

Reasons: After a few months of use, cloth pads need to be disposed of. The Camp is densely populated, tough to find place to burry it. Burning is prohibited and unsafe.

Common disposal:

- Sometimes burry in soil.
- Pack it in polybags and dispose to the latrine pit creating a problem.
- Dispose in red bin packed in polybag

What they propose:

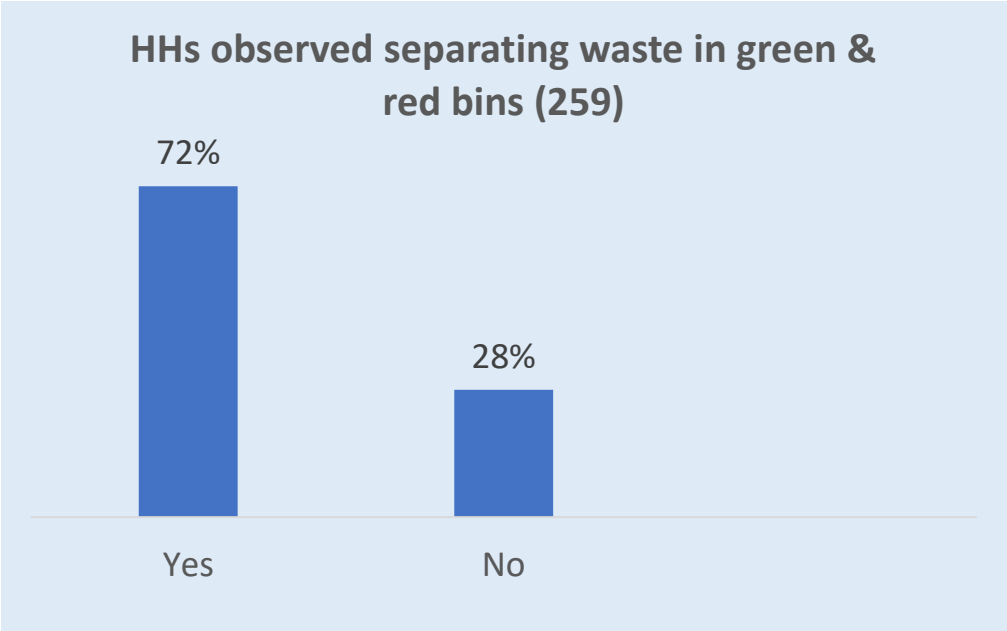
- Separate bin for menstrual material disposal at HH.

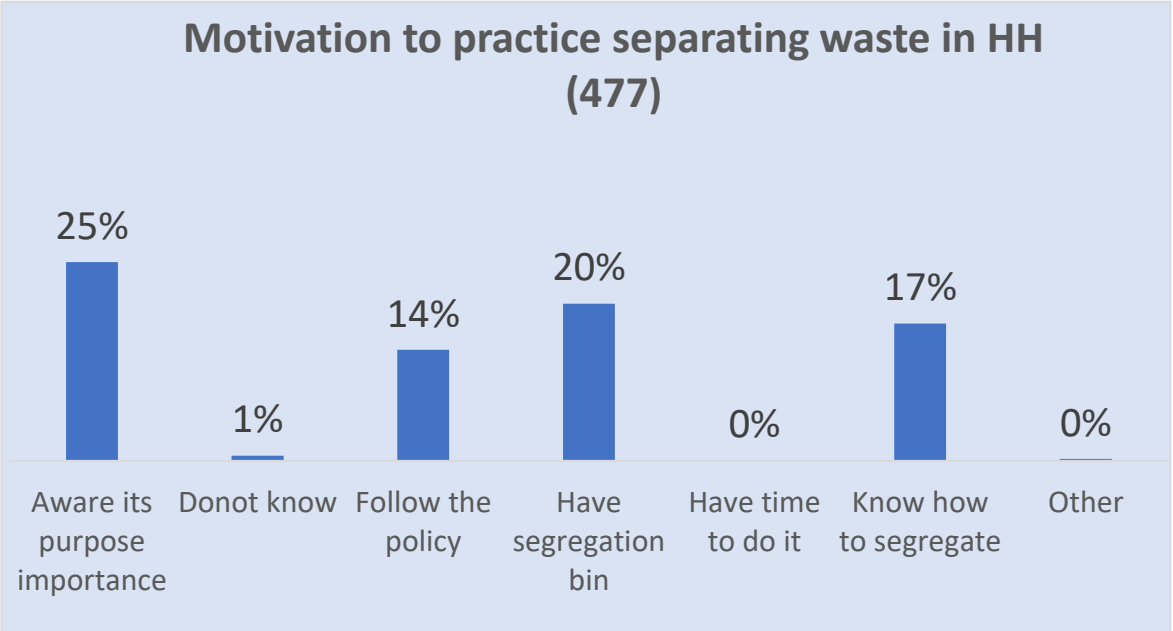
7) Menstrual hygiene material disposal for persons with disabilities (Practice)

- Disposal of worn-out pads: burry or burn
- Inappropriate disposal of menstrual waste in the communal bin as everyone throws garbage in bins.
- Limited space to live, often no space to bury hence most prefer to burn menstrual materials.
- Disability person barrier – when unable to burry/burn, get support from their mother/ sister
- Type of support of the caregiver (family member) depends on the type of impairment.
- They have to depend on others, feel shy, are mocked, and can’t go to hilly areas.

“People with disability face challenges during menstruation as they cannot change, wash or dispose of the materials used. Their female family members help or do it for them. ‘’

8) Observation: waste separated into green & red HH bins & Motivation (Practice)

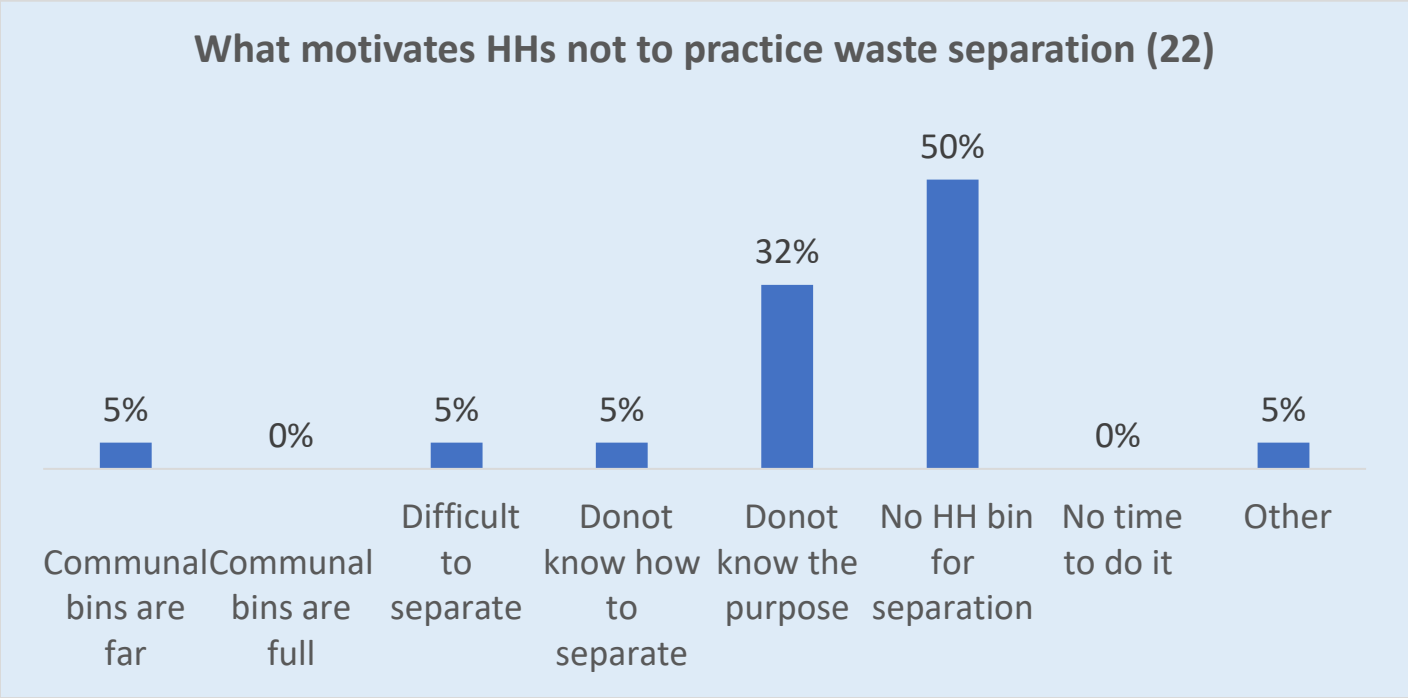


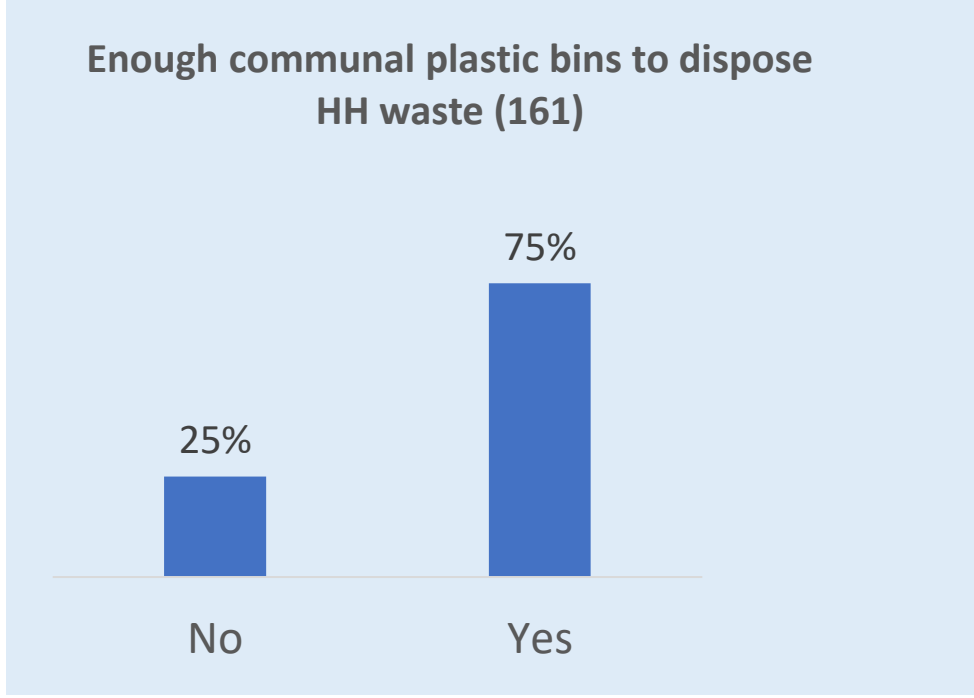


Note: only 259 HHs were observed out of 477

- 72% of 259 households are observed separating their waste in green and red bin
- 25% HHs are motivated to separate HH waste being aware of its purpose & importance, 20% have segregation bin & 17% know how to segregate

9) What motivates them not practice waste separation in HH (Practice)





- Out of 22 HHs, 11 or 50% are demotivated to separate HH waste having no bin for separation and 7 or 32% don't know its purpose/importance.
- 75% of 161 HHs have enough access to the communal plastic bins to dispose their HH waste

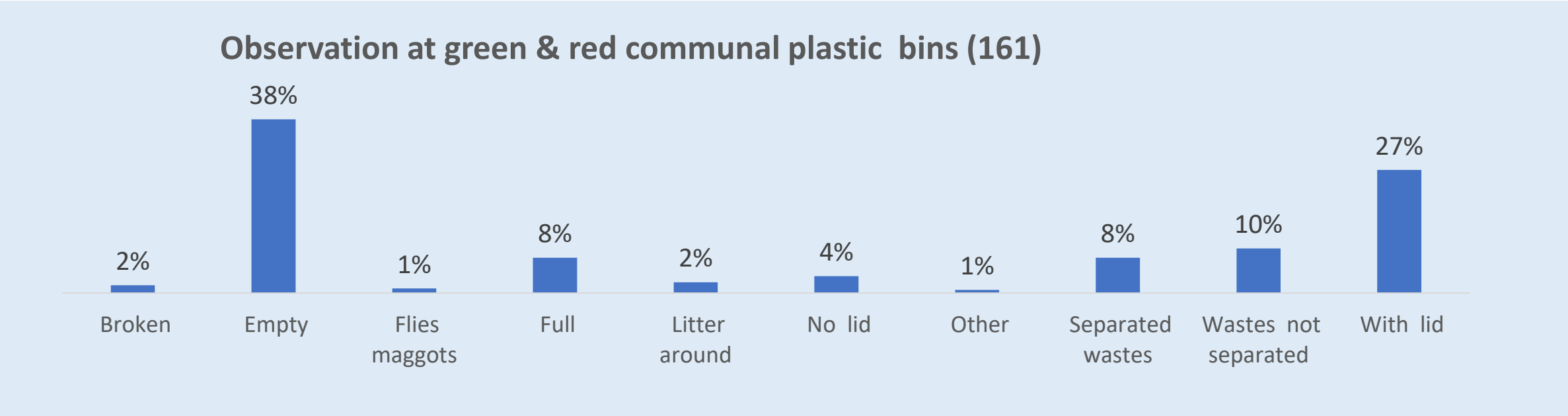
10) Current practice for HH waste management & Satisfaction – FGDs

Current practice & satisfaction	Respondents in 15 FGDs	Knowledge gap
Practice organic and non-organic separation from households to communal bins disposal	14 FGDs – half of respondents	Half don't practice segregation
HHs separate waste but mostly expressed that they dont know about how to segregate, as they don't practice it regularly.	1 FGD	Some don't know how to segregate
"My bins got broken now I keep them in different polyethylene".	1 FGD	
Keep the dry waste into bins and the wet waste in polyethylene. Plastic jar bottles are reused for storing spices and other food items.	1 FGD	
Some throw in drains, 5 persons throw anywhere	1 FGDs	Some litter waste in drains
Majority satisfied with their waste segregation and disposal practice, 1 satisfied with door to door waste collection.	10 FGDs	
Some are not satisfied as everyone has not practice waste segregation properly, many of whom litter waste anywhere, some asking UNHCR to provide pedal bin for HH waste management easy use	4 FGDs	

11) The last time wastes are collected from households & communal bin (Practice)

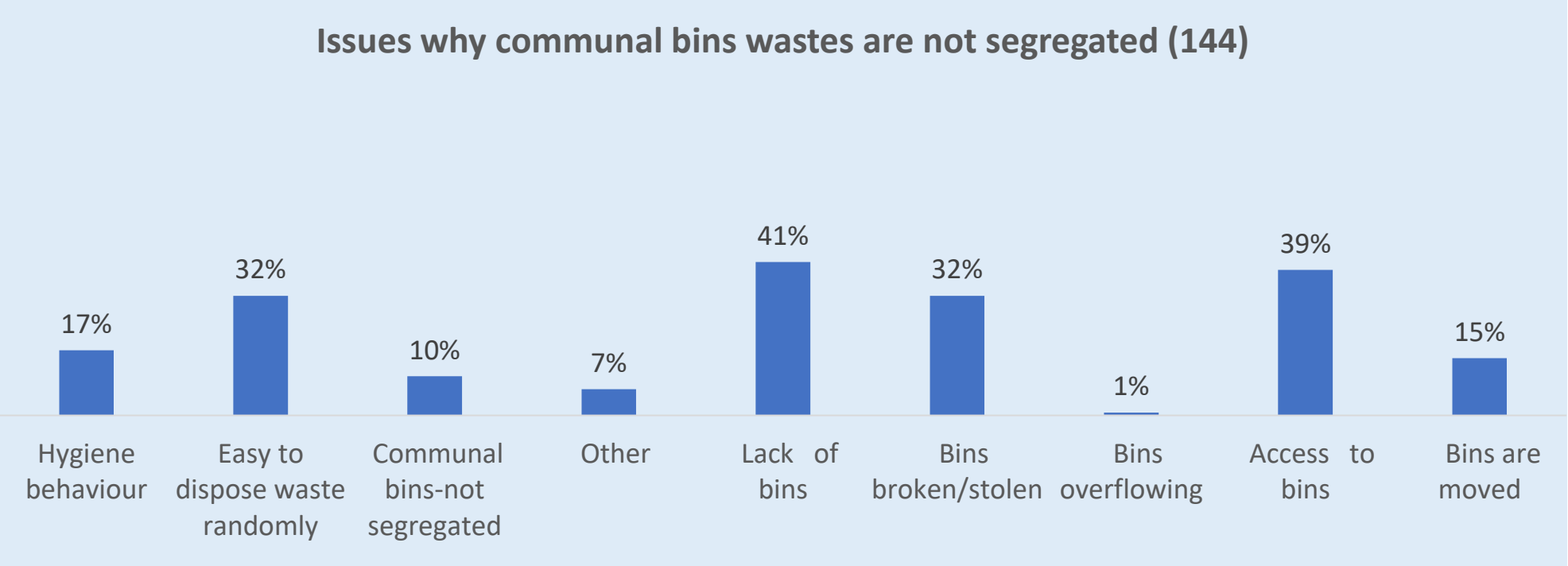
- 56% of households said the waste are collected from communal bins and door–to–door this morning, 15% said it was collected yesterday, and 19% they don't know
- Total of 73% HHs said the waste was collected this morning, this afternoon, and yesterday which indicates waste collection is timely managed.
- Collected wastes over 2-3 days ago is 8%

12) Observation at communal plastic bins



- 38% empty, 27% with lid, 8% separated wastes
- 10% not separated, 8% full, % no lid, 2% litter around

13) Why waste is not segregated in Communal bins (Practice)



For action: *Identity who is responsible for this operational task to reinforce bins are segregated when used.*

