Water, Sanitation and Hygiene Promotion Programme

Report of the Water, Sanitation and Hygiene

Baseline Survey in Pyawbwe/Mandaly and Yesagyo/Magway Townships, Myanmar

Myanmar Red Cross Society

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LIST OF ABBREVIATIONS AND ACRONYMS

BPL	Below Poverty Line
BSL	Base Line Survey
CBHFA	Community-Based Health
CHAST	Children Sanitation and First Aid
DW	Dug –Well
FT	Feet
Gal	Gallon
HH	Household
HHW	Household Waste
HP	Hand Pump
HQ	Headquarters
HW	Health worker
IFRC	International Federation of Red Cross and Red Crescent Societies
IEC	Information, Education and Communication
MRCS	Myanmar Red Cross Society
MTS	Meters
MOH	Ministry of Health
MMK	Myanmar Kyat
PHAST	Participatory Hygiene and Sanitation Transformation Hygiene training.
PBE	Pyawbwe Township
RCRC	Red Cross and Red Crescent
RCV	Red Cross Volunteer
SW	Shallow well
TW	Tube-well
VL	Village leader
WHO	World Health Organisation
YSG	Yasagyo Township
2IC	Second IN charge

1. BACKGROUND

The water, sanitation and hygiene promotion programme implemented by Myanmar Red Cross Society, supported by the International Federation of Red Cross and Red Crescent Societies and funded by Austrian Red Cross is the first of its kind in size of community based watsan project and nature of implementation process with main focus on enhance capacity of MRCS branch for long term programme implementation.

The objective of the project is to improve the health of the targeted population in 10 villages in Pyawbwe and Yesagyo Townships at Mandalay and Magway division by improving community based sustainable water supply systems, sanitations and hygiene practices.

The project is entirely designed and carried out by MRCS HQs staff, Township Branch and Red cross volunteers.

The community-based watsan project spans 2 years (2011 - 2012) and aims at, among other specific objectives,

a) Establish and Developing the WatSan Unit at HQs and build and enhance capacity of staff and volunteers in Watsan assessment, project design and implementation, monitoring and evalution.

b) To reduce the incidence of water borne diseases by providing sound , sustainable environmental services in water supply, Sanitation and hygiene promotion.

c) To enhance the capacity of Watsan Unit to response to emergency and disaster preparedness and risk reduction.

2. BASELINE SURVEY

This report is based on a descriptive community survey and highlights important water sanitation and hygiene issues. The data was generated by the use of questionnaires and observation forms, both being carried out by men and women separately.
The survey basically deals with four main areas:

- *Water*
- *Sanitary situation and defecation habits*
- *Solid and liquid waste*
- *Diseases*

The survey findings is one of the means which will be used for village selection, monitoring and evaluation benchmark. Based on its findings, several recommendations on fine-tuning the project are made.

The baseline survey findings are deduced from data of households, villages' leader, health workers, and schools' headmaster collected by trained MRCS volunteers from within the target townships' area. Household data were gathered from 443 households, 8 health workers and 8 schools using structured questionnaire; respondent households were selected through simple random sampling.
Indicators assessed from the survey indicate lack of safe water and sanitation coupled with poor hygiene.

3. METHODOLOGY

A quantitative Household Survey of water, sanitation and hygiene knowledge, attitudes and practices in 15 villages in two townships Pyawbwe and Yesagyo Townships in Mandaly Magway Divisions repectively. Over 432 Household and 30 officials interviews were performed by trained MRCS volunteers.
The volunteers attended two intensive training in Meitklia and Yangon, whilst 2ICs and selected active volunteers were given additional training as they are nominated as team leaders.2
Each household interview was conduced by a group of two volunteers (male & female) considering gender balance, while official's interview was performed by two volunteers and a team leader.

To supplement the Household survey data, both transect walks and Focus Group Discussions with target beneficiaries were performed to provide qualitative insight to the data set for analysis and comparison with the quantitative findings.
Data entry were rendered by MRCS volunteers at the HQs; statistical analysis were then performed independently by the WatSan delegate, IFRC to ensure reliability through quality control of the data.

3.1 POSSIBLE BIAS AND METHODOLOGICAL LIMITATIONS

1. "No response bias." The fact that interviews were conducted from 9 a.m. to 4 p.m. meant that some heads of household were not at home during the survey and thus were not included in the study.
2. Despite the high number of surveys that have taken place in the targeted areas, "refusal to participate bias" was not observed in all visited communities and the surveyors were generally well received. This demonstrated the will of the population to work closely with the team during future programs.
3. "Translation bias." Interpretation of questions may be different in Myanmar compared to the original question written in English. Accordingly, during the training session the survey team took sufficient time to translate the questionnaire into Myanmar and the surveyors had the translated text in Myanmar next to the questions in English.

4. "Investigator bias." The opinions of the surveyors and their supervisors can skew the results. For example, when surveyors show verbal or non-verbal responses to what is "correct" during the interview. The team tried to minimize this bias during training through role playing.
5. "Respondent bias." Respondents may have an interest in providing incorrect answers because they think that they may benefit later, especially in the event that their responses lead to support from donors. In each household, the surveyors explained the objectives of the study to avoid this bias.
6."Privacy bias." In order to ensure the respondents' confidentiality, the investigator makes certain that crowds are not present during the interview.
To reduce the risks of bias, the survey coordinator: • Dedicated time and effort to select experienced surveyors. • Started with a pre-survey (pilot test) and supervised surveyors during the study. • Verified the completed questionnaires each day and provided feedback to the surveyors before conducting fieldwork the next day.

3.2 DESIGN OF THE SURVEY

The baseline survey forms, household and official, were derived from the RCRC PHAST Household baseline survey form, yet adaptations were made to suit programme local context.
The survey form translated into Burmese, then back to English for cross checking technical terminologies (Annexes 4). Additionally, both forms were introduced to, and filling was rehearsed and practiced thoroughly by volunteers and team leaders.
The survey was planned into two phases; the first phase from March to April and second from May to June 2011. Data collected during the phase-1 had been examined by the WatSan Team; consequently, remedies, additional trainings and close supervision of WatSan team, HQs were established as appropriate for robust high level of trustworthiness.

Simultaneously, a software programme(MS- Access based) was developed by Database Officer and tested by WatSan team for analysing collected data.

3.3 SAMPLING METHOD

The survey sample was calculated to cover 28-30 % of the target populations as indicated in table 1. The sampling plan was developed on advice obtained, with some modifications, from the CBHFA PILOT VERSION Draft. Concerned villages' houses were numbered, then the first HHs was selected randomly and an interval of 4 houses.

4 VULNERABILITY OF THE PYAWBWE AND YESAGYO

These two townships falling in the Dry zone of of Central Inner Burman(Myanmar) basin located between 19 degree to 23 degree N. The Dry Zone comprise 54 townships in 13 districts spread 3 divisions namely Sagaing(Lower), Mandlay and Magway as per the Dry Zone Greening department.
IN Mandlay (23 township), sagaing(19 townships) and Magway(18 Townships) falling in Dry Zone of Myanmar In overall 60% of areas in these township represent Dry Zone.

Pyawbwe and yasago have been facing spells of draughts and floods in the recent decades in which tens of villages suffered the consequences. The immediate effects of these onset adversities manifest in shortage of clean water and irregularity of replenish traditional water sources (ponds, dug and tube wells, rain harvesting systems). The aforementioned phenomena have influenced not only drinking water quality and quantity, but daily hygiene of people through insufficiency of water for domestic usage.

4.1 SANITATION:

Sanitary situation and defecation habits
The enquiry about defecation habits shows, that villagers has habits of open defecation while men go to the open field, women go in the opposite direction to shrubs and bushes. Open defecation is practised by most, while the use of private toilets is an exception. Around 51% of households do have private toilets but only one third of the men of such households use them. Children under five defecate in the shrubs or else their faeces are be taken away by elders. The most challenging issue for the informants as regards open defecation appears to be the loss of time and necessity of walking long distances. Two thirds of the existing toilets are in comparatively bad condition. Interestingly, only a very small percentage of the villagers recognise use of latrines and regular hand washing practices as a way to prevent diarrhea.

4.2 Solid and liquid waste

It is obvious, that no sort of segregation of solid waste material is being made at present in the villages under scrutiny: kitchen or bio-degradable waste is not kept, nor disposed of separately from other plastic or solid waste. Most waste material is disposed of in open public dumping places where it is regularly burned. For the informants themselves, the biggest problems with this form of waste disposal are the resulting bad smell and the mosquito menace. The same is true for the existence of waste water, which can usually be found stagnating around the villages, in canals and roads,

and even in a large number of private courtyards, with household waste water being mostly thrown into backyards.

4.3 Diseases

The most common disease in all 15 villages, represented by the most astonishingly high numbers, is followed by Malaria, diarrhea, eye disease and skin diseases with a difference of about 30%. While diarrhea appears to be a major challenge for the informants,
The two most widely used methods of protection against mosquitoes are incense and electric fans. Mosquito nets and meshes are rare.