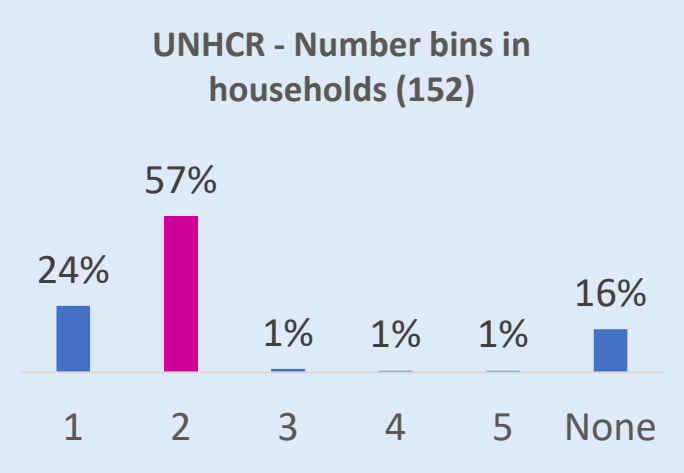
- Lack of communal bins (41%), accessibility (39%), broken/ stolen (32%), easy to dispose of waste randomly (32%) bins are moved (15%).
- Communal bins are not segregated (10%).
- Attitude/behavior (17%)

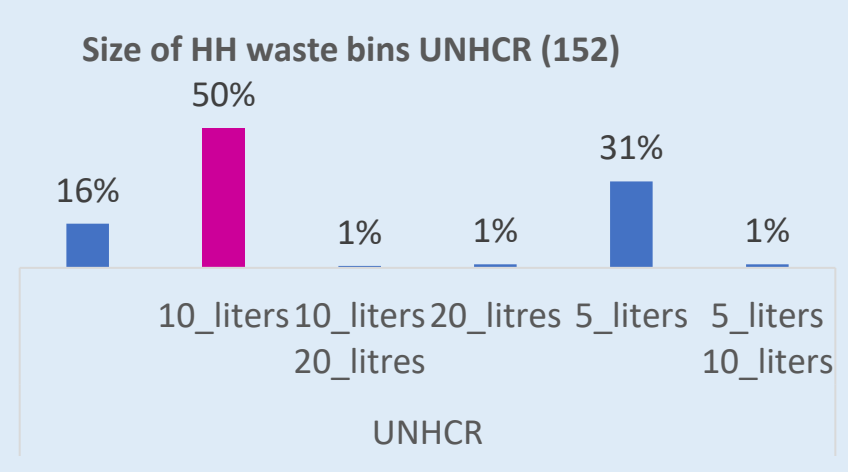
PART-IV

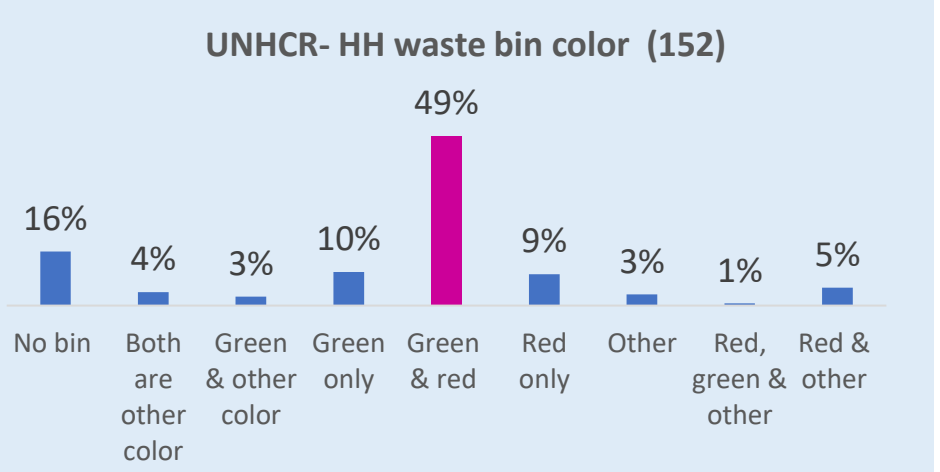
UNHCR SWM modality

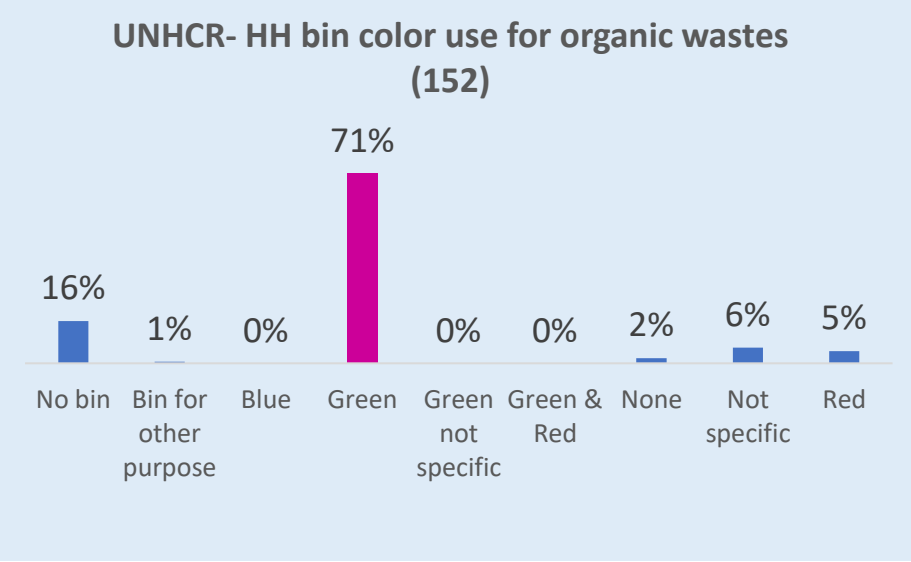
Combined concrete/brick bin & communal plastic bin waste disposal system

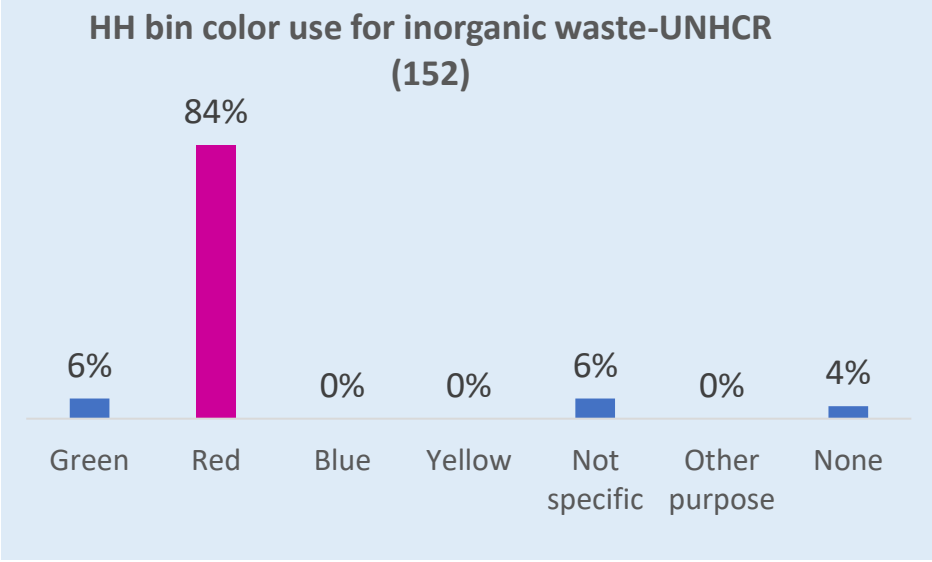
1-Number, size, the color of bins, HH segregation





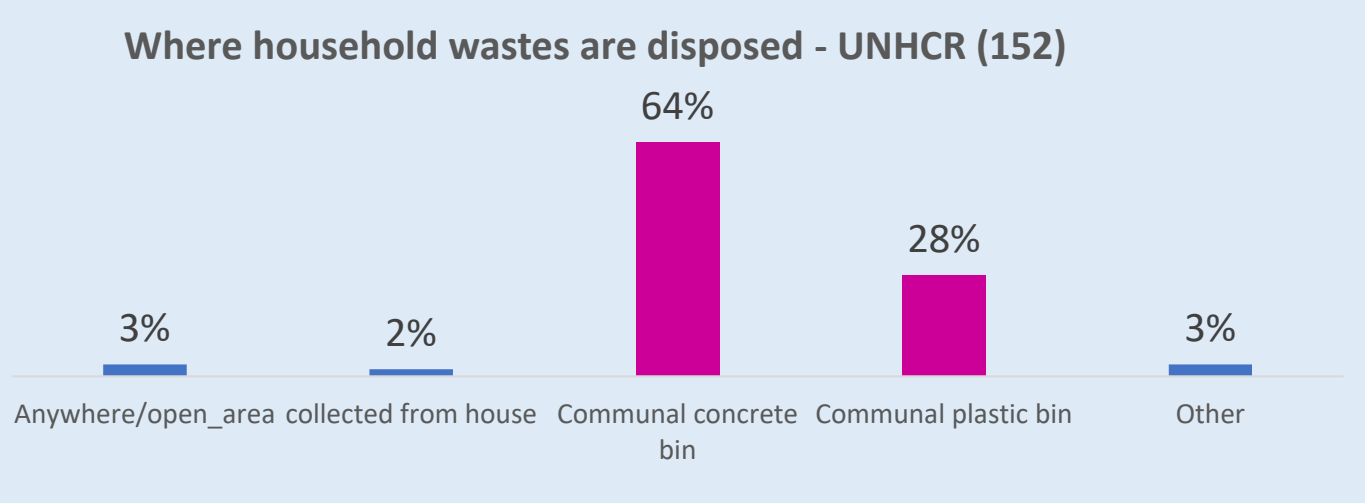


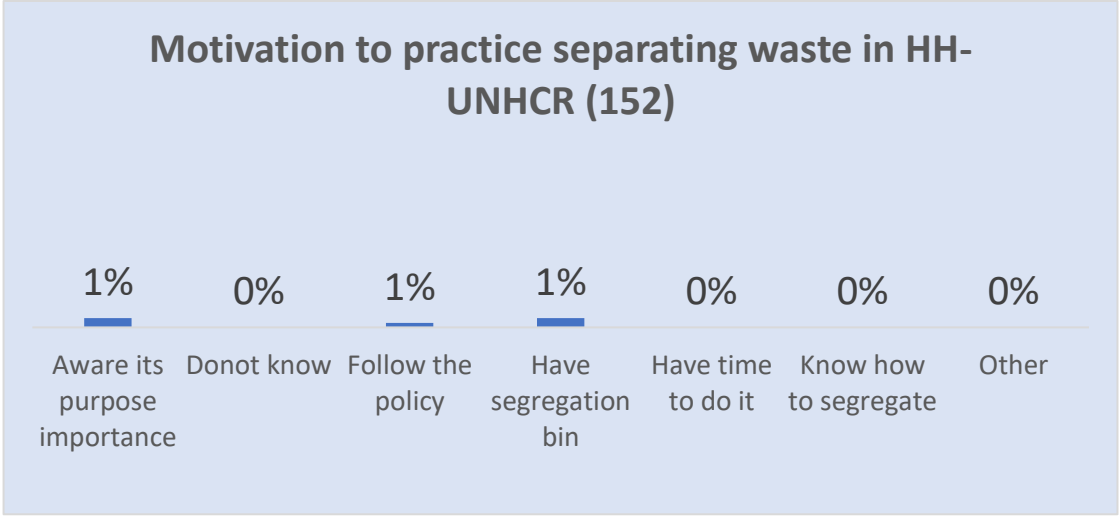


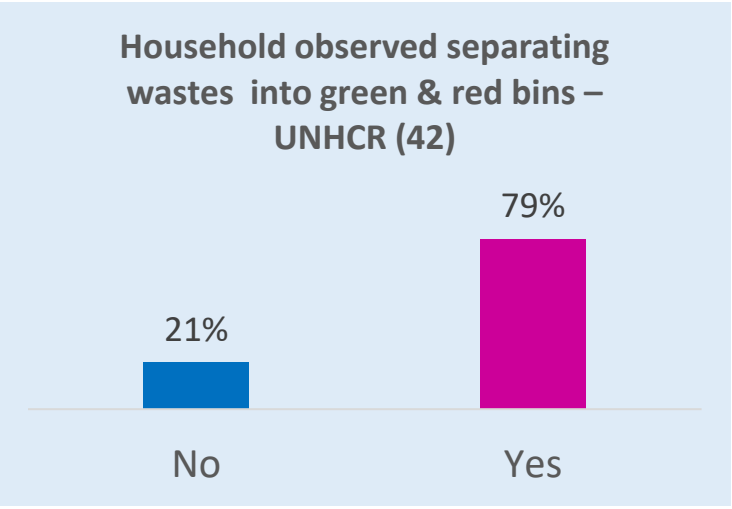


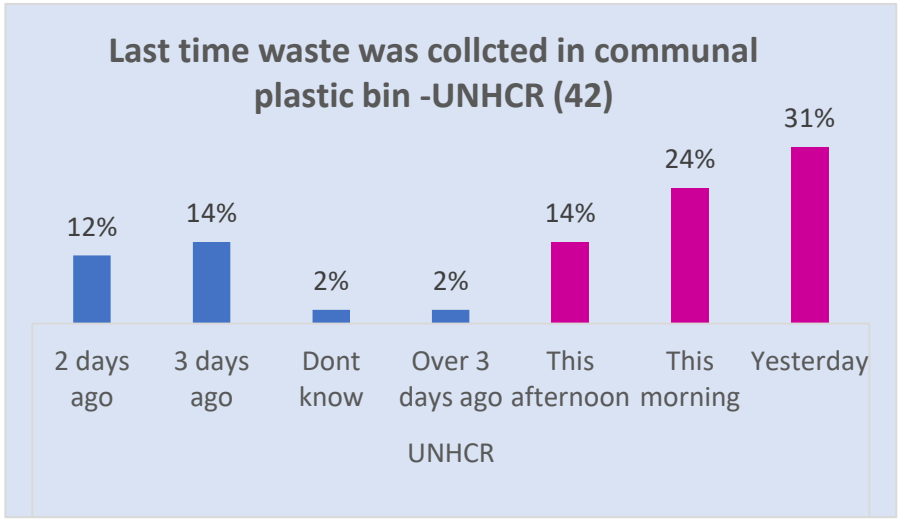
Number of bins 2 per household: 57% of 152 HHs; Size of bins: 50% have 10 liters; Waste bin color: 49% have green & red bins; Bin used for organic waste: 71% use green; Bin used for inorganic waste: 84% use red;

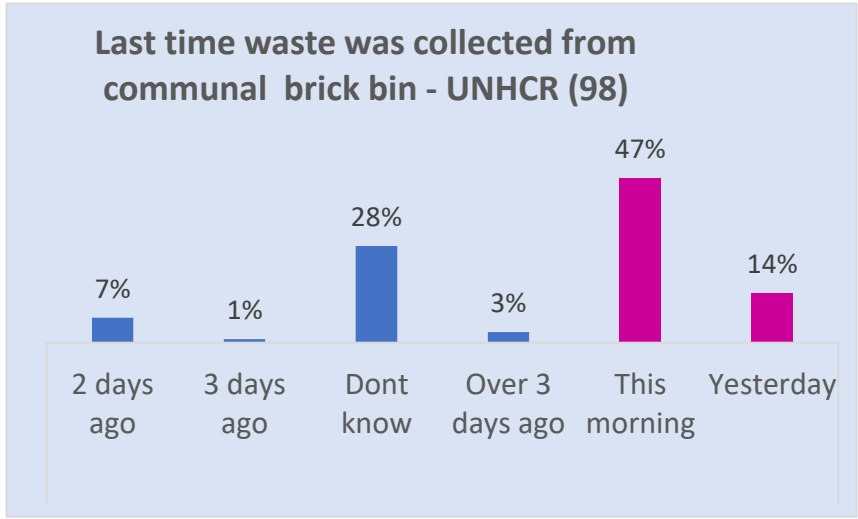
2- Disposal, use of segregated communal bin, last time collected





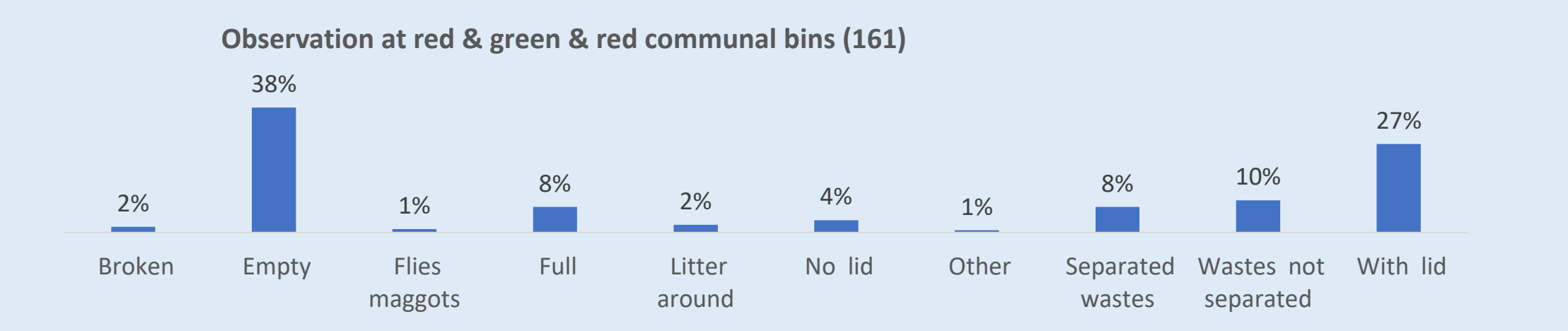


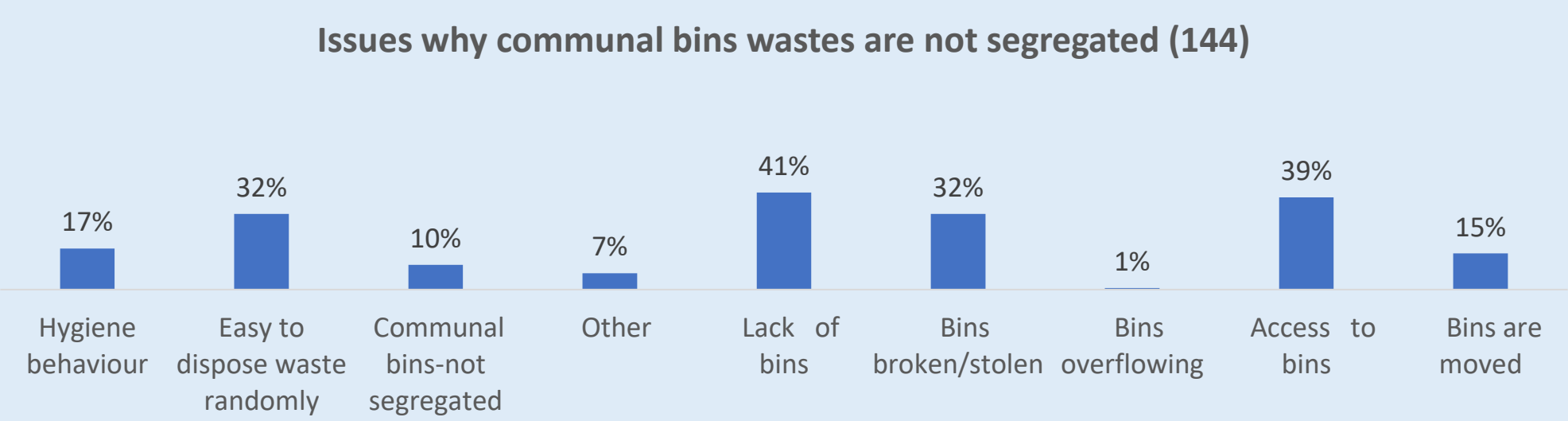




- Disposed HH waste: 64% to communal plastic bin & 28% communal plastic bin
- 79% of households separate waste into red & green bins
- Last time waste are collected 47% this morning & 14% yesterday.