A 5. RESULTS OF THE STUDY: QUANTITATIVE DATA DEMOGRAPHIC CHARACTERISTICS

The sampling plan was chosen carefully to represent all community criteria, including poorest people may live on the edge of villages. However, all schools' principal, health workers, and villages' leader within the target area were interviewed without exception

5.1 Total Surveyed Households and officials

Total 432 Household and 15 Govt offcial (schools' principal, health workers, and villages' leader) are interviewd and their openion was carefully recorded
The details are :

Table – 1 Households and Officials Surveyed in Two Townships

Pyawbwe Township					
	Name of Villages	Total HH	HH Surveyed	%	Officials Surveyed
1	Pan Ai Hla	70	18	26	1
2	Nyaung Hla	88	22	25	1
3	Tha But Khwe	104	26	25	1
4	Kyauk Taing	165	41	25	1
5	Ta Lin Kone	141	35	25	1
6	Tharsi	105	24	23	1
7	Magyikone	171	43	25	1
8	Da hat kone	94	24	26	1
	Subtotal	938	233	25	8

Yasagyo Township					
	Name of Villages	Total HH	HH Surveyed	%	Officials Surveyed
1	Htan pin chaung	93	23	25	1
2	Kyauk hle bee	43	12	27	1
3	Taw ke ba	45	11	24	1
4	Kan bauk	268	59	22	1
5	Khan sat taw	128	38	29	1
6	Chin yar kone	69	18	26	1
7	Auk Oo Ah Ashayt	109	38	24	1
	Subtotal	751	199	27	7
	Total Surveyed in 2 Townships	1689	432	26	15

5.2 Characteristics of Surveyed Households

5.2.1 Percentage of males and females

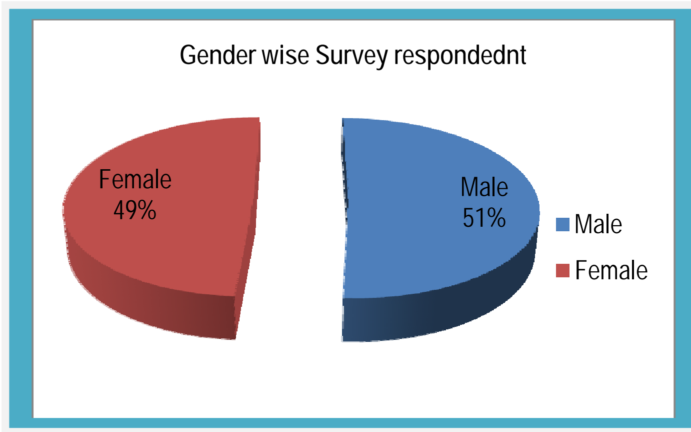
Over all 51% male and 49% female are surveyed representing different age class in 15 villages of Pyawbwe and yasagyo townships.
The table below shows the percentage of men and women in the surveyed households:

Table – 2 Gender wise Households Surveyed in Two Townships

Pyawbwe Township						
#	Name of Villages	HH Surveyed	Male	%	Female	%
1	Pan Ai Hla	18	11	61	7	49
2	Nyaung Hla	22	12	54	10	46
3	Tha But Khwe	26	20	77	6	23
4	Kyauk Taing	41	18	44	23	56
5	Ta Lin Kone	35	14	40	21	60
6	Tharsi	24	10	42	14	58
7	Magyikone	43	17	40	26	60
8	Da hat kone	24	11	46	13	54
A	Total	233	113	49	120	51
Yasagyo Township						
9	Htan pin chaung	23	10	44	13	56
10	Kyauk hle bee	12	2	17	10	83
11	Taw ke ba	11	2	18	9	82
12	Kan bauk	59	25	43	34	57
13	Khan sat taw	38	28	73	10	27
14	Chin yar kone	18	13	72	5	28
15	Auk Oo Ah Ashayt	38	27	71	11	29

B	Total	199	107	54	92	46
C	Total in 2 TSP	432	220	51	212	49

Chart– 1 Total Gender wise respondent



Females (48%) constituted almost half of the respondent survey samples, while the survey protocol selected respondents on the criteria of adult residents in household with preference for the household head. The larger number of female respondents is due to the greater likelihood of finding women in the household during daytime hours as women spend more time in the homestead performing domestic chores.

5.2.2 Sample of respondent- Age class wise :

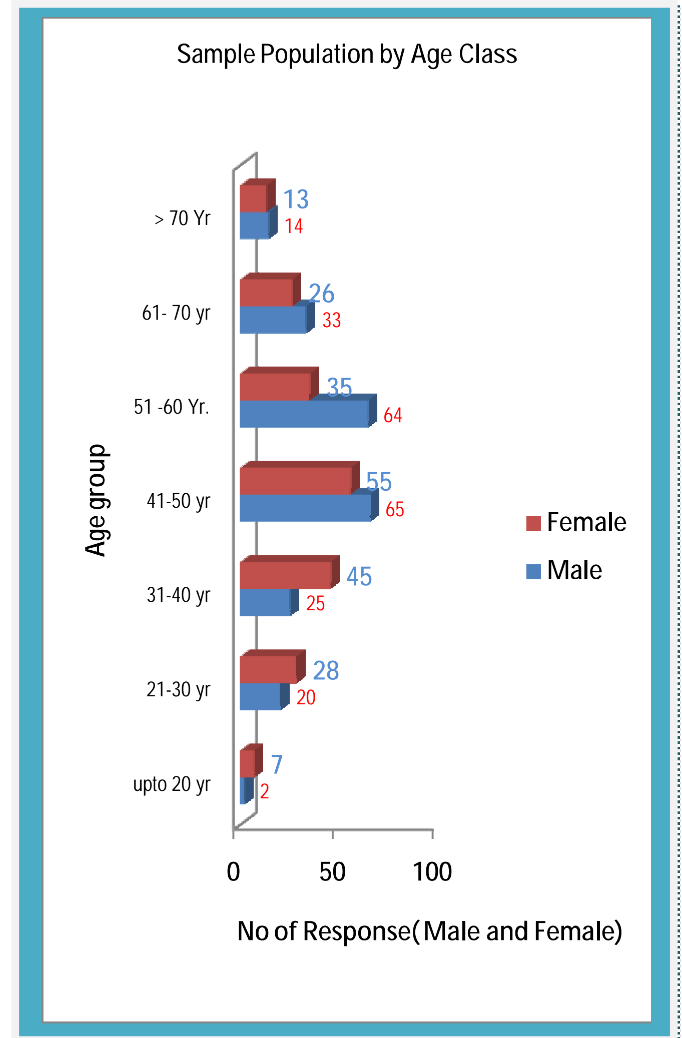
The surveyed respondent further anylyse by genderwise and age classwise are :

Table-3 Age Class and gender wise respondent

Age Group	Male	%	Female	%
upto 20 yr	2	22	7	88
21-30 yr	20	42	28	58
31-40 yr	25	36	45	64
41-50 yr	65	54	55	46
51 -60 Yr.	64	65	35	35
61- 70 yr	33	60	26	40
> 70 Yr	14	52	13	48
Total	223	52	209	48

The 41 to 50 year age group people constituted 28% response, and 23% from age group of 51 to 60 year of people. During survey it was decided that all class of people has to be survey, to identify the response from all age class of people.The upto category represent 18- 20 year age class of people which can be single HH or lived as part of nuclear family in the villages

Chart– 2 Age Class and gender wise respondent



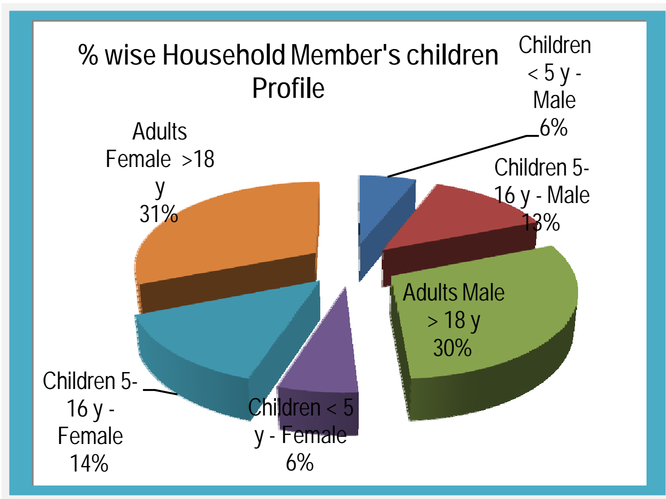
5.2.3 Children population in surveyed villages

Children population in sample villages are categorise are recorded in age wise

Table-4 Age Class wise children Population

Family Type	No.as Family member	Percentage
Children < 5 yr - Male	87	6%
Children 5-16 yr - Male	175	13%
Adults Male > 18 yr	413	30%
Children < 5 yr - Female	85	6%
Children 5-16 yr - Female	190	14%
Adults Female >18 yr	432	31%
Total	1382	100%