3 - Observations at communal bins

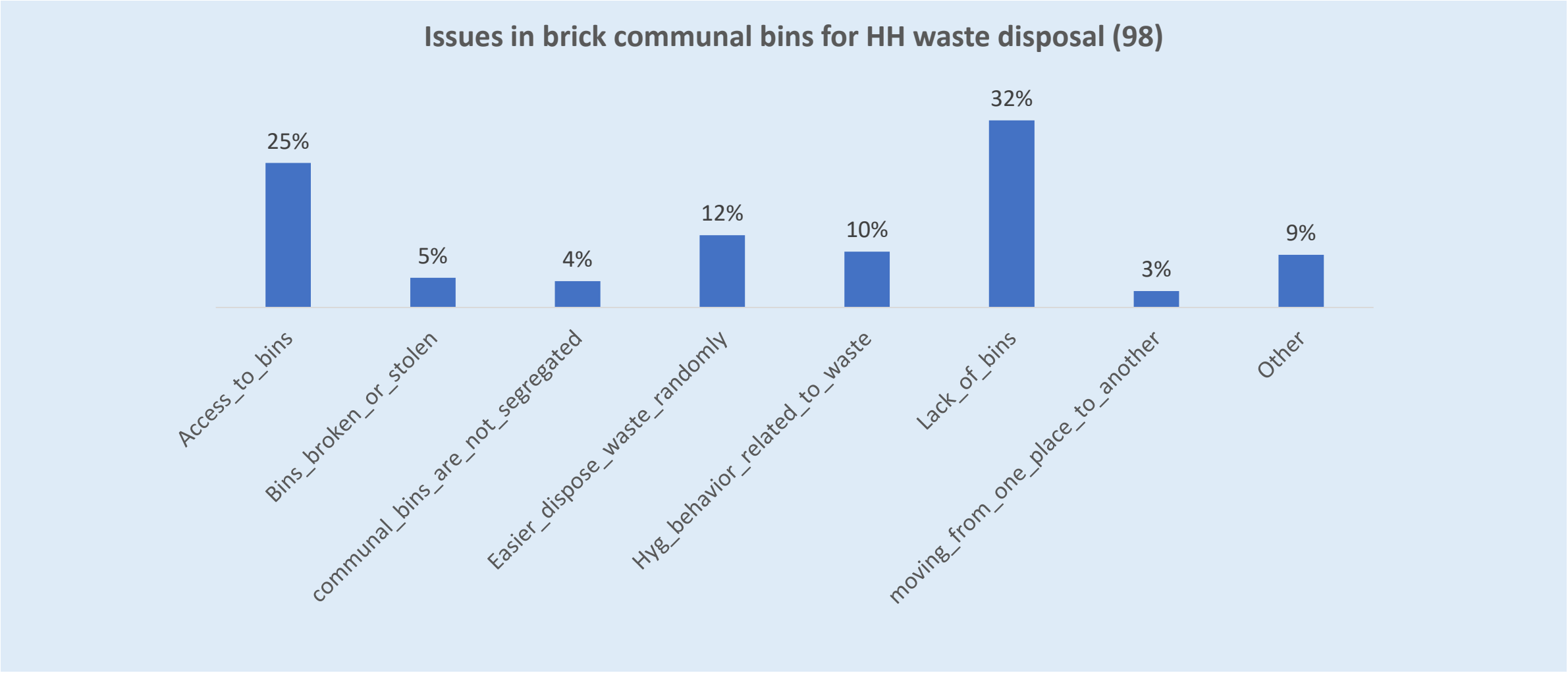




For action: *Identity who is responsible for this operational task to reinforce bins are segregated when used.*

- Lack of communal bins (41%), accessibility (39%), broken/ stolen (32%), easy to dispose of waste randomly (32%) bins are moved (15%).
- Communal bins are not segregated (10%).
- Attitude/behavior (17%)

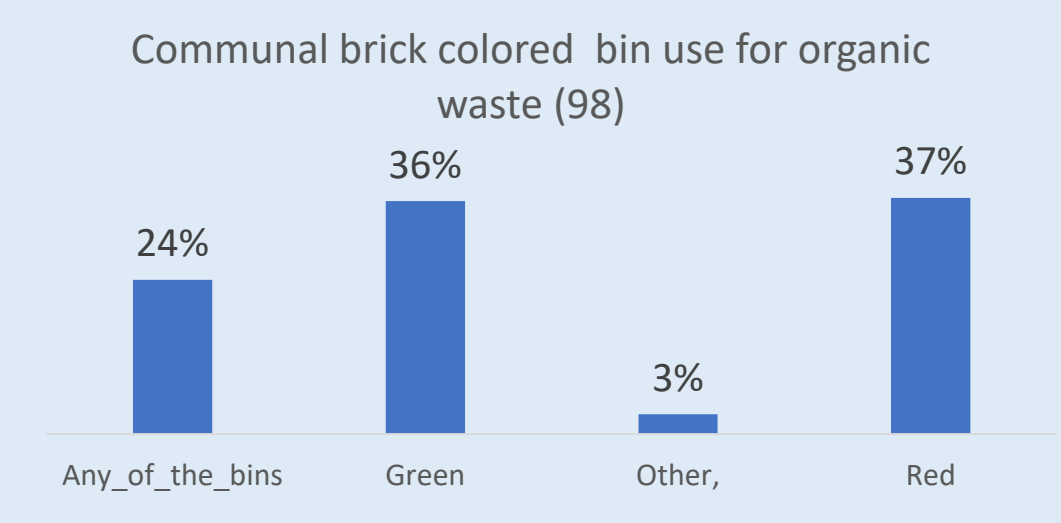
4 - Waste disposal to Communal brick bin (Motivation)

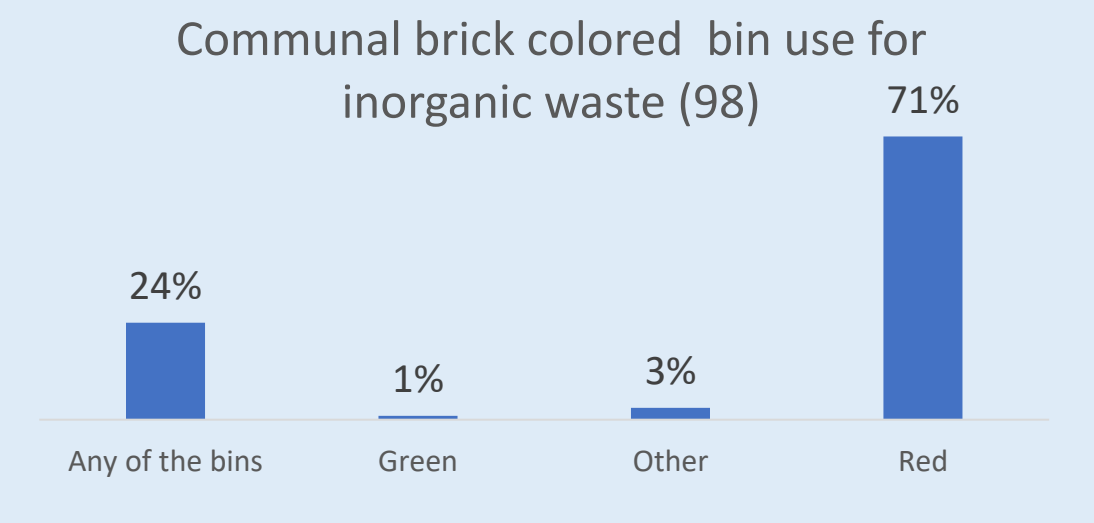


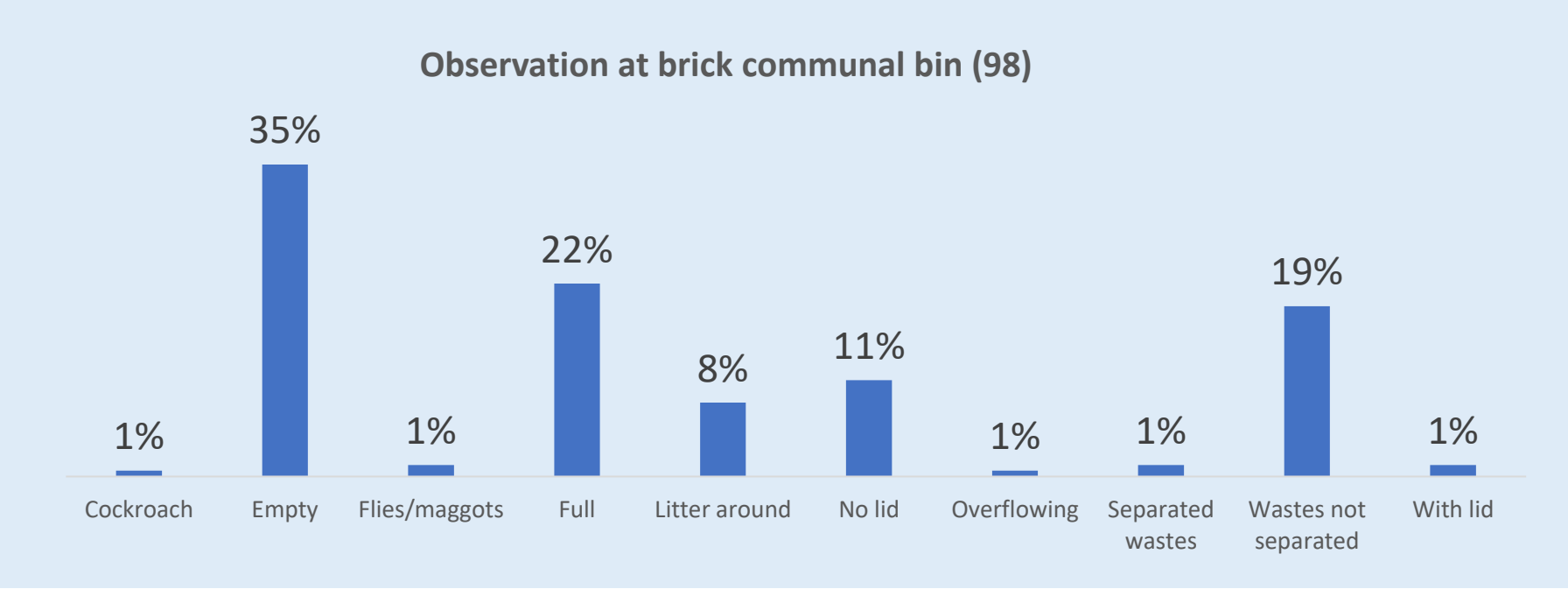
Communal brick bin issues:

- Lack of bins (32%), access (25%), easy to dispose of waste randomly (12%), attitude/behavior (10%)
- Communal bins are not segregated (4%).

5 - Observation in Communal Brick Bins (Practice)







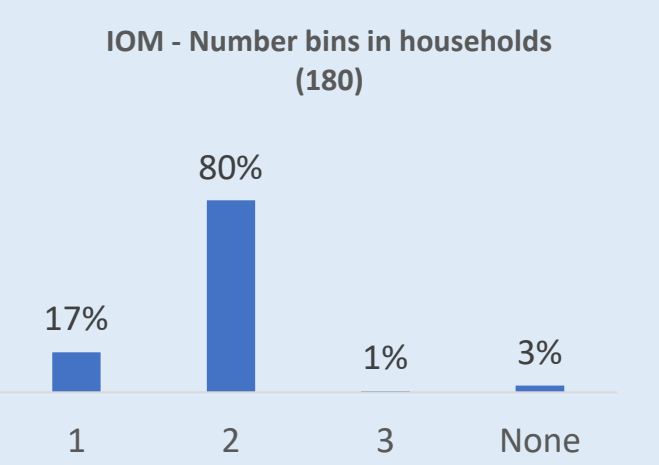
- Only 36% HHs dispose organic waste in brick green colored bin
- 71% HHs dispo ofse inorganic wastes in brick red colored bin
- Brick bin is observed 22% is full of waste, empty 35%, 19% waste not segregated

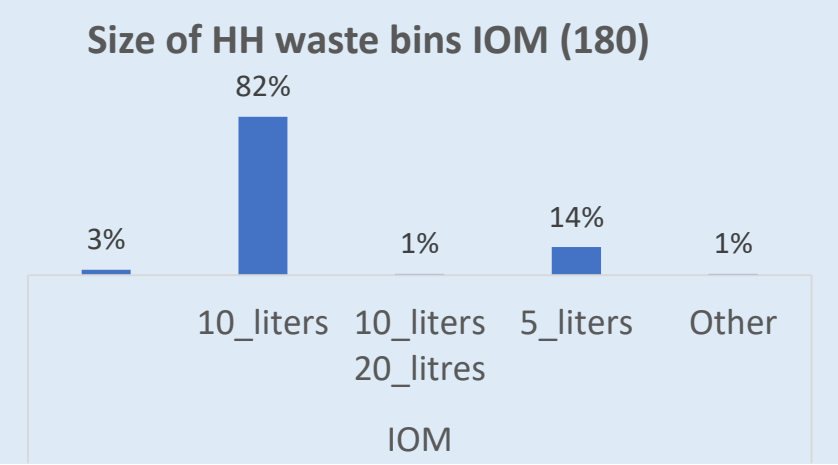
PART-V

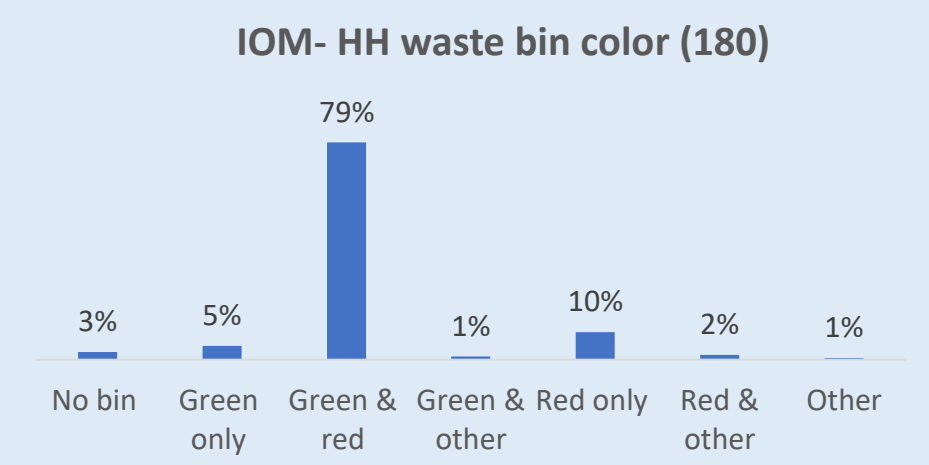
IOM SWM modality

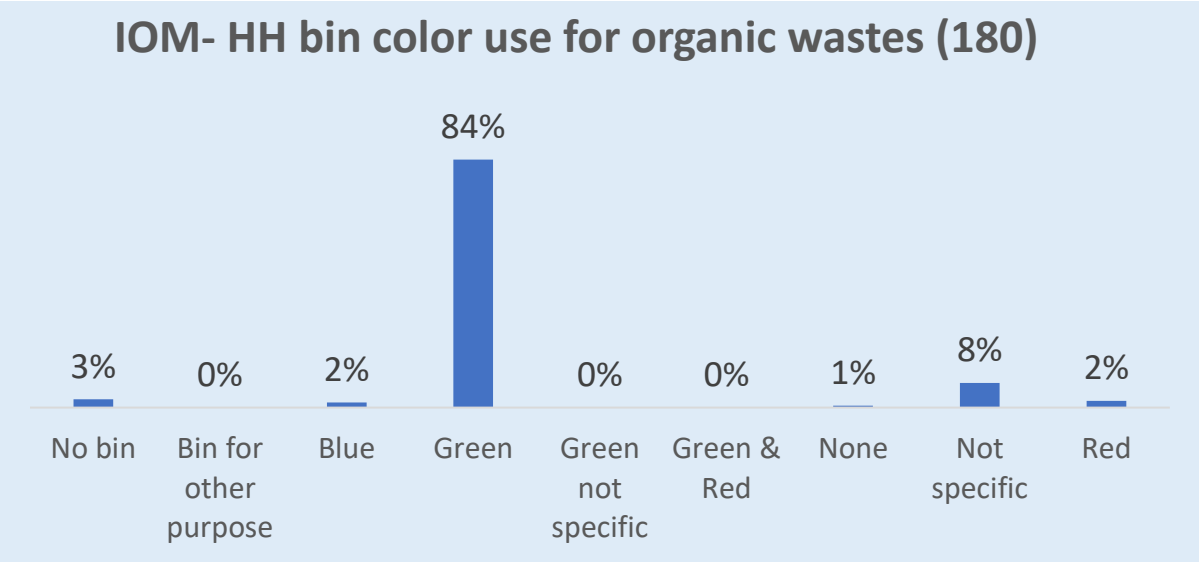
Door-to-door / household solid waste collection system