Chart -3 Age Class wise children Population

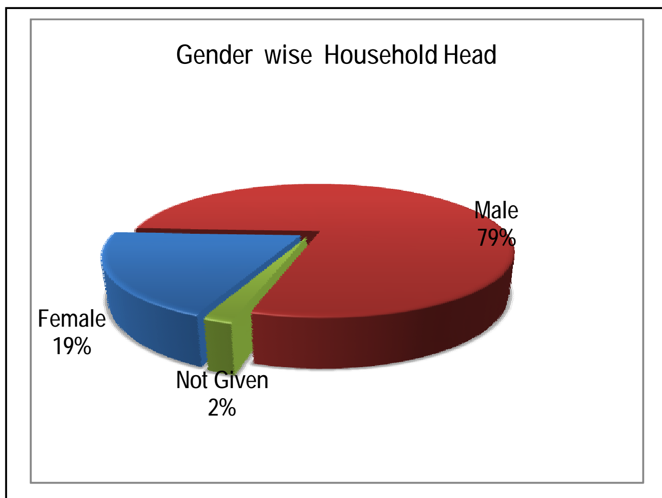


The sample illustrates 12 percent of households have children aged below five years, this figure is of interest because children of this age are not only very vulnerable to water and sanitation related diseases, but are themselves vital carriers of infection

5.3 HOUSEHOLD SIZE DISTRIBUTION (Head of Household)

79% male represented to head of Household and involved in decision making for the family in the survey villages.19% female are head of household which is either seprated/ divorced or single mother are involved for decision making of family.2% of People didnt responded for this question.

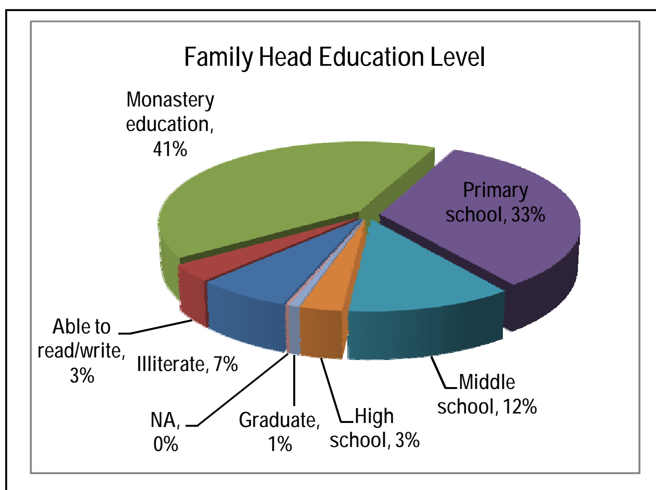
Chart -4 Gendewise head of Households



5.4 EDUCATION LEVEL OF HEAD OF HOUSEHOLD

It is observed that more than 90% of household heads are able to read and write, despite the fact of being living in rural areas

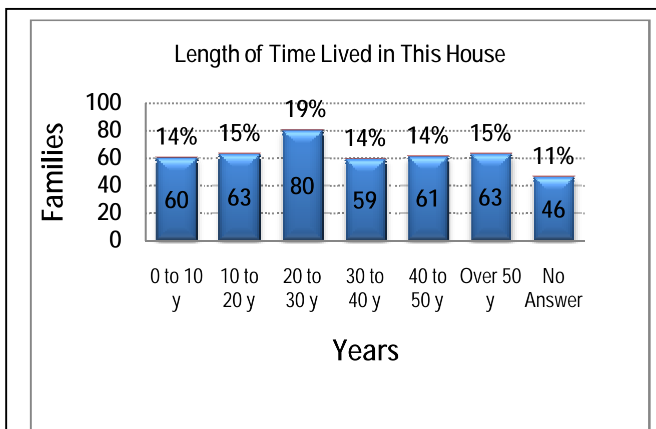
Chart -5 Education level of Household

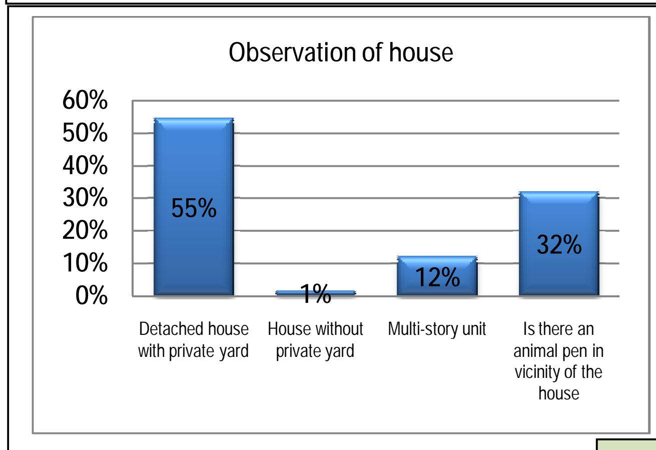


5.5 HOUSEHOLD LIVING SPAN IN PRESENT HOUSE

47% of survey respondent mentioned they spent 20-50 year in the present house.Some people responded that they lived in sameplace and constructed or expanded the area of their house as family grow.

Chart -6 HHs time length for living in the present house& Observation for Houses





From observations of Surveyor it is found that 87% of selected respondent mention have detached house with private yard and Animal pen in the vicinity of house. 32% mention they have only Animal Pen in the vicinity of house. Most of house are single storyed only 12% house found double story or G+2 structure .

B 6 .WATER SUPPLY SITUATION IN VILLAGES

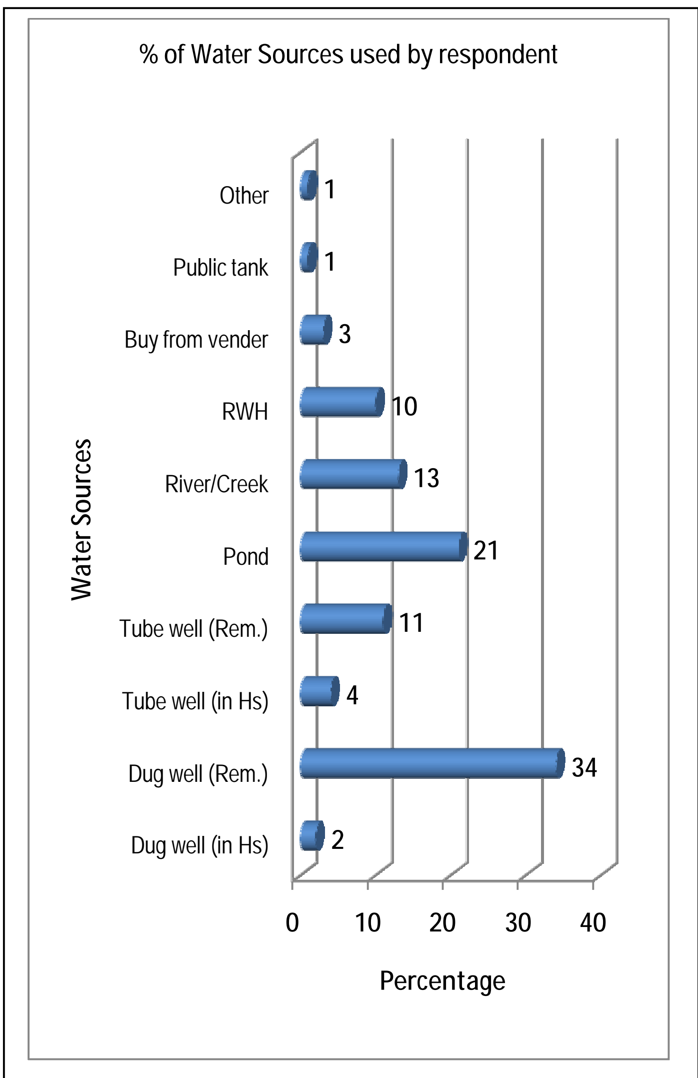
The current sources of water include traditional protected and unprotected ponds, dugwell, tube wells, and rain water harvesting systems which are either used at communal or household levels. A relatively 14% percentage buys water from vendors (bull carts and private tube well). The traditional dug wells are seasonal and during the dry spells, the water table is lower hence the need to buy water to meet all the domestic needs. The findings indicate the water is mainly used for drinking, washing utensils, washing clothes, Bathing and watering livestock where applicable and the sources used by villagers are:

a)Dug well At House
b) Dugwell (Remote)
c) Tube well at House
d) Tube well private and remote
e) Village Pond
f)River or creek
g) Rain water (RWH)
h) Buy- Bowser/ Bullock Cart
i) Tank
j) Others

Most of respondent 34% mentioned that they used remote area located dug well for their water usage

When asked concerning the benefits of their water source the primary preference criteria applied by households in selecting water points are to reduce diarrhoea, more quantity for domestic use and improved quality.

Chart -7 Type of Water Sources used by Villagers



The risk of water contamination is high based on unsafe handling and storage which provide additional opportunities for the contamination of drinking water.

Mainly, childrens aged less than 15 years (Daughters 37% and sons 31%) collecting or fetching water thus could be targeted for HP, In some of Household women(11%) are responsible for collecting the water for daily usage.

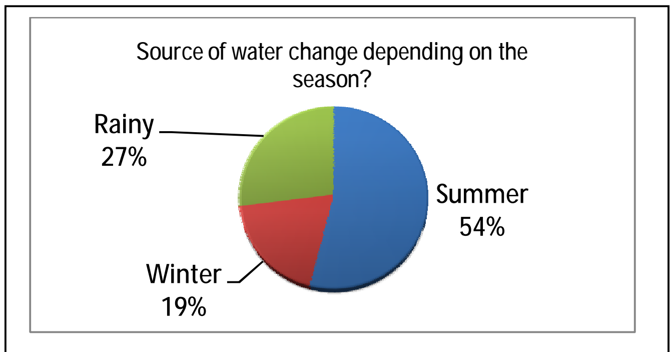
Only 2-5 percent of households consistently treat their drinking water, the main impediments to this safe guard being cost and ignorance on which method to apply and with the assumption the water is already safe. The cost barrier emanates from the time used to search for wood fuel for boiling or money to buy water filters.

Chlorine is not commen to be use find out during observation and discussion.
It is find out through obervation during survey that People and aminals share the same water source.

6 .1 Season wise changes in current water Source

Changes in water sources are frequest in the surveyed villages and community changes water depends upon the season. 54% of people changes their water sources in summer season and reason is the present sources may become dry or the recharge time for Dug well are increase 4 - 5 hr and recharge level of water will be less and insufficient.
27% of people mention they change water source in Rainy and 19% in winter and due to less travel time to fethcing the water.

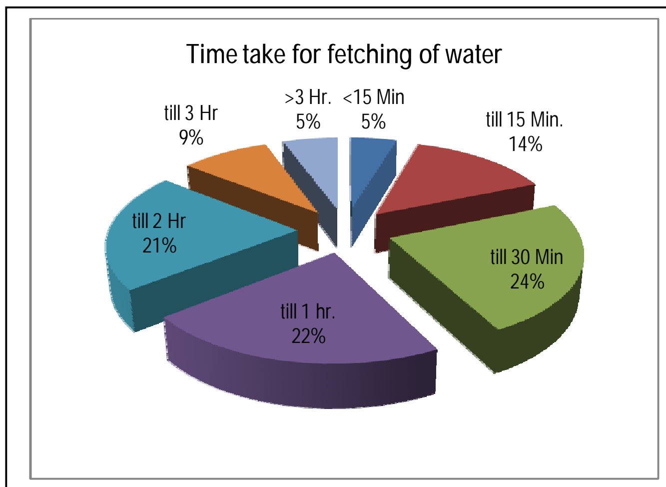
Chart 8 %wise water sources changes in season



6 .2 Time used for Collection/ Fetching of Water:

53% of respondednt mentioned that the average time for collection of water during normal (winter and Rainy) season is range from 15 min to 30 min.
43% of respondednt mentioned that the average time for collection of water during normal (winter and Rainy) season is range from 1-2 hrs.
4% of respondednt mentioned that the average time for collection of water during normal (winter and Rainy) season is range from more than 2 hrs

Chart 9 Time used by villagers to fetch the water



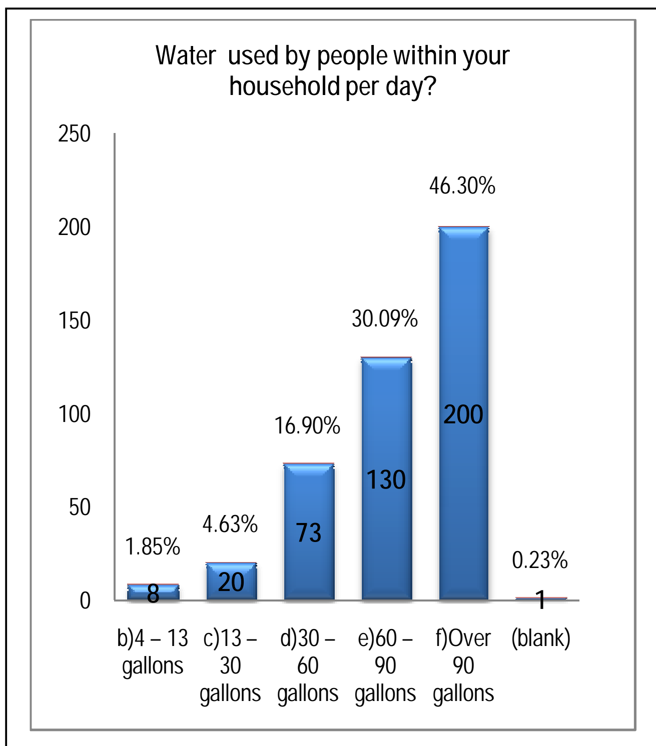
During Dry season most of water source become dry or the water table level go down in most of the surveyed villages. Women's mentioned some time in rainy season water quality become worse of some sources and during dry season most of time they go for fetching of water 2-3 times, as some of them are lacking of transportation and they have to carry water on their shoulders.Some of respondent mentioned that during dry season most of villagers faced following issues are:

a) Sharp Depletion in water table level.
b) Water Recharge take longtime and quantity is not sufficient
c) New source is not sufficient for villagers.
d)Travel time to fetch water increase (3-4 times) as compare to normal time.
e) water quality is worse and muddy and yellowish in nature.
f) lack of fuel wood for treating/ boiling of water.

6.3 Water usage per Household

At least 47 percent of the household use 30-90 gallon and 46% percent of the household use over 90 gallon of water per day for their domestic and personal hygiene which indicate an average of 12-20 gallon per person per day. Only 7 percentage use less than 30 litres of water per family for their daily usage

Chart 10 Household wise water usage



The current problem for current drinking water reported by responded during survey are categorised and summarised.

Table-5 Water Quality problems in villages

Water quality	%	Reason
Dirty/ Brackish	8	Some of village tube well installed by Govt/ private owners providing brackish water with mild salinity level. During water quality check we find the randge are 1000ppm to 1200 ppm in some of villages. And if the boil, there is not sufficient firewood available.
Taste is Bad	13	Some village beneficiary mention the taste of water is not good due iron presence in water. And some time if they drink they become sick etc. Some of respondednt mentioned that during cooking with rice the water turn in yellowish color.
Disrupted supply / not enough for fullfilling present needs	43	This is normal problem of respondent , they mention that during dry season the water sources become dry and water scarcity arises .
Diffcult to collect	27	Most of responded from Pyawbwe mentioned that they have to travel 3-4 hrs to collect the water during dry season and during normal time its 1-2 hrs.
Water cost is high	3	During dry season the cost of water become high due to unavailability of drinking water ,in normal time 10-15 kyat per gallan become 20-25 kyat, due to vender also has to collect water from far sources and travel time increases.
Others	6	Some people mentioned that maintenance cost of tube well running is high, and some time owner cant offord to repair.

6.4 Attitude towards present water supply (only for drinking purpose):

The Attitude of respondednt is presented in following ways as per seasonality. The combined response for both townships are:

Table-6 Attitude towards water supply (season wise)

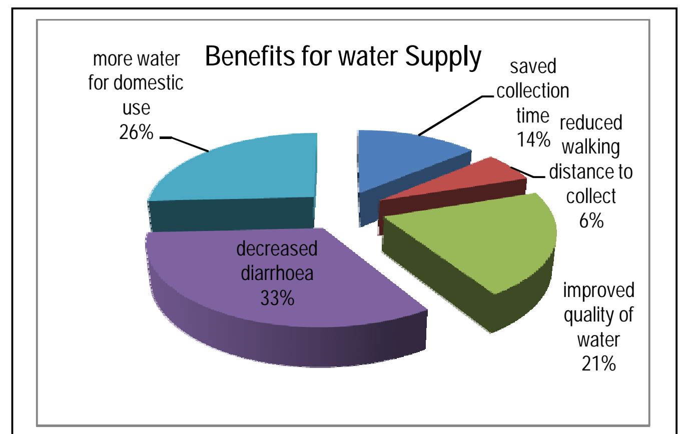
Attitude	Season		
	Summer	Rainy	Winter
Water Quality and Quantity are Good	9% agreed that water is available during this season and quality is good and 91% mentioned that quantity is not enough due to some of sources become dry. Most of respondent mention that their collected water become dry and less in this season	11% agreed that water is available in this season and 45% mentioned quality is not good as the current sources become muddy some times. 32% respondednt mention that they collected water in this season, but they dont have enough pots to collect RWH. 12% not responded for this seasond	24% mention that water is available in this season and some of water source quality is good and sufficient only for villagers.
Water Delivery/ Collection is good and enough are available with 10-30 min walk	In Pyawbwe TSP.60-70% of respondednt mention that nearest collection point for water become dry i.e. well etc. So they have to travel 2-3 hrs to collect water	60% mention that during this season water is available at nearest point.	65% mention that during this season water is available at nominal cost and at their nearest sources.
Enough water but quality is concerned.	80-90% responded that water quality is brackish where water is fatched through tubewell, but again where tubewell is not major source for drinking, respondent mention the scarecity of water during summer season.	40-60% mention that enough water if good rain, but annual precipitation is found decreasing in recent years. 30-35% mention that quality is main concern during rainy days also as water become muddy in shallow well in their areas. 5% not reponded for this.	65% respondent mentioned that water is available and quality is good related to wells. But in tube well throughout quality is concerned in yasagyo township. 30-32% agreed for quality and quantity in their areas.