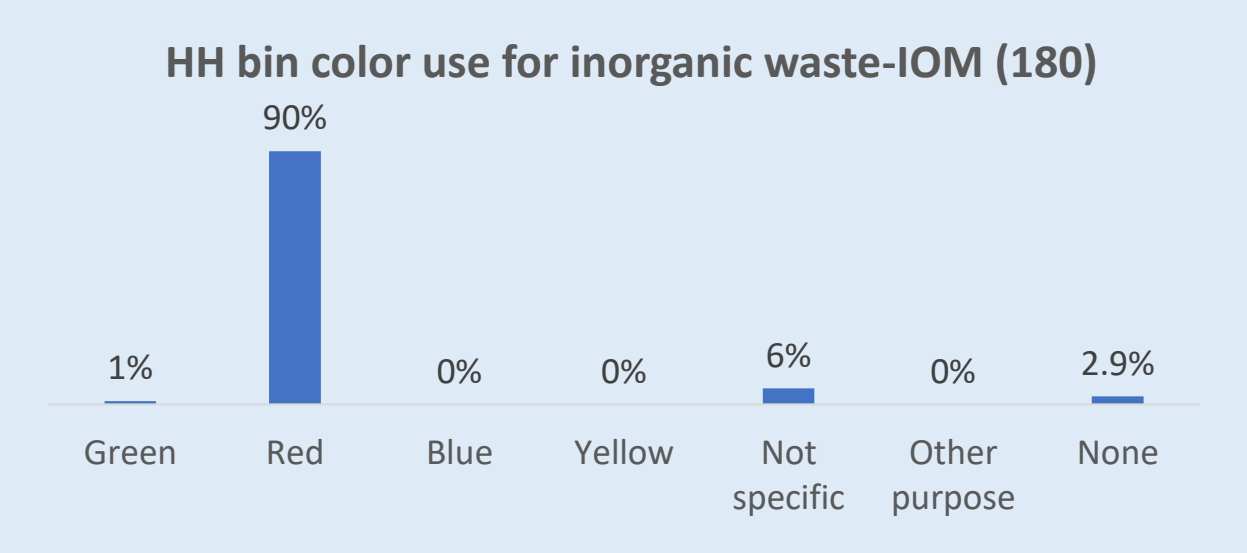
1-Number, size, the color of bins, HH segregation





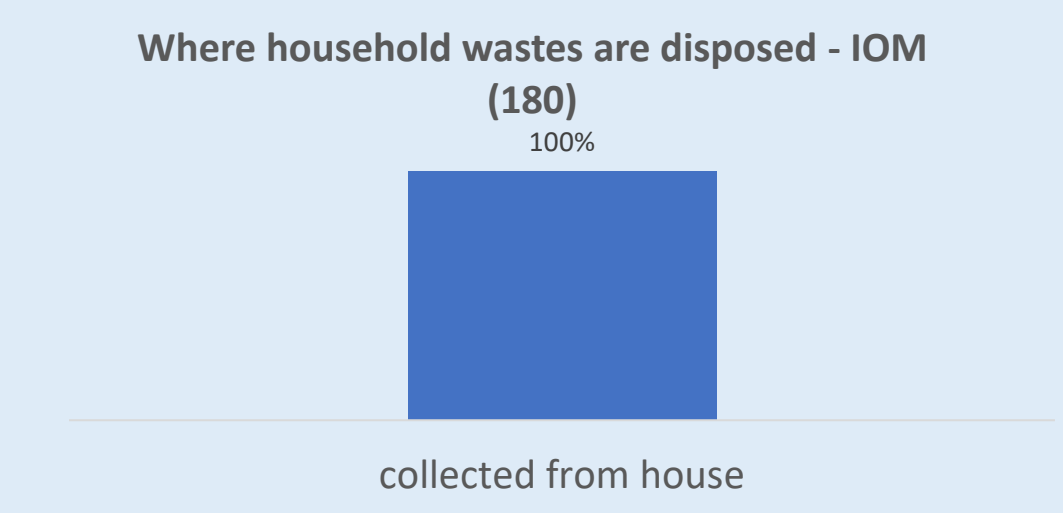


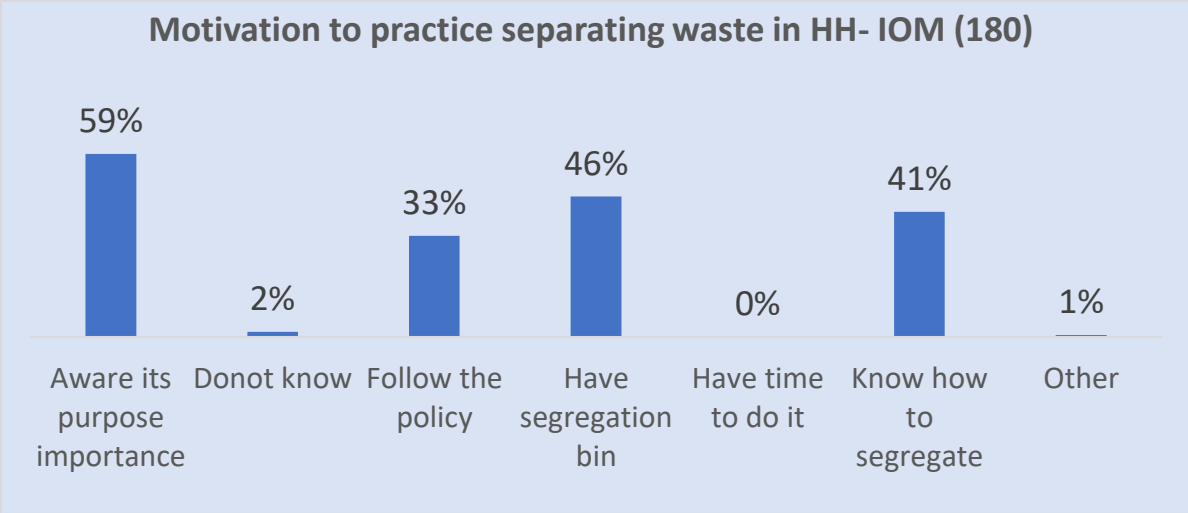


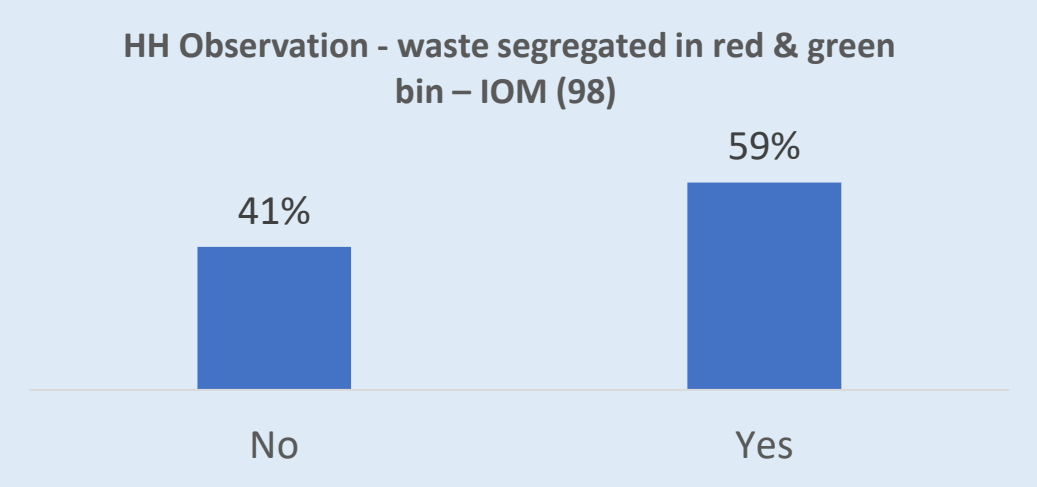


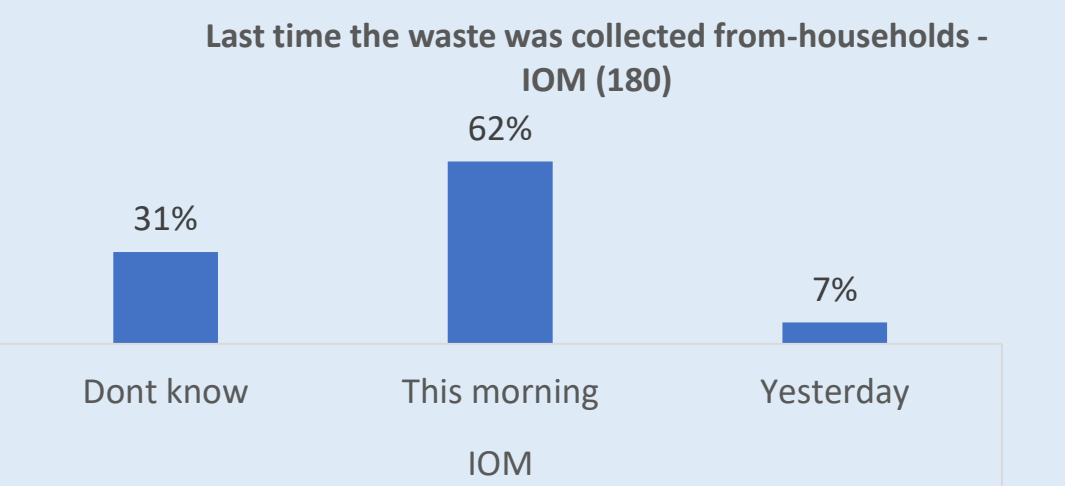
Number of bins 2 per household: 80% of 180 HHs; Size of bins: 82% have 10 liters; Waste bin color: 79% have green & red bins; Bin used for organic waste: 84% use green; Bin used for inorganic waste: 90% use red;

2- Disposal, use of segregated communal bin, last time collected









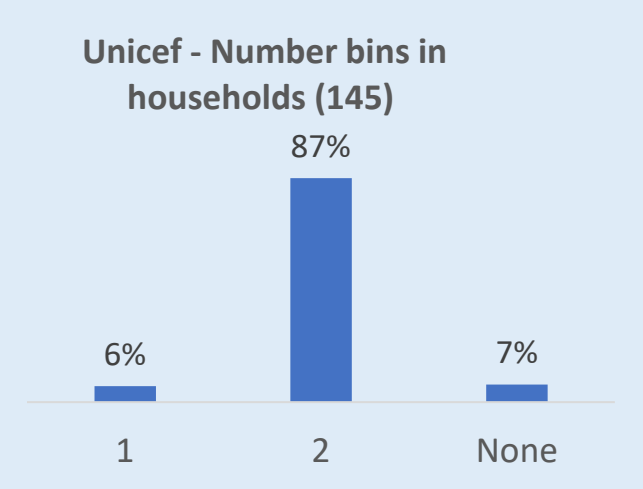
- Disposed HH waste: 100% collected door-to-door/from households
- 59% of households separate waste into red & green bins
- Last time, waste are collected 62% this morning & 7% yesterday.
- Motivation to separate waste: 59% are aware of its purpose/importance, 46% have segregated bins & 41% know how to segregate

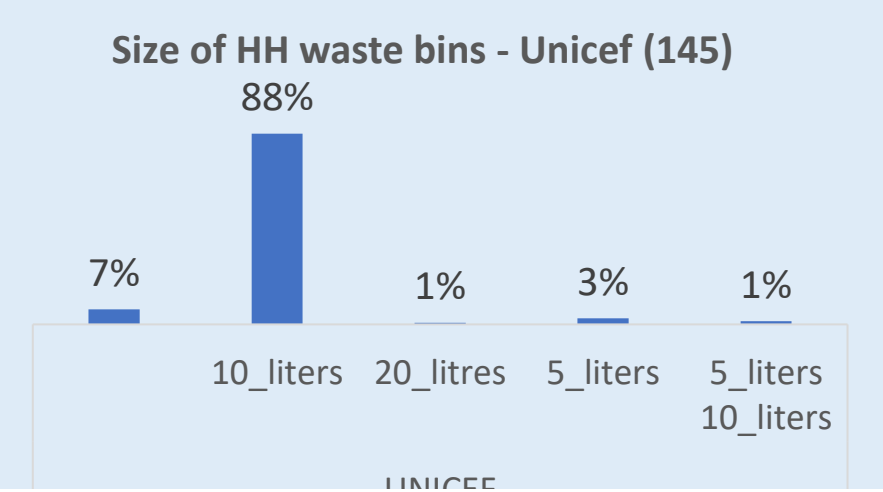
PART-VI

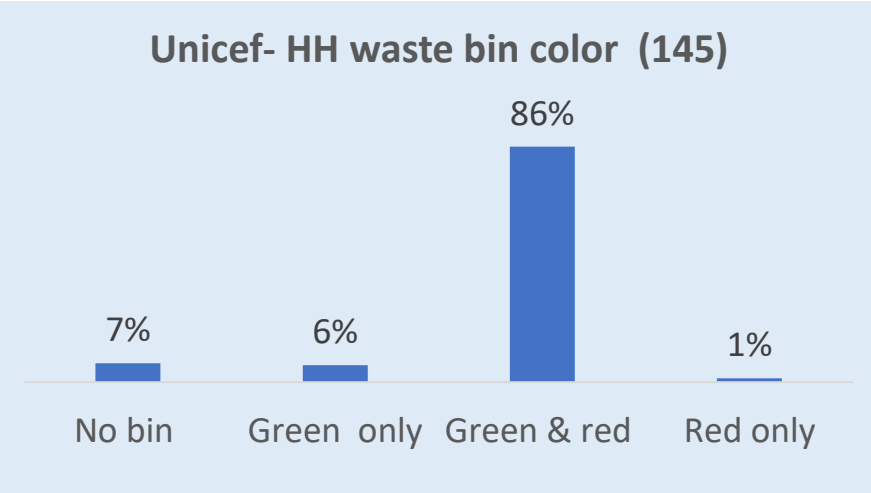
UNICEF SWM modality

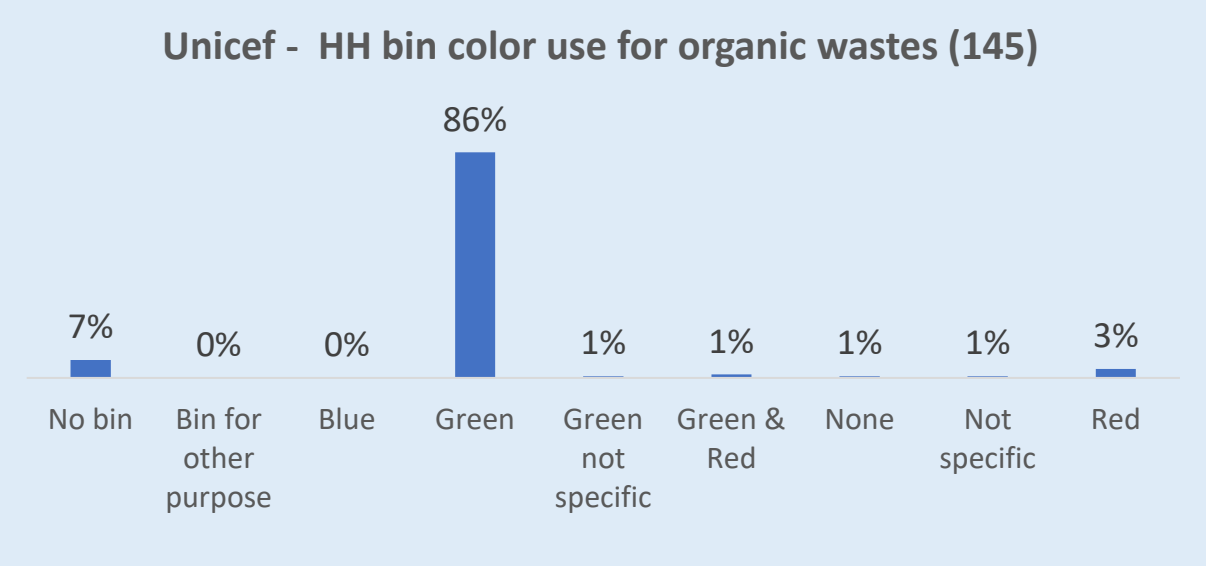
Communal plastic bin solid waste disposal system