6.5 Benefits for Drinking water Supply

The benefits for water supply view assessed keeping in way that water points available at nearest to their house and quality of water is safe for drinking purpose and has awareness of water borne disease in community.

33% of respondent mention that if water supply system in their area will reduce down the water born diarrhoea diseases, stomach ache problem etc.

Chart 11 Drinking water supply benefits



21% responded said the quality of water will improve and safe water will be available as a benefit.
20% mention that its will be reduce down the time for collection of water.

6.6 Water Treatment before drinking.

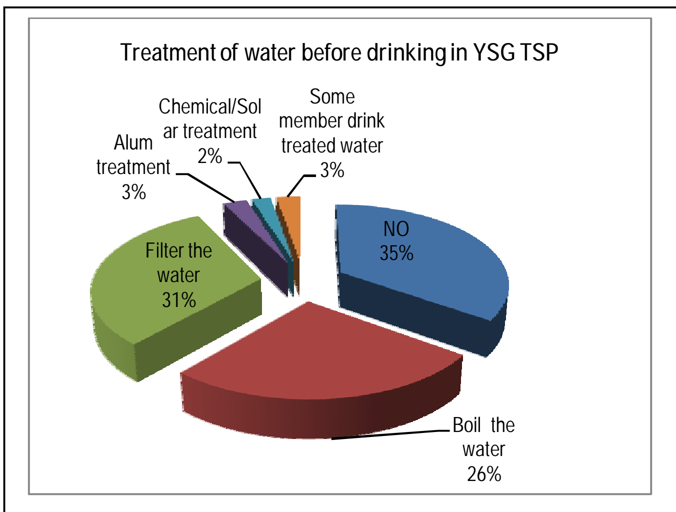
Household level water treatment most of villagers use in keep as economical and as per their affordability . Some of villagers has lack of awareness for water treatment before drinking if quality is not as per standard.
The surveyed results are:

Table-7	Water treatment methods

Water treatment	YSG (%)	PWE (%)
No	35	51
Boil	26	27
Filter	31	14
With Alum	3	3
Solar/Chemical	2	2
Some member drink treated water	3	3

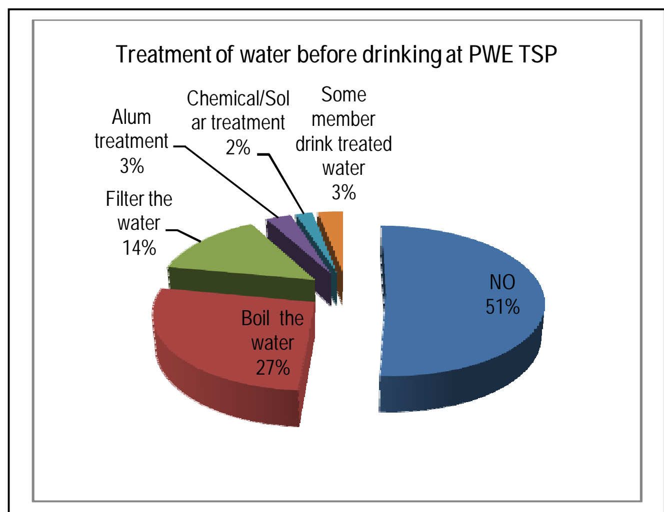
At Yasagyo Township:

Chart 12 Water treatment methods at YSG Tsp



At Pyaebwe Township:

Chart 13 Water treatment methods at PBE Tsp



The combined results for for PWE and YSG and reason for not treating of water are:
Approximate 43% respondent mentioned that they do not treat water before drinking in both townships. The impediments to this safe guard being cost and ignorance on which method to apply and with the assumption the water is already safe. The cost barrier emanates from the time used to search for wood fuel for boiling or money to buy water filters. Chlorine is not commen to be use .The only village asked for chlorine or checemlcals to treat their water which is also supply to a adjusnt school.
26% of respondent mentioned that boil the water before drinking but not adopted as routine. Sometime boil water only for drinking purpose. During discussion it is found that some of communities not seive the water after boiling, some time the impurities remain in the water after boiling also.
23% of respondednt mentioned that they filter water before drinking and they have the water filter in their home, but they dont change water filter regularly.
5% of respondednt mentioned that they used some treatment methods (Alum, solar, etc) before drinking and the reason they that most of community not aware the innovative treating water process, like solar..
3% respondednt mentioned that they used treated water for drinking purpose but most of them has to buy from urban town.
General openion from respondednt that they dont treat water because:-

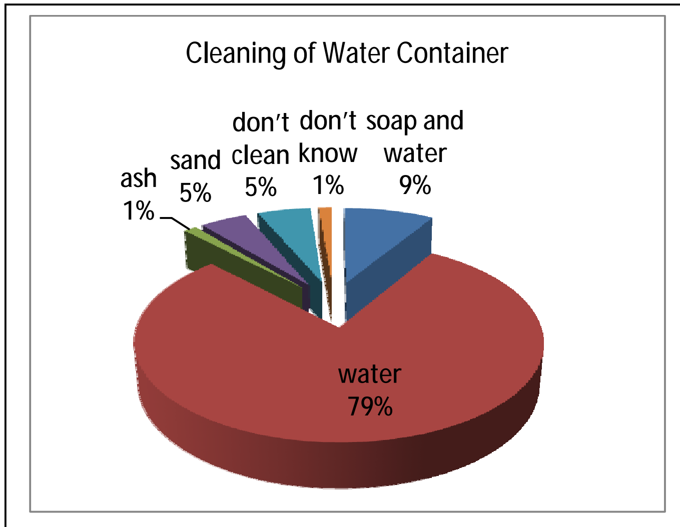
a) Lack of water Treatment knowledge.
b) Lack of firewood available and cost of firewood is more.
c) Cost of water and Cost of Firewood can not offord.
d) Lack of availability of Filter in the area and cost is high.
e) Lack of knowledge about Alum, Solar treatment etc.

Some respondent mention that they aware about quality of water and visible appearance of water, but lack of money they do not have option to drink bad quality of water.

6.7 Water storage container cleaning agent

79% of respondent mentioned that they wash container with water, but used the same water which may be mild salinity. No one responded that they wash the container with clean and safe water.
9% respondednt mentioned that they clean the container with soap and water.

Chart 14 | Water container cleaning



D 7. SANITATION AT VILLAGES

A majority of both men and women do not own latrine and only 54 percent have their own latrine but during the feedback session and focussed discussion on access to latrines they reported the access was lower with only about 20-35 percent having own latrines. What they reported was the most commonly used neighbour and relatives laterines.
However the survey data indicates at least 40-45 % use neighbourhood or families sharing latrine.

7.1 Defication Places at Villages

Most of people use the defication places near to their house or inside the houses

Table-8 Defication Places in Villages.

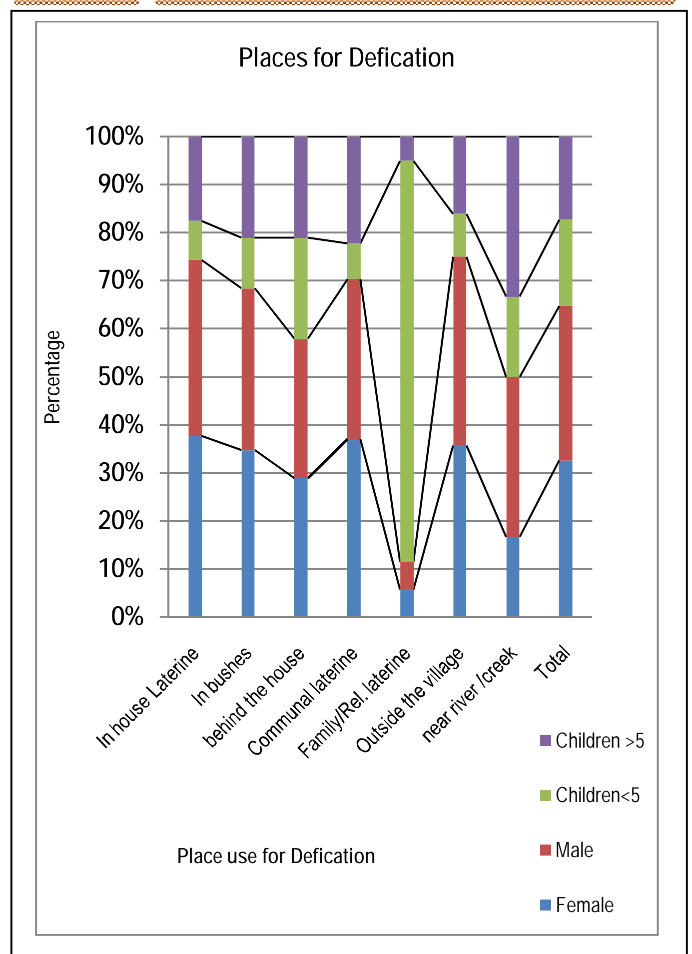
#	Place for Defication	% of respondent
A	In house Laterine	49
B	In bushes	17
C	behind the house	11
D	Communal laterine	2
E	Family/Rel. laterine	15
F	Outside the village	5
G	near river /creek	1
	Total	100

49% of respondednt mentioned they deficate inside the house laterine.
34% people go for open defication by combining the results B, C,F, and G, .
15% of people use their neighbour, relative or family laterine for defication and
2% of people use village communal laterine, but this is not available in all survey villages and issue related to cleaniless is major concern of villagers.
The gender and children wise segregation are shown in graph below and percentage wise in table below:-

Table-9 Gender wise Defication Places in Villages.

Defication Place	Female	Male	Children<5	Children >5
	In percentage			
In house Laterine	56	53	26	60
In bushes	21	21	9	19
behind the house	10	11	10	11
Communal laterine	3	3	1	3
Family/Rel. laterine	3	3	50	3
Outside the village	6	7	2	4
near river /creek	1	2	1	0
Total	100	100	100	100

Chart 15 HHs wise Defication Places in Villages.



7.2 Benefits of Laterine:

Benefits of laterine questions asked for those respondent who has laterine or owner of laterine. The response are:-

Table-10 Benefits of laterine

#	Benefits for Laterine	%
A	less time to walk to deficate	24
B	More privacy	23
C	Decrease in Diarrhoea	27
D	Social status	12
E	Feel shame to deficate in open	14

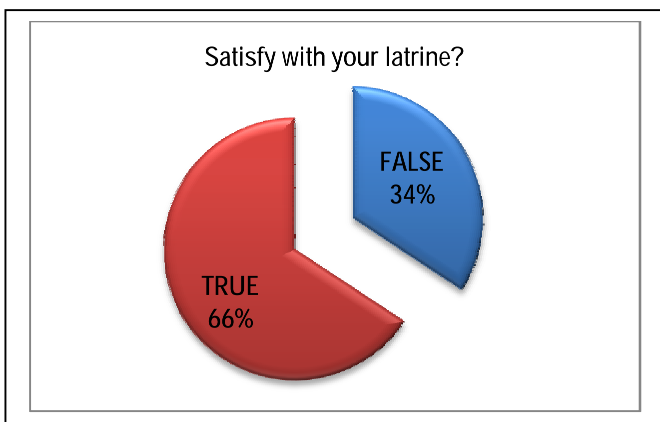
14% of respondent mention they feel shame to deficate in open place. 27% of respondent that not deficating in open mentioned that by having laterine the risk of diarrhoea in their family is decreasing.

Nearly all latrine owners reported that adults and children usually use the household latrine for defecation, although children are slightly more likely to continue the practice of open defecation. Almost 95% of latrine owners indicated that they would defecate in the field or forest if they did not have a household latrine

7.3 Satisfaction with present Laterine:

66% respondent mentioned that they satisfy with their laterine and 34% mention that they are not satisfy with present laterine.

Chart 16 Satisfaction level with present Laterine.



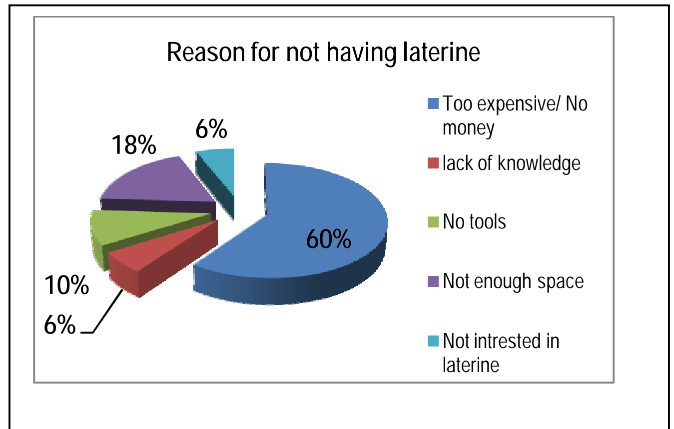
The major reason for not satisfy are:-

- Most of respondent mentioned that present excreta disposal system needs to be replace every year due to soak pit make by bamboo and every season it cut by rats and construction new soak pit will reduce down their money from saving.
- Some of respondednt mentioned the super structure is in dilapidated condition and has less privacy during defication and can not afford to construct new structure.

7.4 Reason for not Having Laterine:

Approximate 60% of respondent mentioned that construction of laterine is expensive and they can afford, Some of respondent mentioned that they can afford superstructure by using old material of houses but can not afford regular disposal system

Chart 17 Resons for not having Laterine.

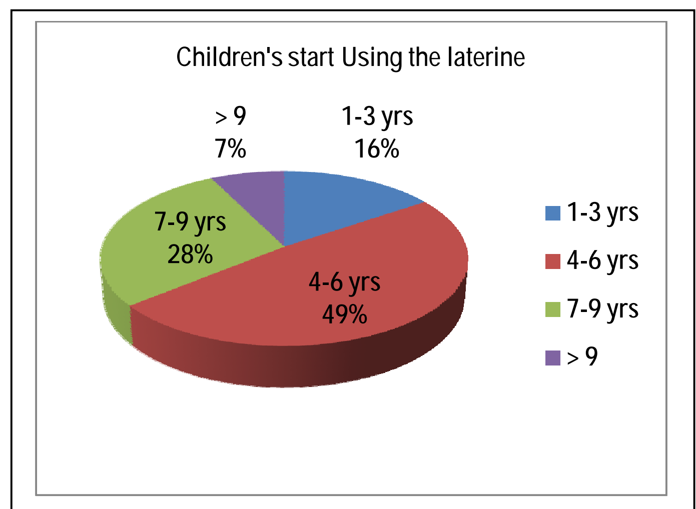


18%of respondent mentioned that they dont have enough space for construction of laterine in their present land and their farmland is far from their house.

7.5 Age group of Children's to start using Laterine

49% of respondednt mentioned that their childrens start using the laterine at the age of 4-6 yrs.

Chart 18 Age group of Children's to start using Laterine



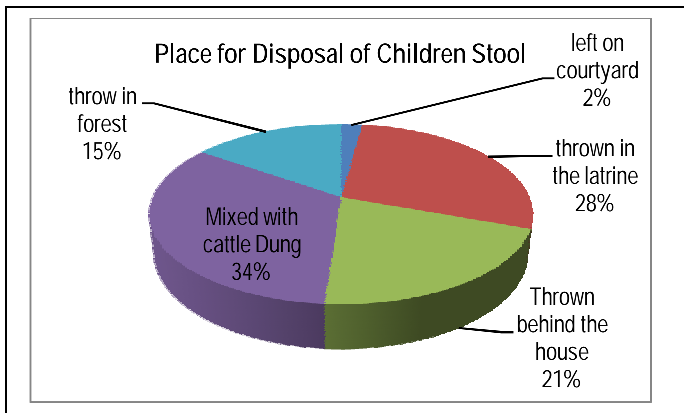
7.6 Place for Children's Stool disposal

34% respondent mentioned that they mixed children stool with cattle dung in same area where they collect cattle dung.

28% respondednt mentioned that they trow stool in laterine.

36% mentioned that they throw children stool either in behind the house or bushes- forest areas. 2% mentioned they left children stool in courtyard and when they clean they through outside courtyard.