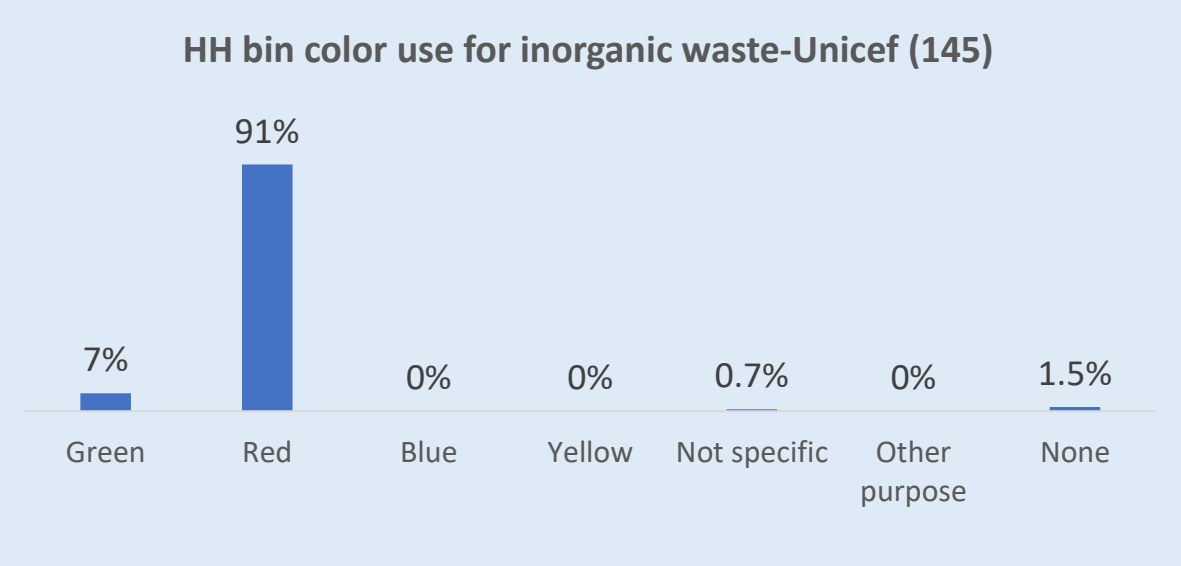
1-Number, size, color of bins, HH segregation





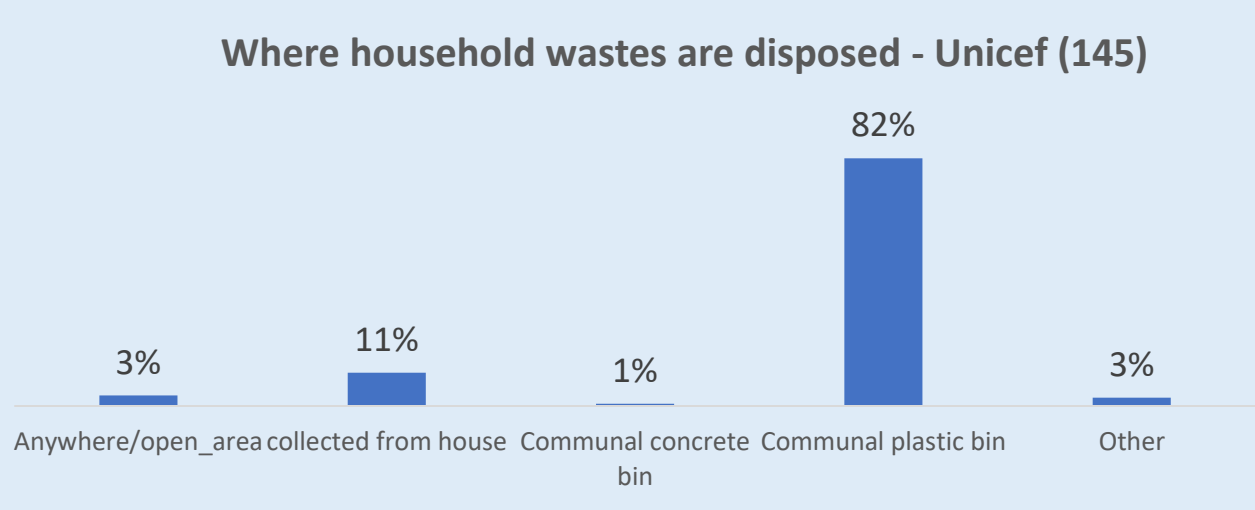


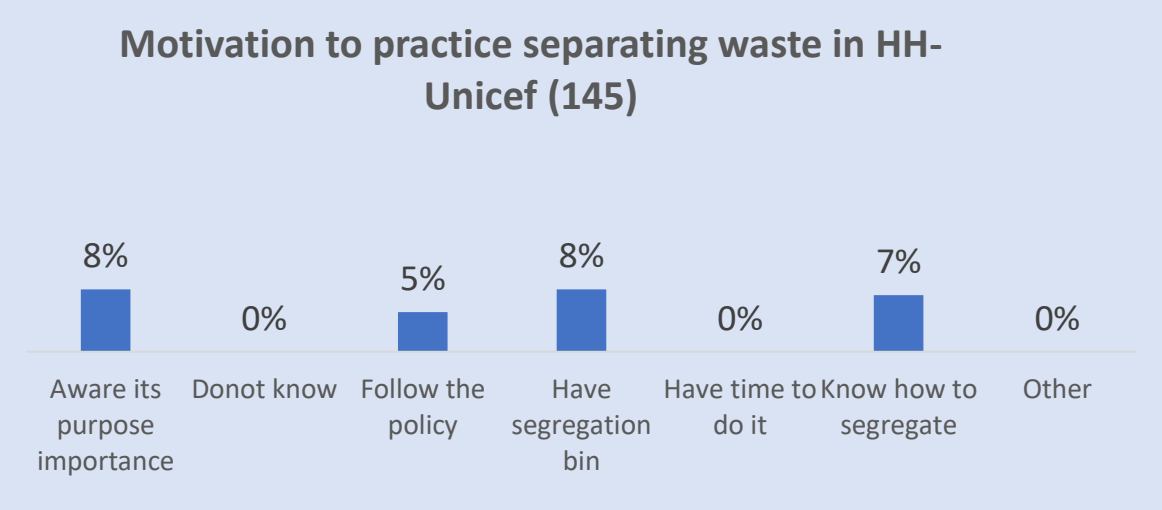


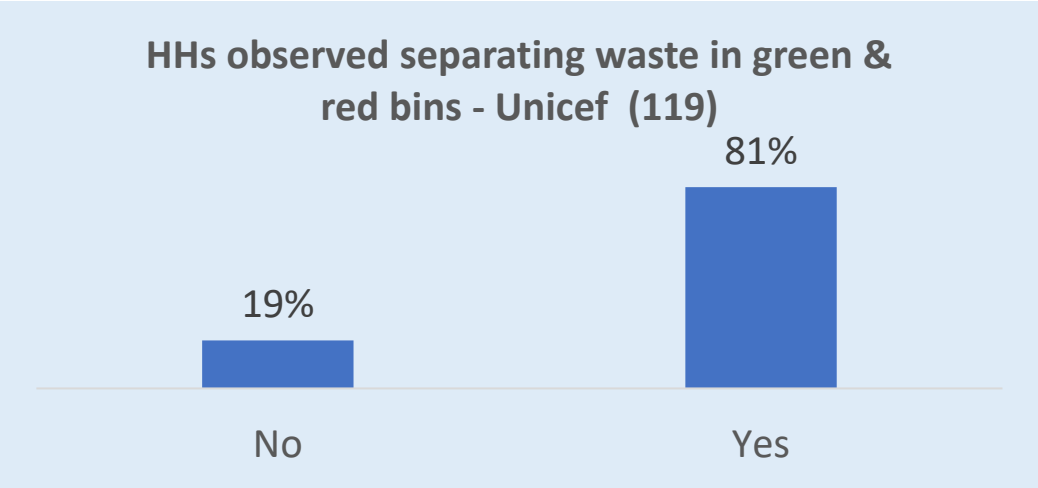


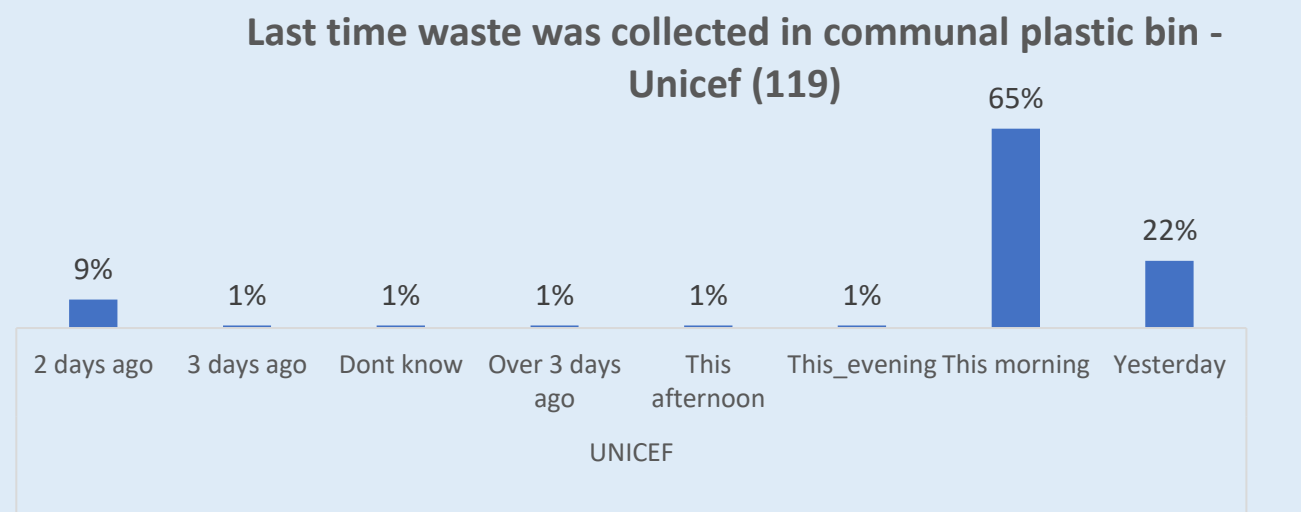
Number of bins 2 per household: 87% of 145 HHs; Size of bins: 88% have 10 liters; Waste bin color: 86% have green & red bins; Bin used for organic waste: 86% use green; Bin used for inorganic waste: 91% use red;

2- Disposal, use of segregated communal bin, last time collected







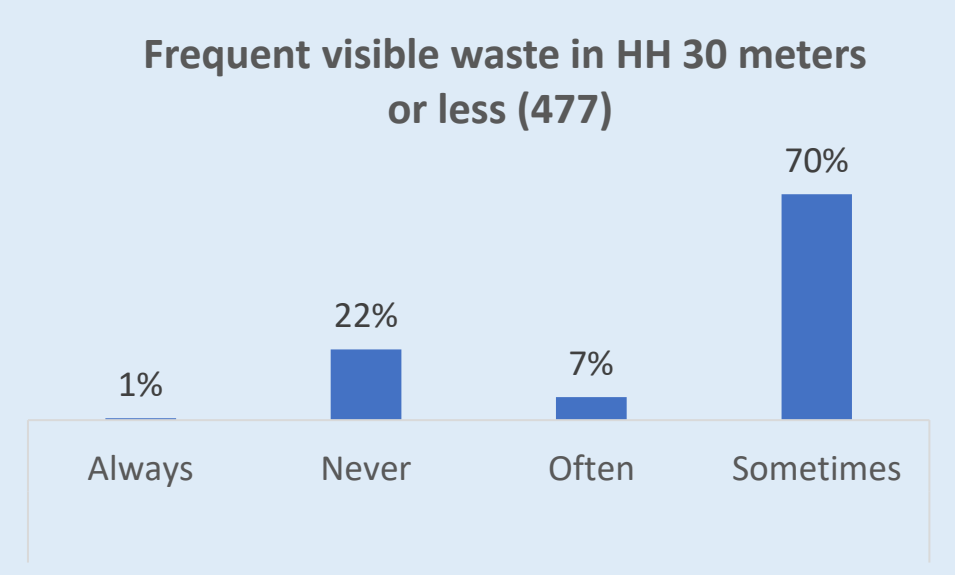


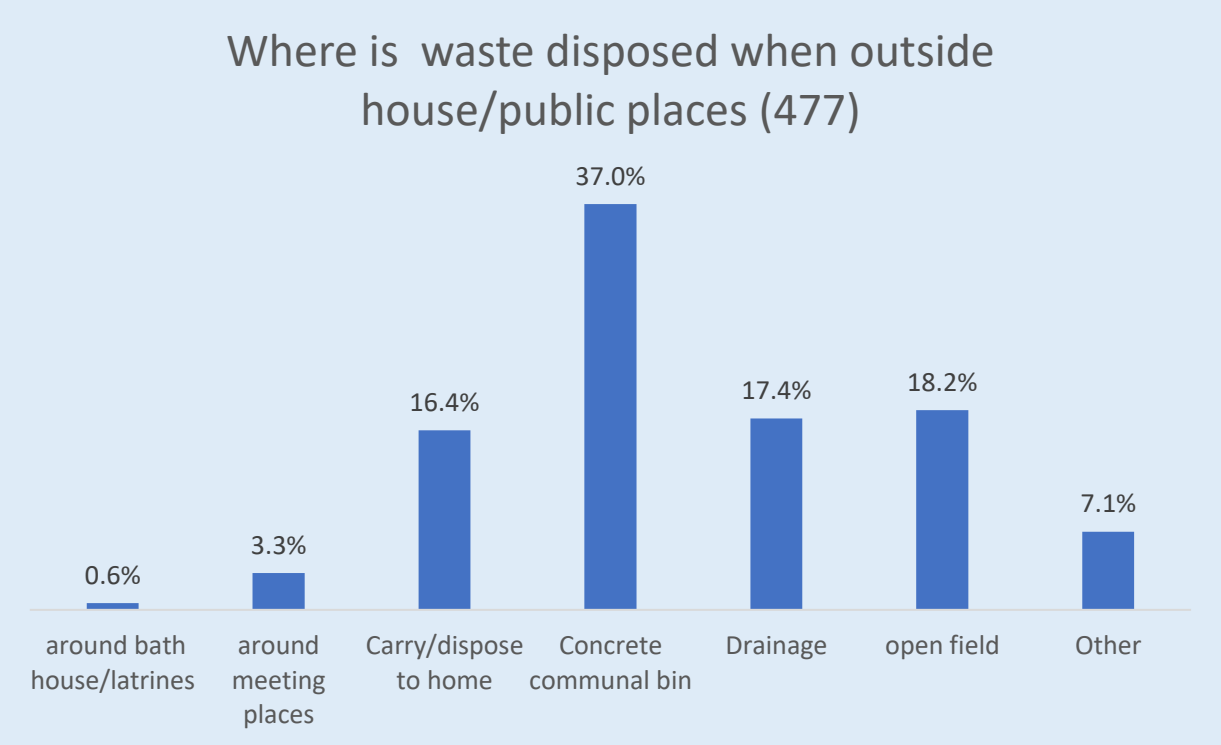
- Dispose HH waste: 82% disposed in plastic communal bin
- 81% of households separate waste into red & green bins
- Last time, waste are collected 65% this morning & 2% yesterday.
- Motivation to separate waste: 8% are aware of its purpose/importance, 8% have segregated bins & 7% know how to segregate

PART VII

Littering, SWM Policy & Recycling

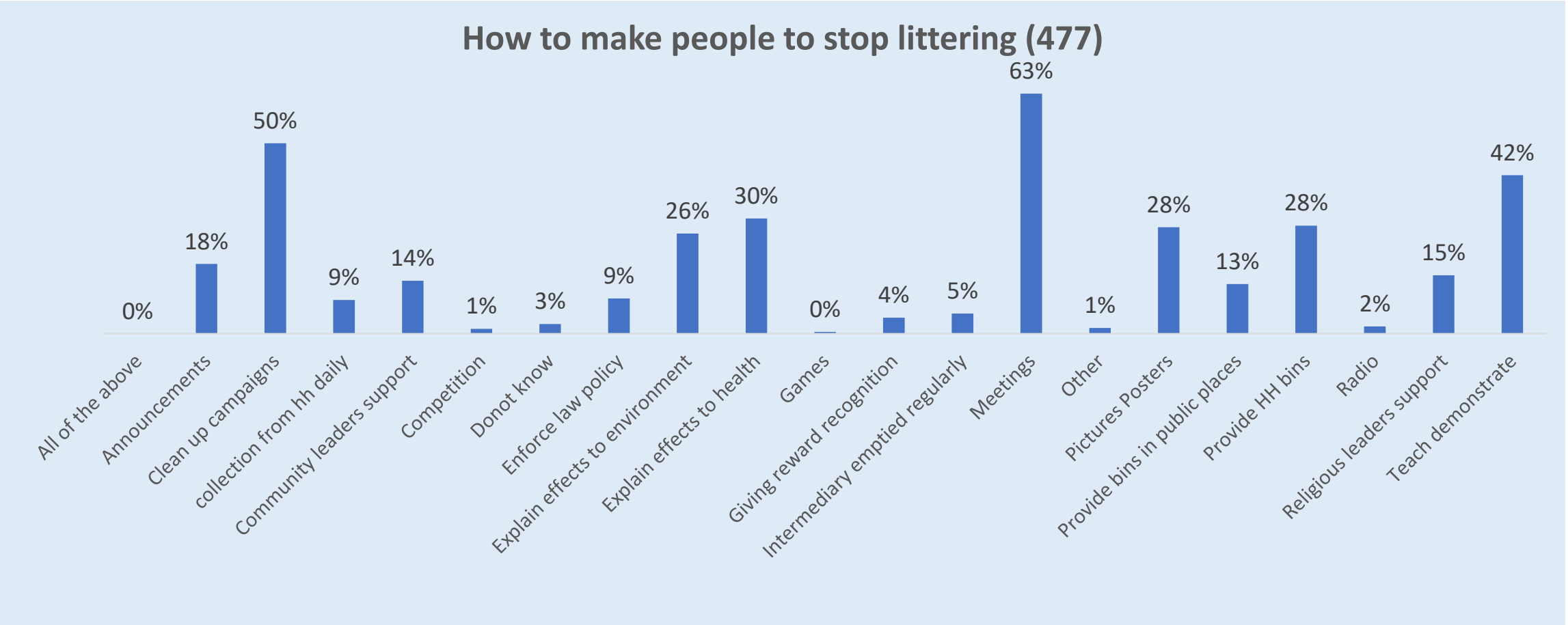
1-Littering: Visible waste & disposal – outside house/public places (Practice)





break this down into age groups for targeted promotion

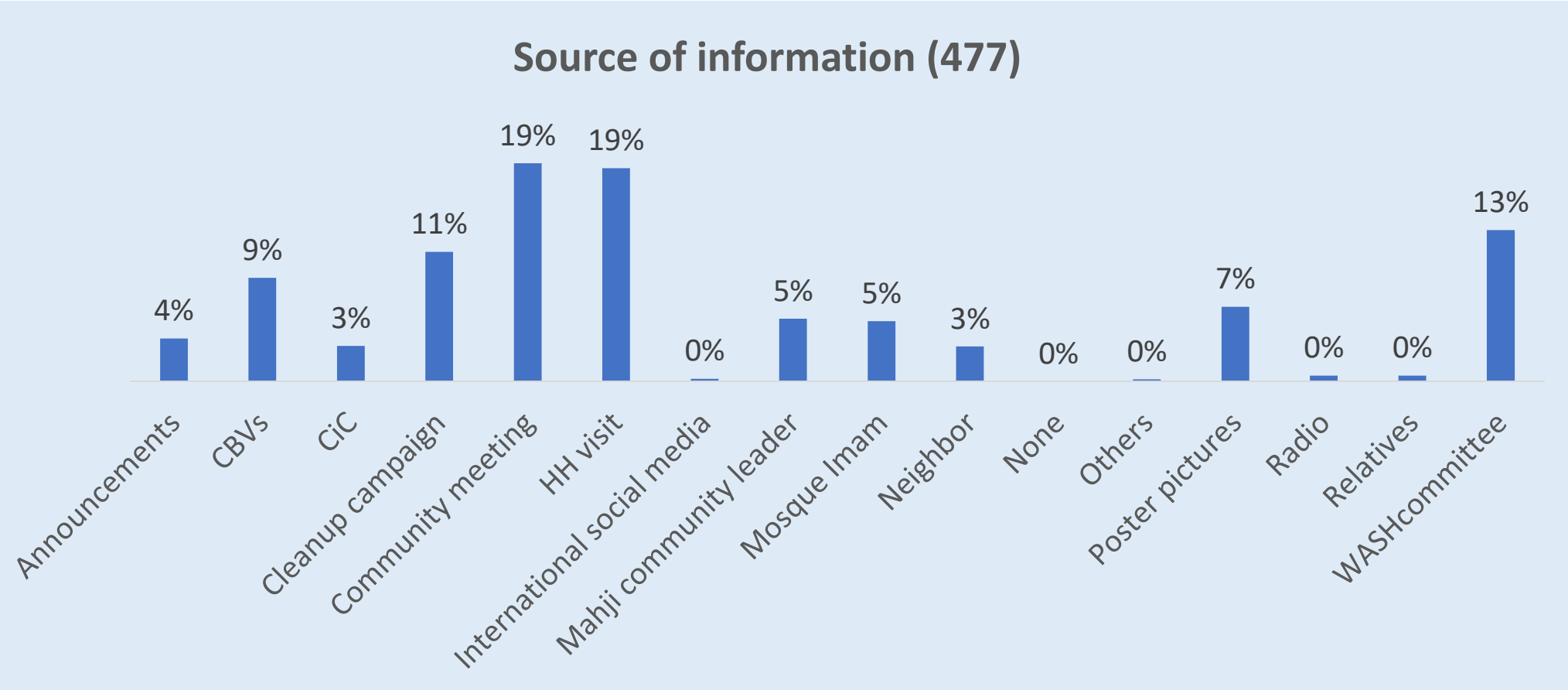
2-Stop littering (Practice)



Motivations/enabling the Practice improvement :

- Top 5 ranked (in order) by the respondents: 1: meetings, 2: clean up campaigns, 3: teach/demonstrate, 4: explain effects & environment, 5: pictures/posters; WASH Com/CBVs
- Use diverse interactive/participatory methods during meetings, integrate effect/impact & benefit to health and environment to improve understanding & translate these into behaviors. Ensure age-gender groups are engaged. Frequently update pictorial posters e.g., change this based on information needs regularly; Focus: Stop litter in the entire SWM chain starting from HHs→ communal bins→ surroundings/open areas/drains, etc..

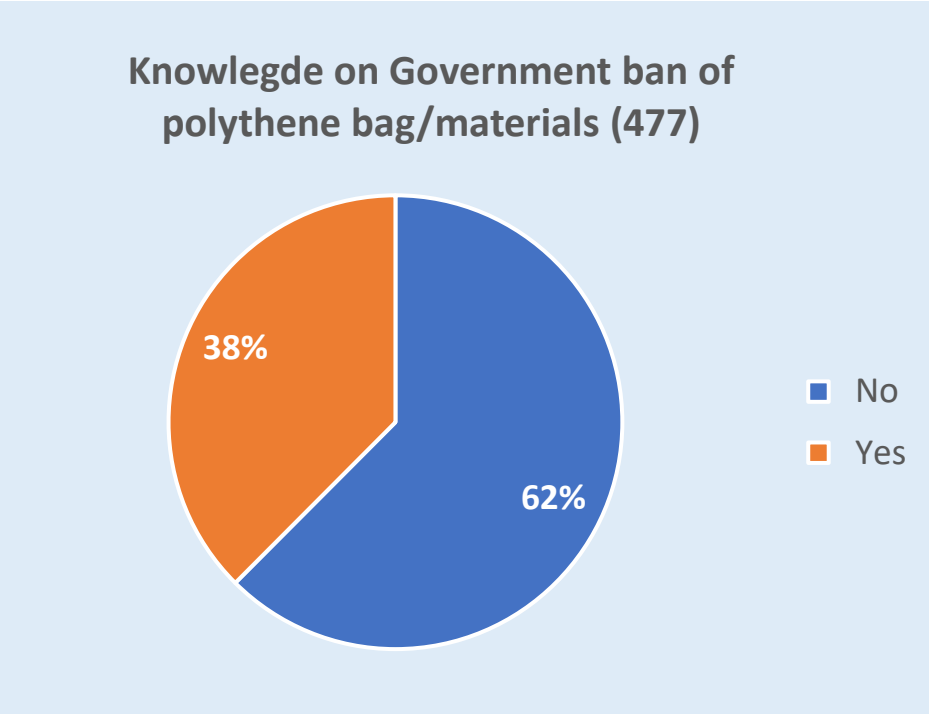
3-Source of SWM Information (Knowledge)

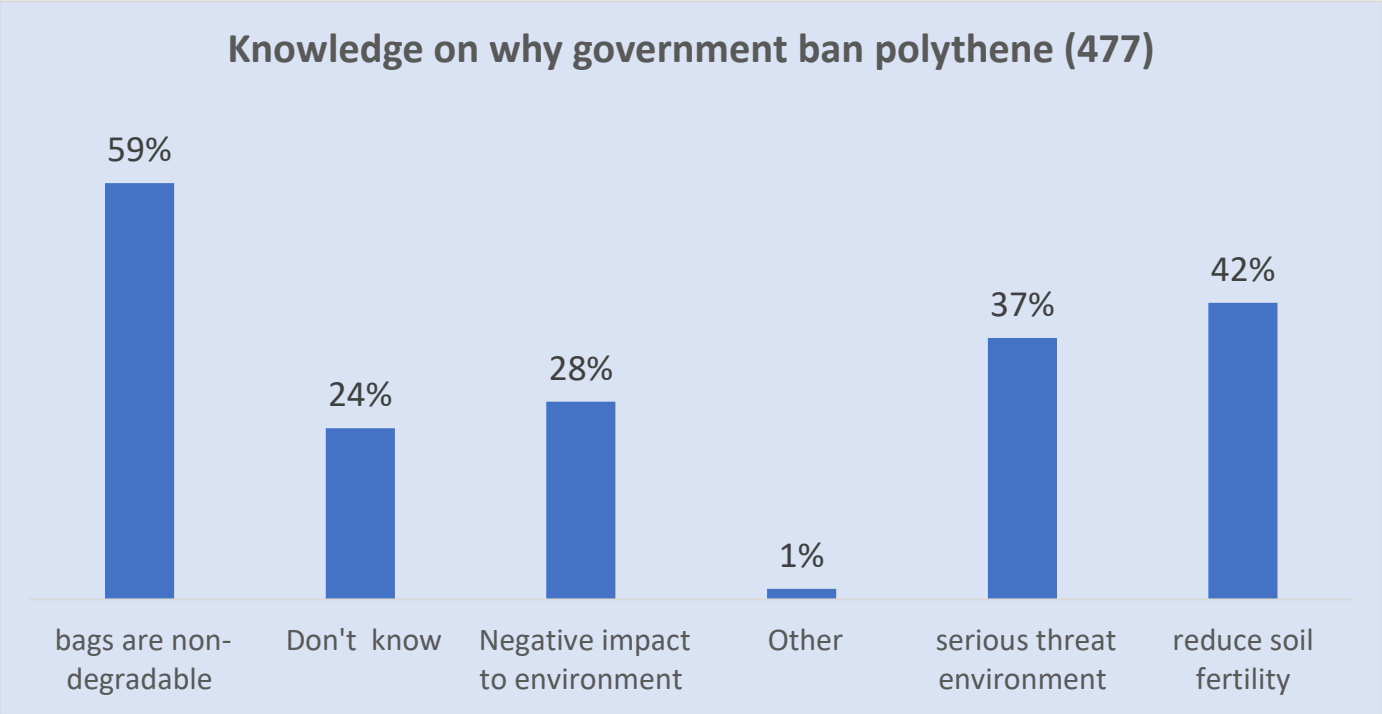


Sources of information on SWM were channeled through:

- Top 5 ranked (in order) : 1: meetings/household visits, 2) clean-up campaigns, 3) WASH Com, 4) CBVs, 5) posters/pictures
- Recommendations: Use diverse interactive/participatory methods during meetings, integrate effect/impact & benefit to health and environment to improve understanding & translate these into behaviors. Ensure age-gender groups are engaged. Frequently update pictorial posters e.g., change this based on information needs regularly; Focus: Stop litter & segregate waste in the entire SWM chain starting from HHs→ collection/communal bins→ surroundings/open areas/drains, etc..

4-Knowledge on SWM Policy

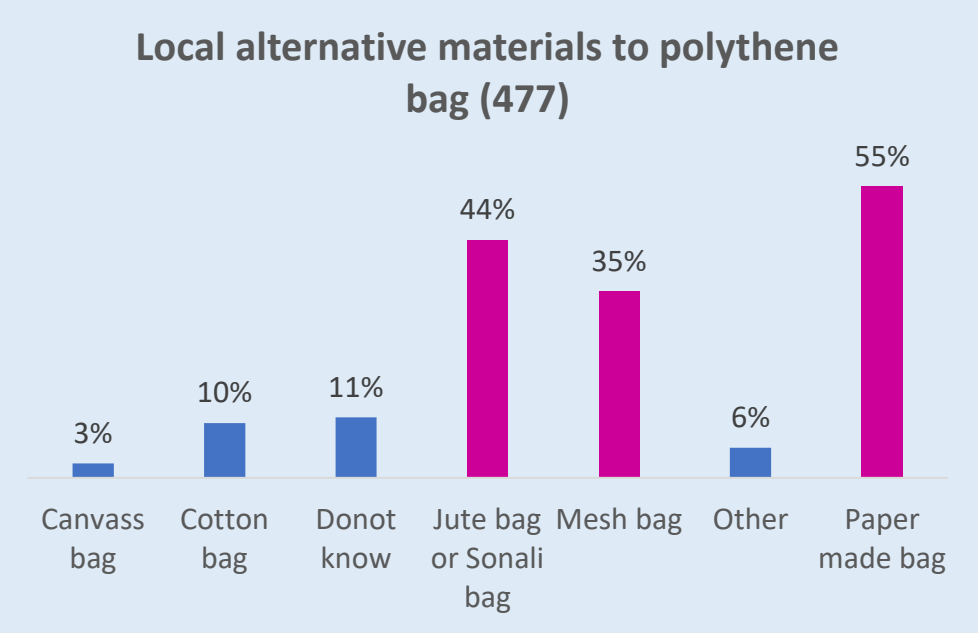


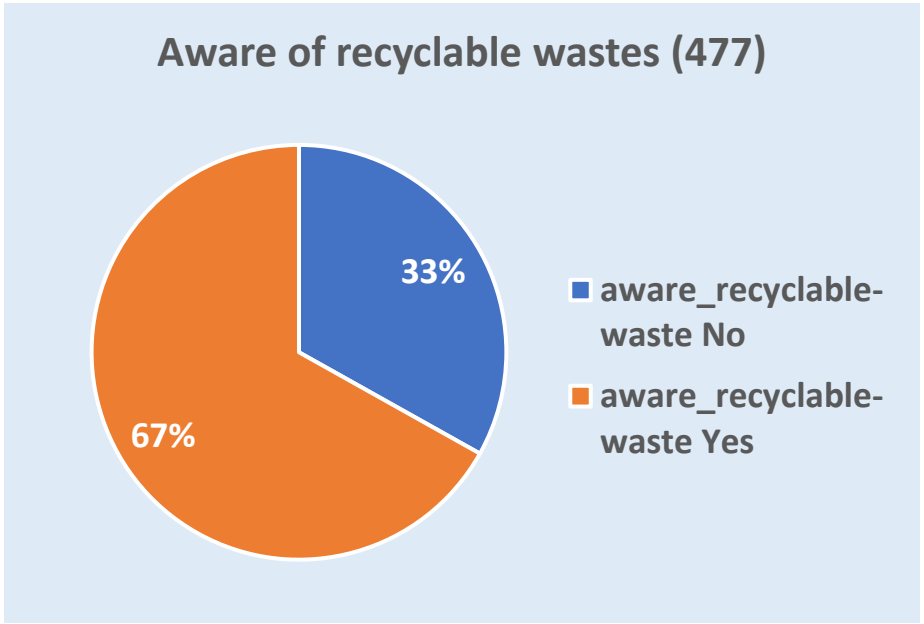


SWM policy

- Only 38% know the government ban on polythene bag
- Related to why polythene is banned, only 59% know that polythene bags are non-biodegradable, 42% know it reduce soil fertility, and 37% know it has a serious threat to the environment.
- Address the 62% knowledge-practice gap on the ban of polythene bags and the ‘‘why’’.
- Did partners include this in their promotion/ Information sharing? As part of the WASH sector SWM strategy, communities need to know the policy and translate it into practice.

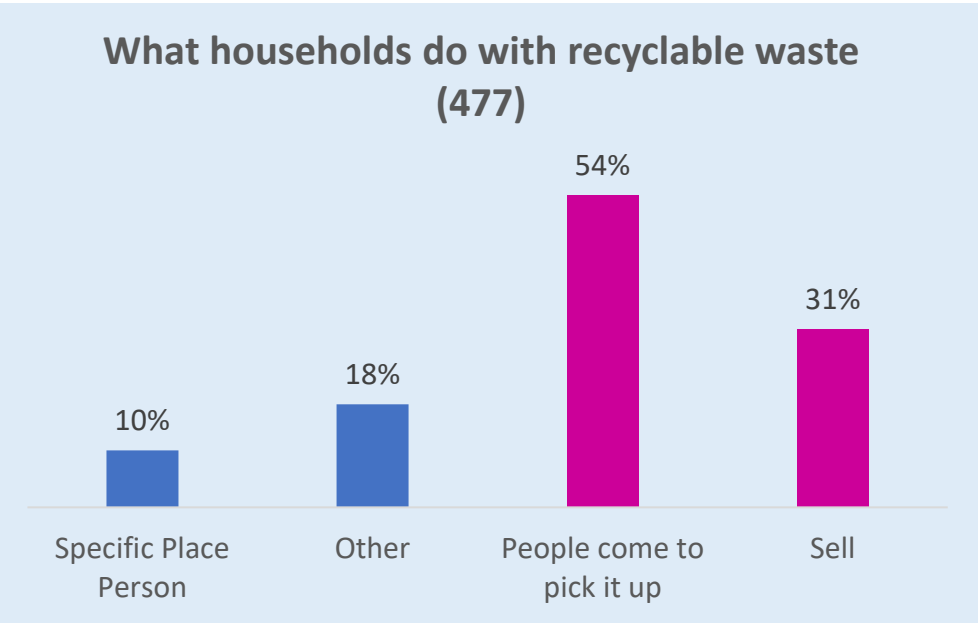
5-Recyclable wastes (Knowledge & Practice)