Chart 19 | Place for children's stool disposal



7.7 Obervations for Sanitations:

The observation are:

		No	%
A	Availability of laterine and type	233	100%
1	Pit laterine	38	16.7%
2	Fly-Proof laterine with bamboo Soak pit	184	78.9%
3	Fly-Proof laterine with Con. Ring Soak pit	11	4.4%
B	Condition of laterine (super st.+soak pit)	233	100%
1	Good Condition	38	16.7%
2	Dilapidated Condition- (Privacy issue)	90	39.8%
3	Bad condition- (Need repair)	101	43.4%
4	Laterine has Concrete slab	4	0.17%
C	Distance of laterine from house	233	100
1	Inside house	75	32%
2	Within 10-20 mts	42	18%
3	Within 20-150 mts	48	20%
4	Within 150-250 mts	18	8%
5	Ø 250 mts	23	10%
6	Ø 500mts	27	12%
D	Laterine Clean(No faecal Matter& urine on the floor)	233	100
1	Is laterine has Smell	115	49%
2	Soakpit full	40	17%
3	Visible waste	24	11%
4	Human faeces visible in yard	9	4%
5	Animal faeces visible in yard	3	1%
6	Open sewage/stagnant water	42	18%

E. HOUSEHOLD WASTE

8.1 DISPOSAL OF HOUSEHOLD WASTE

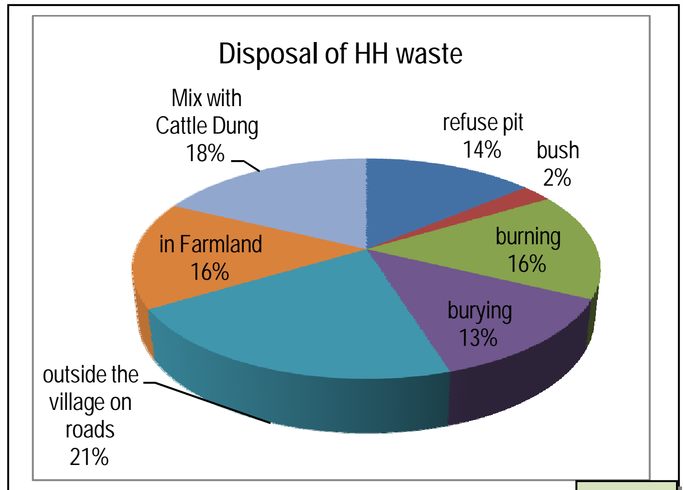
There are two types of HH waste catagorised are hazardous and non hazardous waste seen in surveyed villages.

Hazardous waste are used battery, flouroscent lamps and some insecticide material lying at corner of houses.

Non hazardous waste are kitchen waste,leftover food and vegtable, plastic bottles etc are mixed with hardous waste and found most of surveyed household. Most of Kitchen wastes are combined with water and humidity more than 50%. This factors produce unpleasant smell and make waste degradable seen in surveyed villages.

21% respondent mentioned that they throw HH waste near to village road and 16% mentioned at farm land. A small 14% HH mentioned that they throw HH waste in refuge pit, most of HH mentiond small location called a refuge pit surrounded or vicinity of houses.
18% respondednt said that they mixed with animal waste without reusing the plastic material

Chart 20 | Disposal of HHs waste



8.2 Disposal of Animal/ cattle Waste and issue

In villages , communities has less choice and techniques to dispose animal waste properly specially in regards to who has less land. The villagers are disposil animal and cattle waste in following areas:-

Table-11 Location for disposing animal/cattle waste.

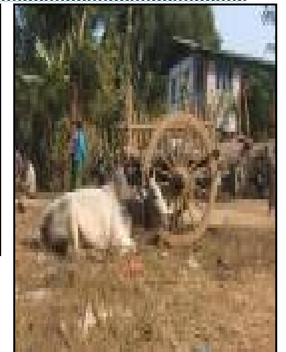
#	Location	%	Reason
1	At refuse Pit	7	Respondent mention they owned large courtyard so end of vicinity of house they make refuse pit for waste.
2	At Bush	14	11% out of 14 mentioned that they dont own agriculture land so they throw near buses. 3 % mention that they throw other people farm land if they agree either they throw near by bushes or near river area.
3	Drying for reuse (fertilizer) at farmland	48	Farm land is near by so can collect near farm land and when dry use for fertiliser.
4	Drying for reuse (fertilizer) at surrounding of house	20	Due to the farm land is far away from house and they collected at surrounding at then transfer to Farm land one in week.
5	Drying and using for cooking purpose	5	Respondent mention they own less quantity of cattle mostly buffallo and goat so they make waste dry and use for cooking purpose.
6	Burying	6	Most of respondent mention thay owned goat and when they clean vicinity they burying waste near house.

8.3 Issue related to Animal waste:

31%of respondent (20% drying at surrounding of house, 5% dryinh for cooking purpose and 6% are burying) said that animal waste become dirty and give unpleasant smell and flies always present on waste in all season, the most problem happen during rainy season, area become muddy and flies and mosquito make them sick. They can not throw the waste outside their Farm land due to far from house and they dont have refuse pit.

A combined 70-80% respondednt mentioned follwing issue related to Animal waste and HH Garbage are:

Flies land on garbage and germs cling to its' feet, then the fly lands on food or drinking glass and you pick up another germ.
Rats get into the garbage- then into house and walk all over everything in home- helping to spread disease. Mice do about the same thing as rats-they are just smaller and able to enter areas through smaller openings
Cockroaches breed and feed in the garbage- then spread out from there, infesting the area



Animal waste disposal location

8.4 Observation For Household Waste:

#	HHs waste location	Y(%)	N(%)	Reason
1	Household pit	7	93	Most of HHs dedicated the location in their courtyard and called the refuse pit.
2	Clean Courtyard	30	70	Houswife clean the courtyard once or twice in days.

3	Unpleasant Smell	82	18	As cattle dung lying on courtyard since morning start giving bad smell in enironment.
4	Flies on Animal waste	92	8	Uncleaned courtyard and no proper disposal of Animal waste invite flies, ants and cockroaches.

Observations About Cattle waste

F 9. Information on Hygiene Awareness

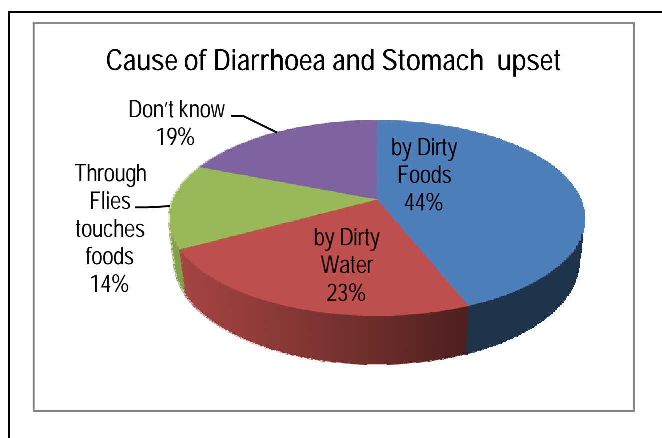
9.1 About diseases:- Diarrhoea and stomach upset

According to the latest WHO data published in April 2011 Diarrhoeal diseases Deaths in Myanmar reached 13,919 or 2.62% of total deaths. The age adjusted Death Rate is 28.97 per 100,000 of population ranks Myanmar 56 in the world.[1]

44% mentioned that cause of diarrhoea and stomach upset are eating unhygenic dirty foods. 18% out of 44% said primarily they unable to recognise the importance of clean food and sometime they eat uncovered food which may be contaminated and then they suffer from Stomach ache.

Many people do not make the link between poor water quality and diseases such as diarrhoea, intestinal worms and skin diseases. Dirty hands and unsanitary waste disposal perpetuate the cycle of disease and poverty

Chart 21 Cause of Diarrhoea and Stomach upset



19% of respondednt dont know the cause of diarrhoea, which shows lack of knowledge of other vector borne diseases. Risk factors that were associated with persistent diarrhoea and malnutrition included low family income, low education of mothers, unhygienic latrines, flies in the house and on the child, dirty appearance of child and mother, mother not using soap and water when washing child's stools, defaecation of child on floor, breastfeeding on demand, child eating food from floor, not feeding recommended weaning foods, and lack of knowledge by mother about causes of diarrhoea and about foods that prevent malnutrition. These results indicated that persistent diarrhoea and malnutrition in surveyed areas are caused by a complex of several interrelated socioeconomic factors, unsanitary behaviour pertaining to personal hygiene, the practice of demand breastfeeding and lack of certain weaning foods, and low education of mothers who showed less knowledge about causes of diarrhoea and prevention of malnutrition.

9.2 Diarrhoea cases in Family in past weeks

10% house hold mentioned that they commonly have problems of stomach upset and loose motion, which may be diarrhoea, as they dont know symptoms of diarrhoea.

20-30% reported that they not aware about diarrhoea cases in family. 10-12% reported that their children face some loose motion problem in current and past weeks also.

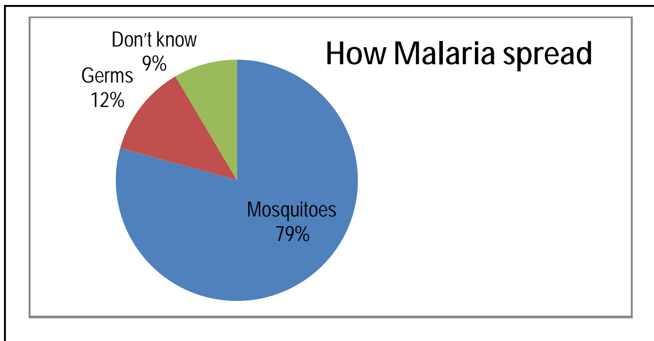
9.3 About diseases:- MALARIA

Understanding of the aetiology of Dengue, Malaria and Chikengunya is better than that for diarrheal diseases. This statement is made in light of the comparison of those who correctly identified what causes vector borne diseases 79 percent (mosquito bites) with those who listed germs 12 percent and 9 percent who don't know and those who listed the correct answer in respect to malaria.