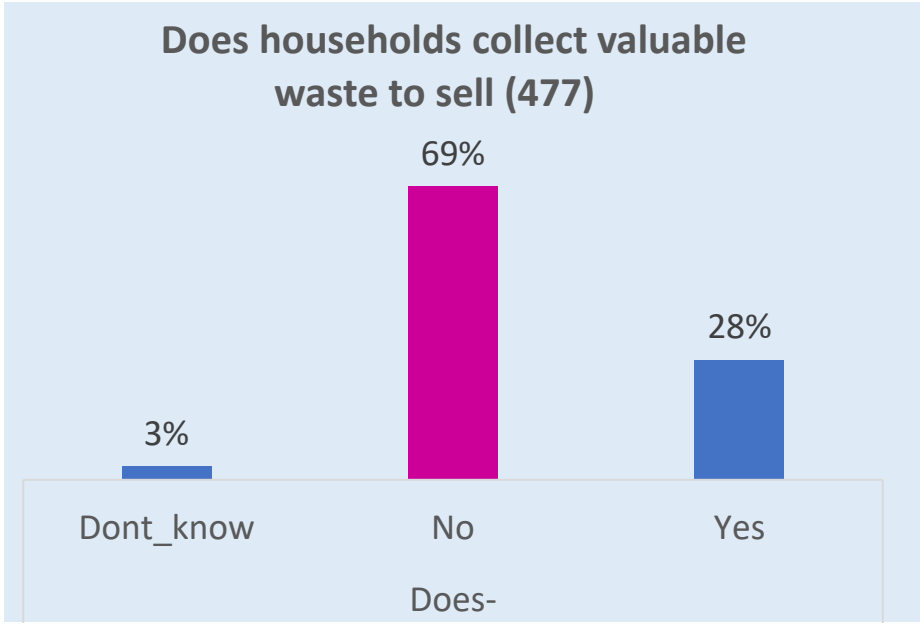




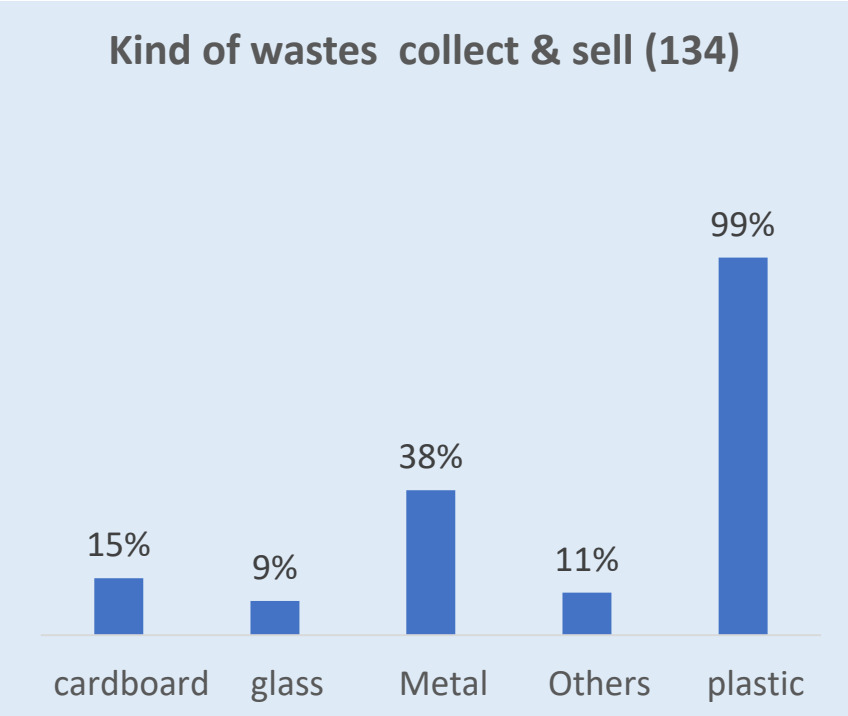
Waste recycling :

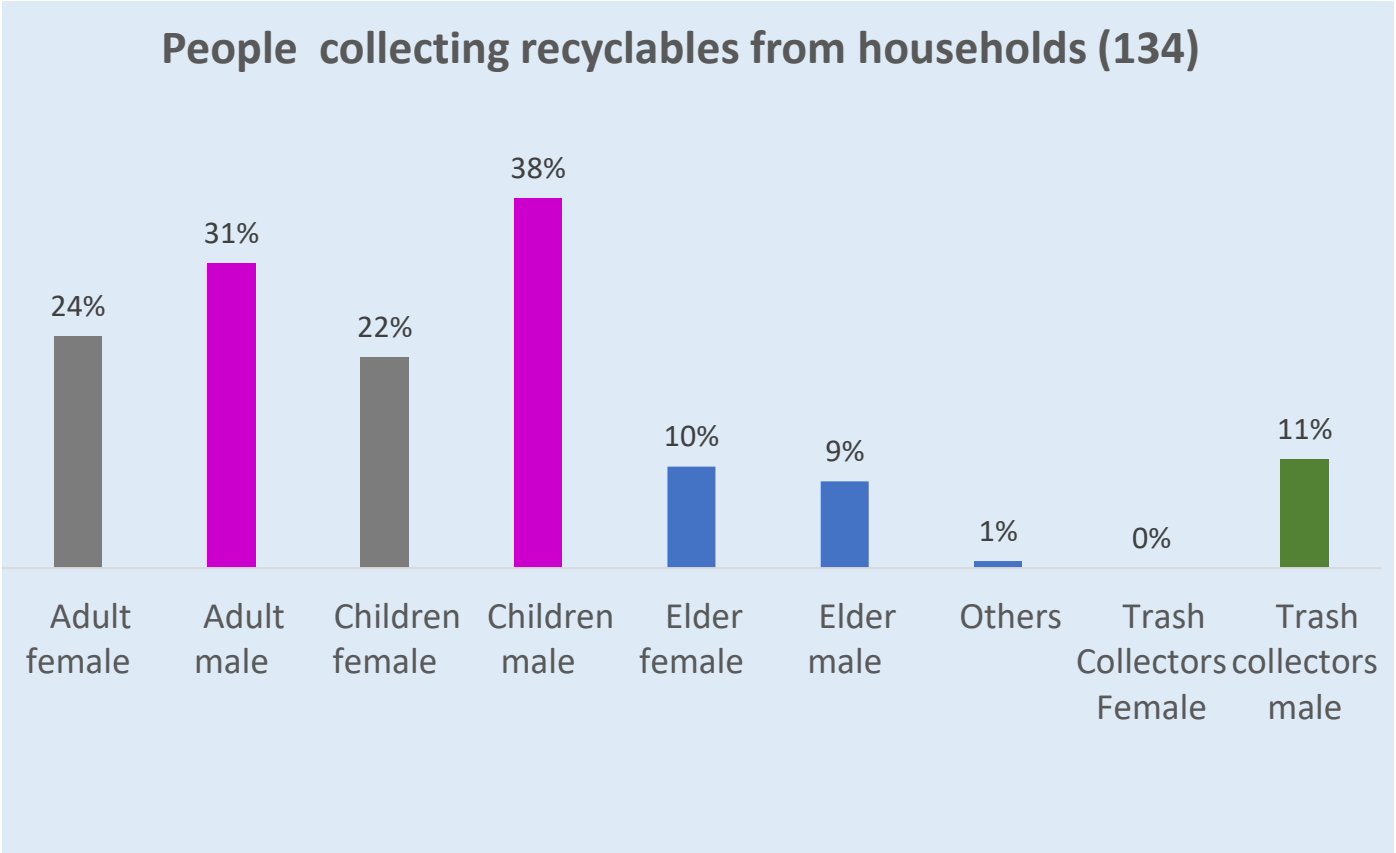
- 67% are aware of recyclable waste
- 69% not practicing recyclable waste collection/selling, although some people (54%) pick/buy
- Only 55%, 44% & 35% use of local alternative bags to reduce waste
- What is the plan of WASH partners on recycling at the HH level?





6-Recycling: Collect & sell waste (Practice)

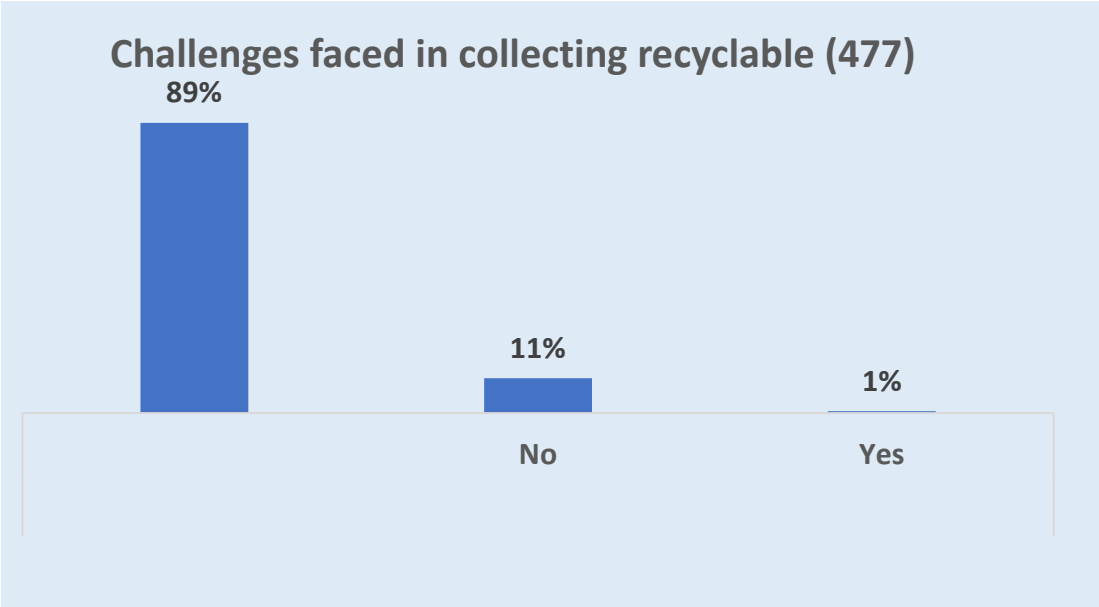




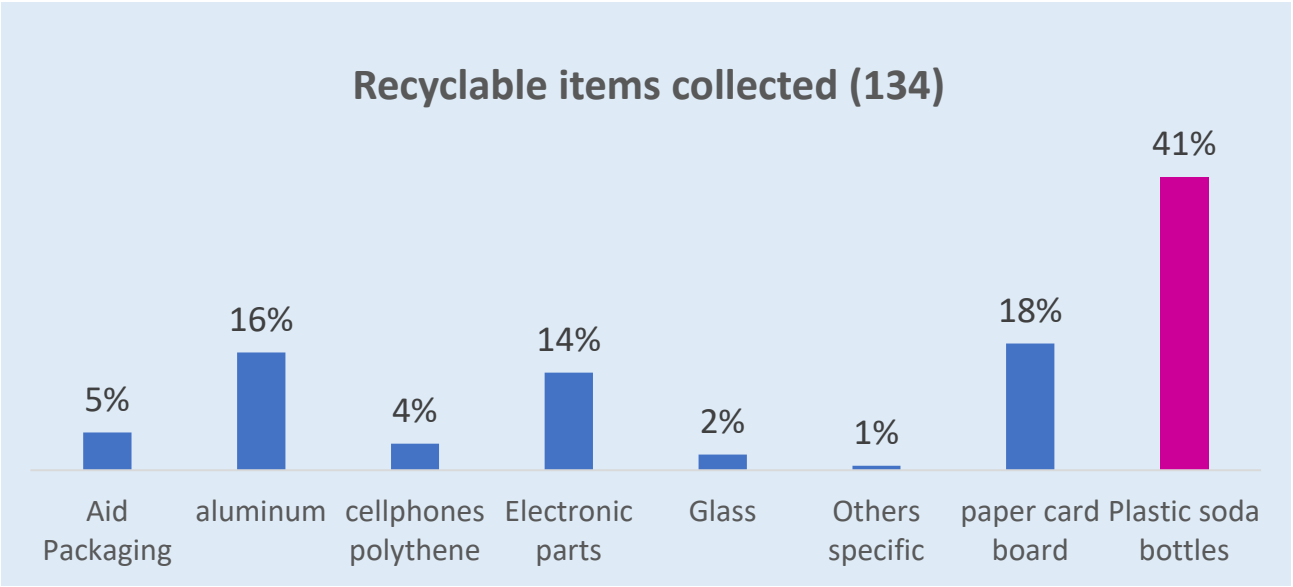
What is the plan of WASH partners on the data related to Recycling? Refer to the WASH sector-SWM strategy

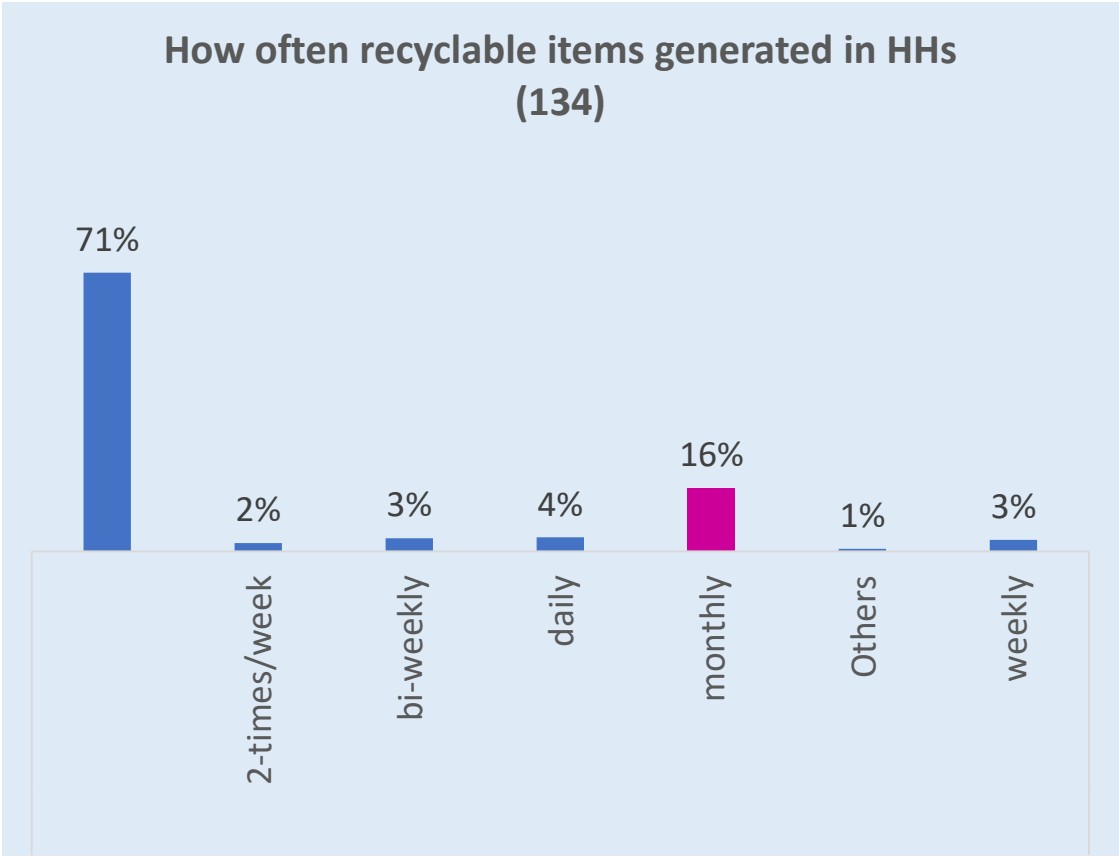
- **Kind of waste collected/sold: plastic, metal; there could be more if community knows more information about this**
- **All HH members are engaged, the highest are children male & adult male collects/sells, some female & elderly.**
- **There are no female trash collectors**

7-Recyclable items generated/collected (Practice)

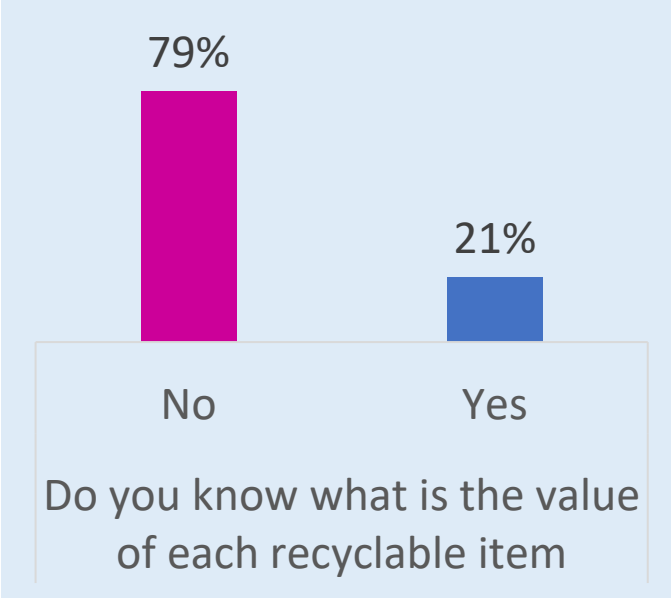


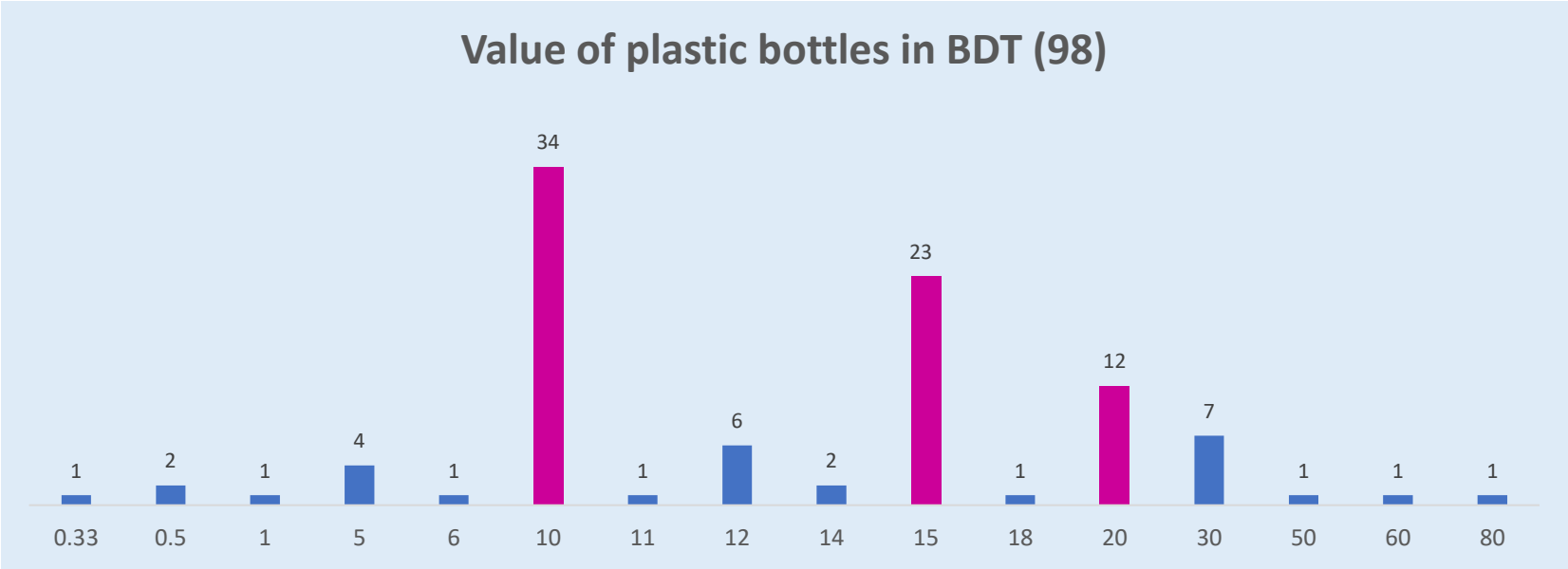
Challenges faced by women:
At day time, males harass, mocked, and eve-tease women
Some boys are misbehaving during dumping time
Action: GBV orientation/awareness to the male population so women can be engaged more





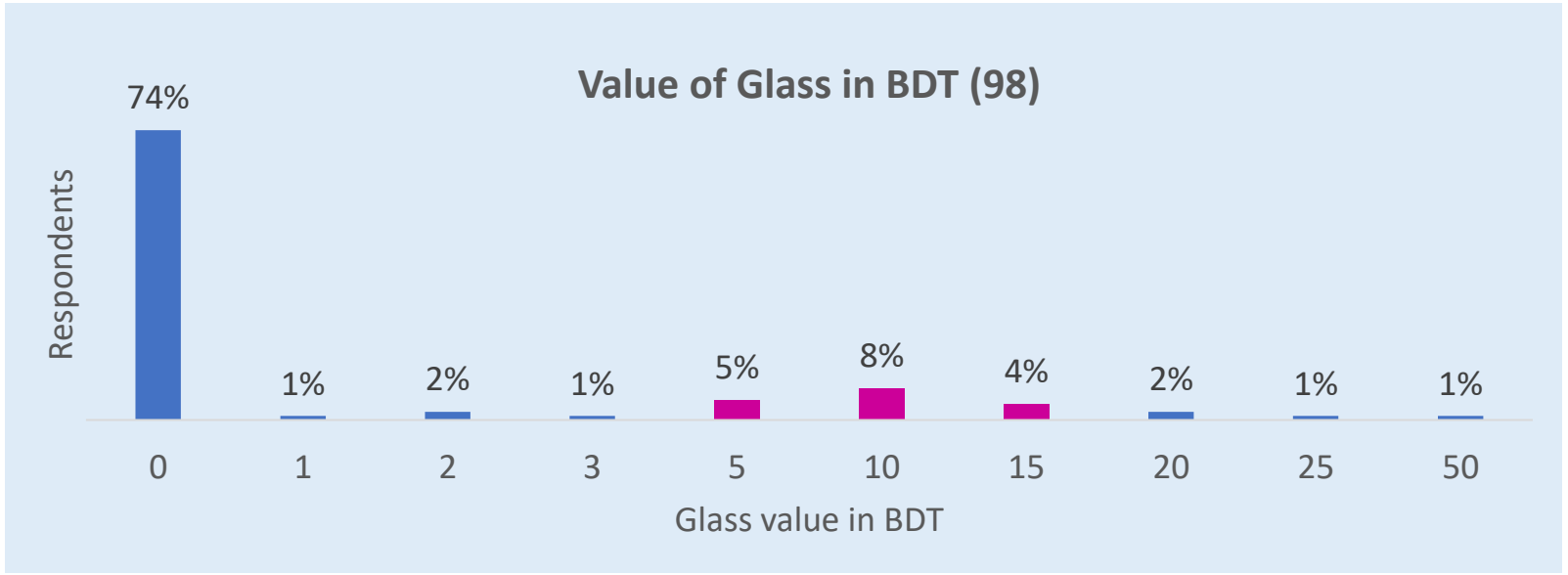
8-Recyclable waste value (Knowledge)



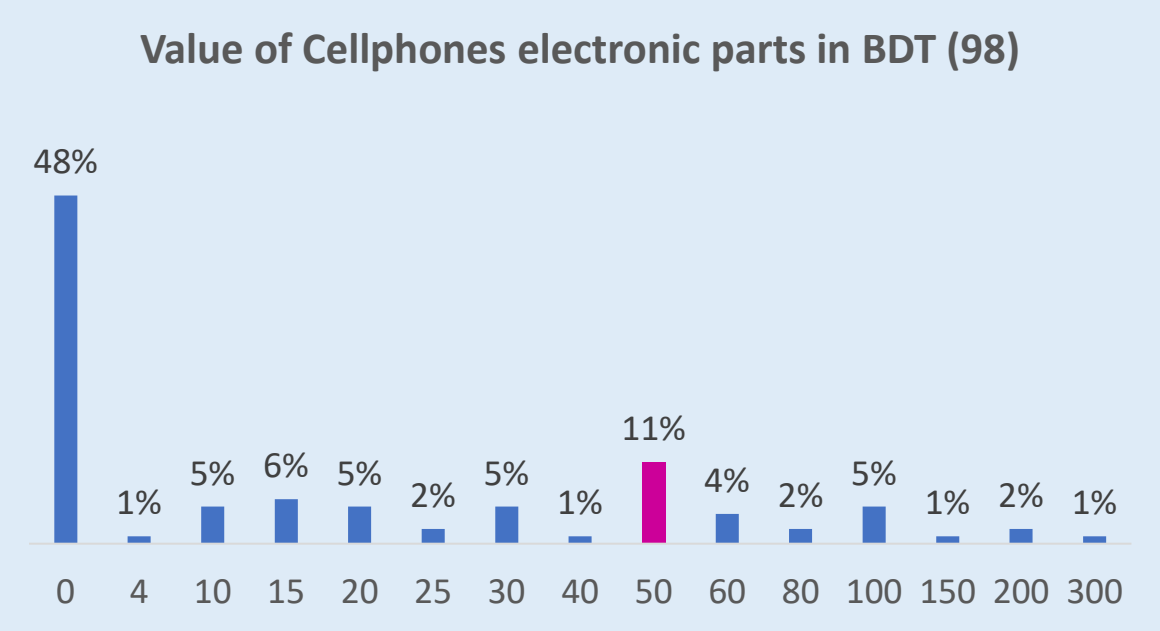


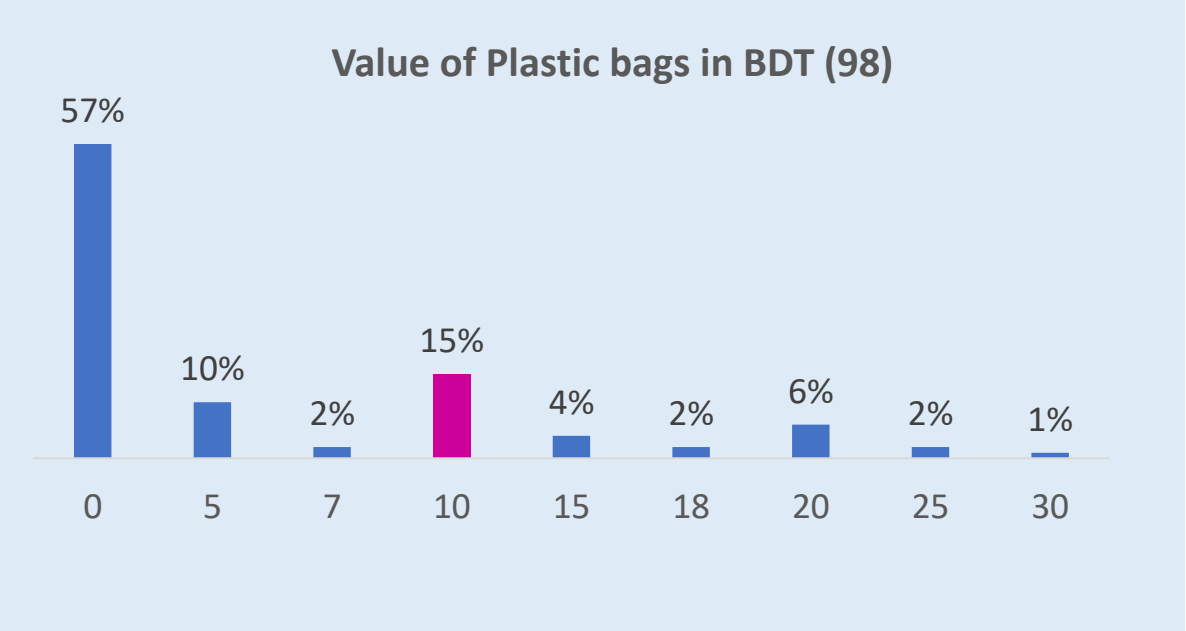
Knowledge gap:

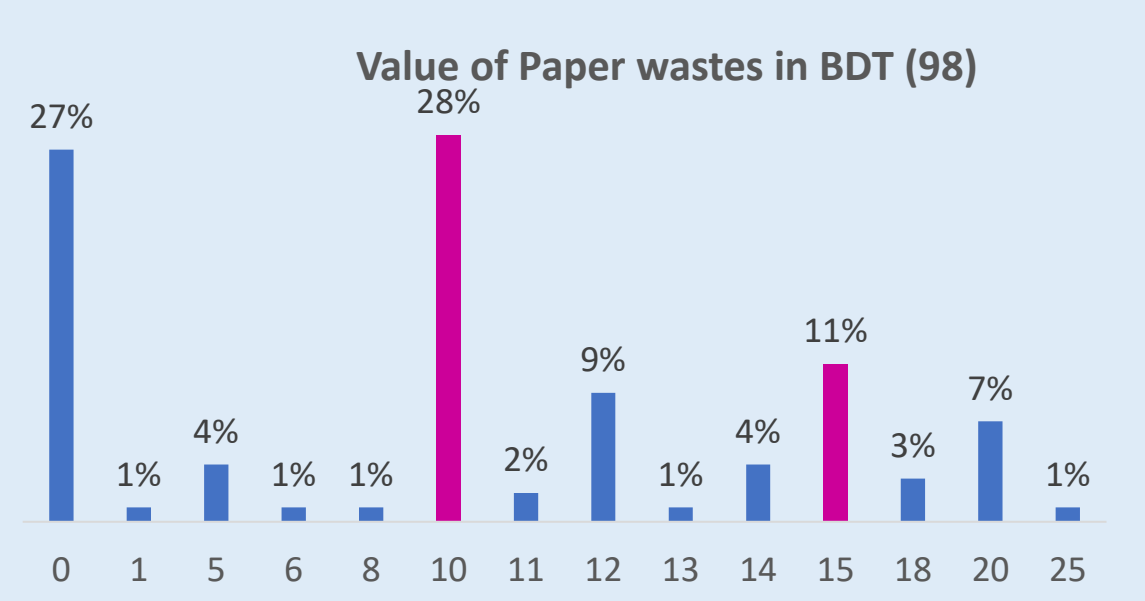
- 79% don't know the waste value
- The waste value given by respondents needs to be confirmed if correct – seems pricy.
- Plastic bottles cost 10 BDT per kilogram?
- Glass 10 BDT per piece?

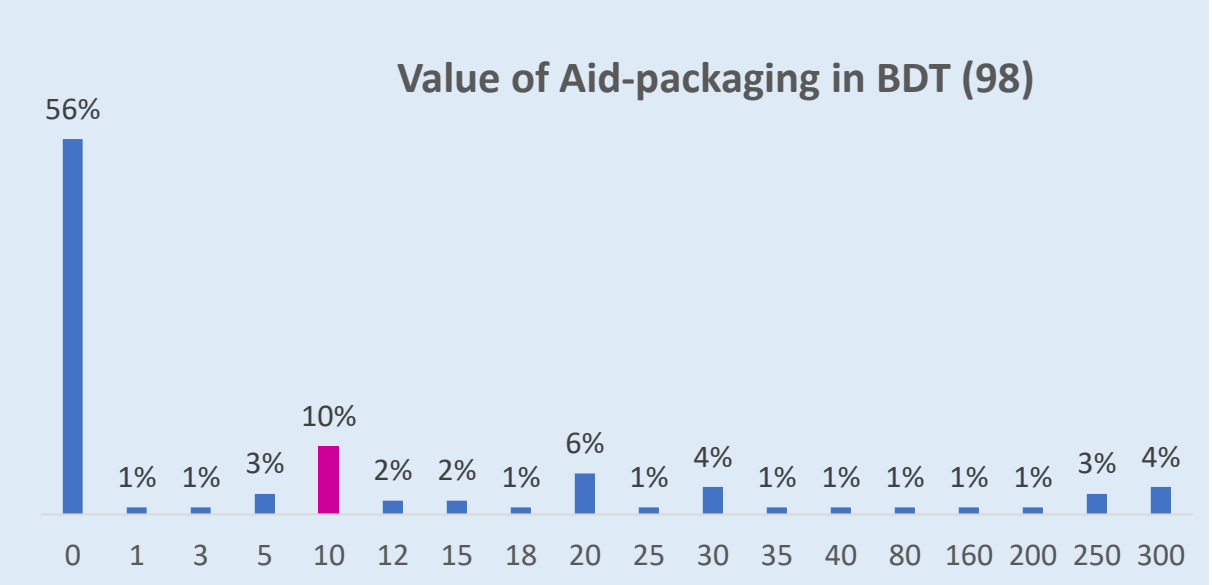


9-Recyclable waste value (Knowledge)

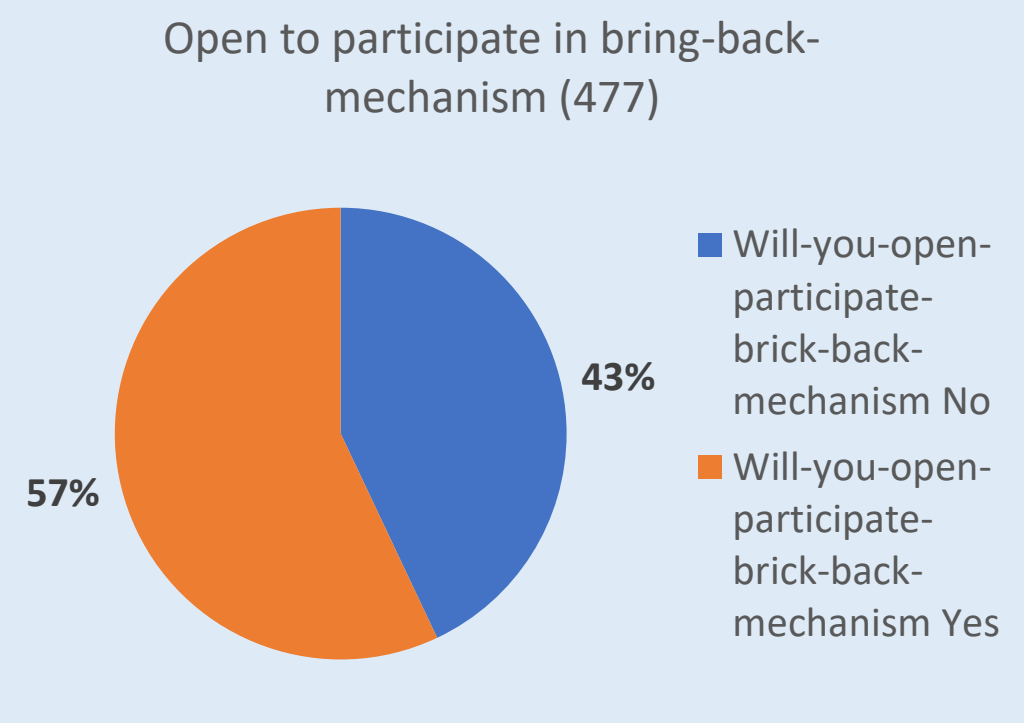


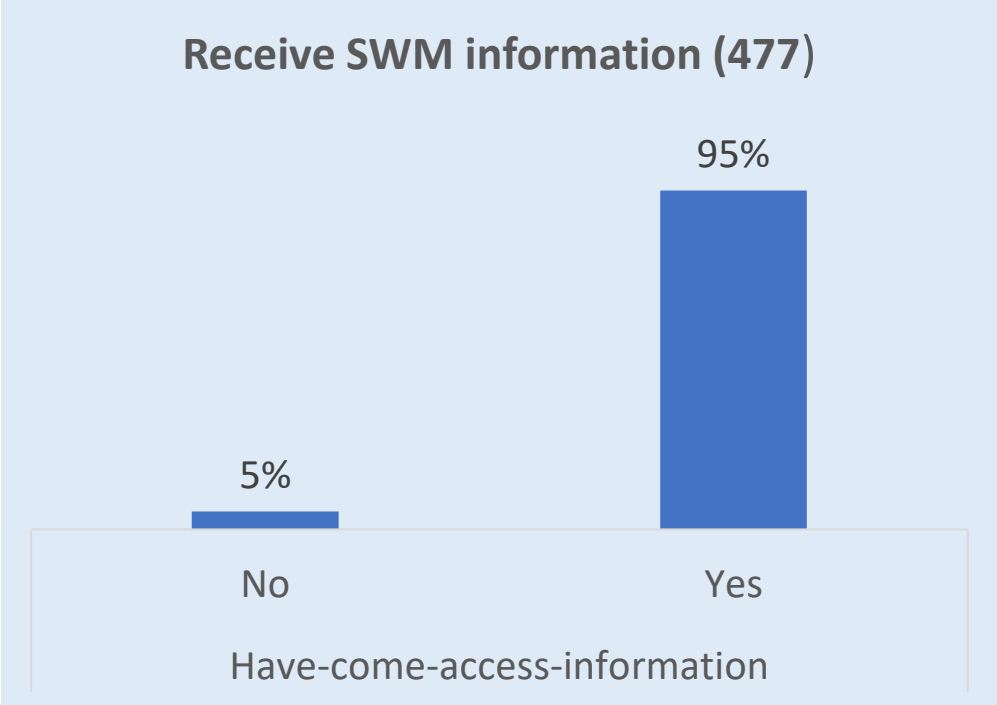






10-SWM Bring-back mechanism & information received (Knowledge)





Information received about SWM

- 95% received SWM information, gaps in information content are detailed in the first parts of this report
- Only 57% open to bring-back

Actions from Summary of findings

- Next step: Joint analysis, recommendations & designing SWM-Behaviour change promotion through discussions with partners
- AFA – partners to be provided with the raw data set and summary per camp/AFA

For any questions/support, please contact:

meriam.asibal@oxfam.org
ttarannum@iom.int

WASH Sector Cox's Bazar

OXFAM