9.4 About diseases:- How Malaria Spreads

However, the understanding of how these diseases can be prevented is majored on environmental actions such as clearing stagnant water and bushes . Notable is the 7 percent who don't know what to do.

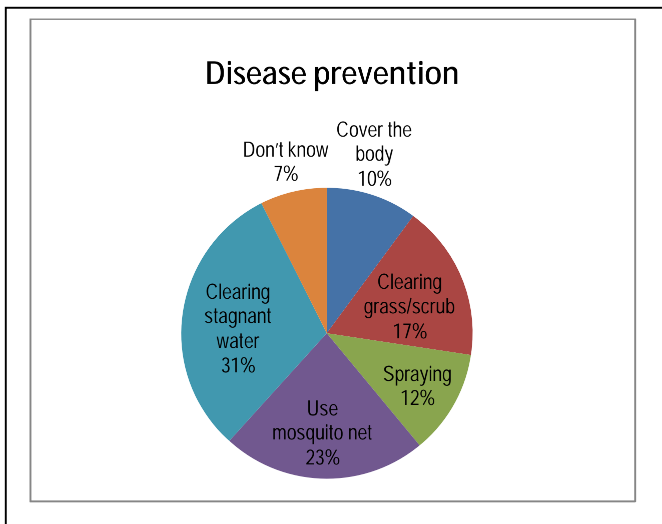
Chart 22 How malaria Spreads



9.5 About diseases:- How Disease prevented

However, the understanding of how these diseases can be prevented is majored on environmental actions such as clearing stagnant water and bushes .Notable is the 7 percent who don't know what to do.

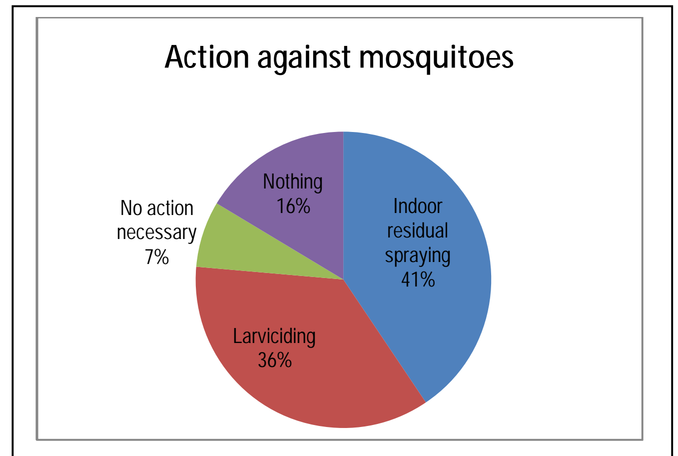
Chart 23 How malaria prevented



9.6 About diseases:-Mosquito related Disese Control

Some of Beneficiary has knowledge for prevention of malaria related control methods by hearing the health department information through radio but applicability fr using of the information they lacking the skill and resources.

Chart 24 How malaria Spreads



9.7 Self Reported Disease incidence and Health Care Options

The most prevalent diseases are water related, the highest reported household incidence being for diarrhoea at 13percent, vector borne (12 percent) and skin diseases at 12 percent. Three of the top four diseases affecting households are therefore water and vector related. Skin diseases, being largely water washed are a reflection of water scarcity while diarrhoea reflects in part the effects of poor water quality, hygiene and sanitation.

9.7.1 AWARENESS OF DISEASE AETIOLOGY

Poor understanding of disease aetiology contributes to poor understanding and practice in hygiene and sanitation thereby perpetuating a disease friendly living environment. Only 68 percent of respondents made the association between dirty food, dirty water and diarrheal diseases, added to the poor association between hygiene and these class of diseases, it is clear that poor awareness on hygiene and disease aetiology make individuals and communities susceptible to disease outbreaks.

9.7.2 HEALTH CARE OPTIONS

There is access to free medical care with an average of 150 patients attended to by MOH[1] clinic which is mainly for prenatal and ante natal care. While the District general hospital provides medical care for an average of 350 patients daily. From the Ministry of Health the Public health inspectors conduct community and school health education program reaching approximately 59 percent of the population with 44 percent information on water and sanitation.

[1] Medical Officer of Health

9.7.3 AWARENESS AND PRACTICE OF HYGINE

Before reading this section, it is important to keep in mind that the practice of hygiene is motivated by various reasons. Some of these motivations have nothing to do with the desire to prevent disease. The desire for order and respect for social acceptance are external to health but are important motivations for the observance of hygiene. Hygiene is central to social norm so much that the need to be seen in a positive light can lead to respondents in surveys answering in the affirmative for habits they do not practice. Further, it has been suggested that the desire to avoid dirt is intuitive to humans (and other animals) as an evolutionary adaptation. As such, hand washing can be intuitive when dirt is visible and if this initiation is the only impetus to keep clean, individuals can neglect hygiene at critical times when contamination is invisible.

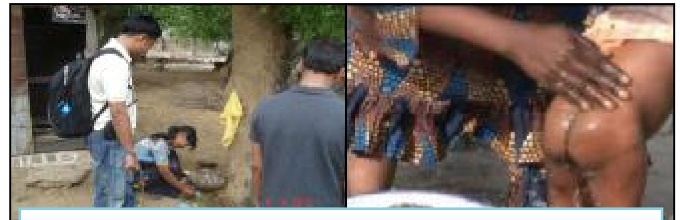
9.8 HANDWASHING AT CRITICAL TIMES

Hand washing before eating and preparing food constitute secondary barriers to the spread of diarrhoeal diseases by preventing microbes in the environment from being ingested. However, once microbes enter the environment either through unsafe sanitation of poor hygiene (primary barriers), there are large number of ways they can spread to new hosts, including but not limited to ingestion.
Hand washing before handling food is much more widely practiced, than before preparing / handling food, 18 percent does it consistently and only 93 percent wash their hands before eating. The higher incidence of hand washing before eating could be because of the direct and immediate association the need to avoid ingesting dirt (and microbes).
While hand washing has definite hygiene value, even when water of intermediate quality is used, the hygiene benefits are much greater when soap is used, and the use of an abrasive (such as ash) yields better results than using water alone.
by asking systematic questions about hand washing time (when they wash hands), the response are:

Table-12 Hand washing at critical times.

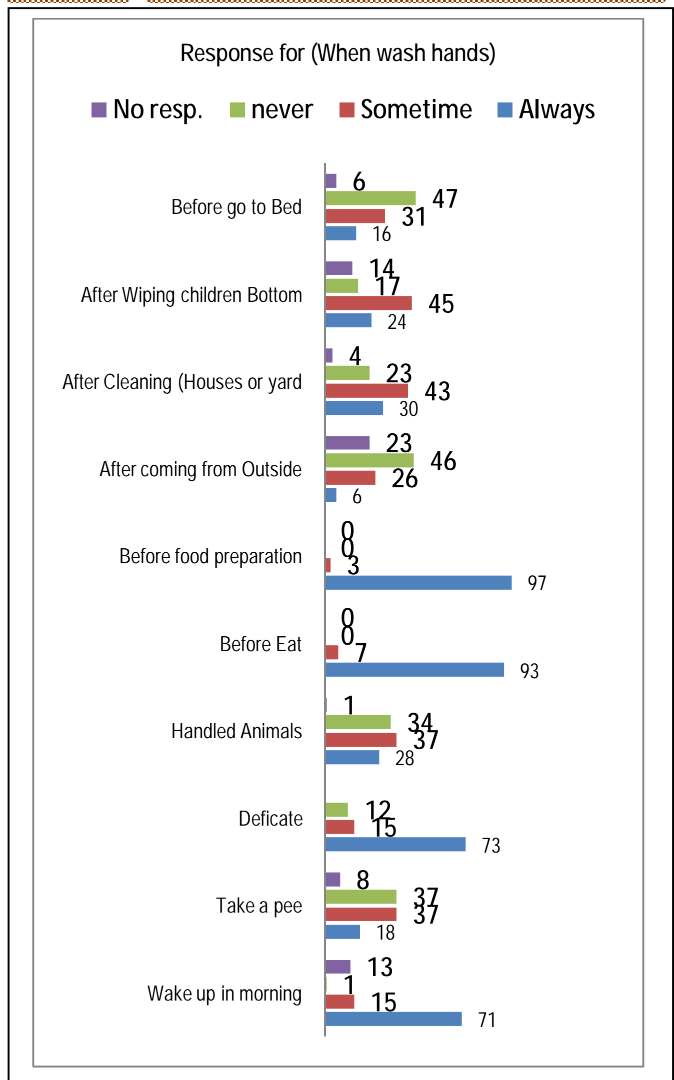
#	Washing of hands- After	Always (%)	Sometime (%)	Never (%)	No resp. (%)
1	Wake up in morning	71	15	1	13
2	Take a pee	18	37	37	8
3	Deficate	73	15	12	
4	Handled Animals	28	37	34	1
5	Before Eat	93	7	0	0
6	Before food preparation	97	3	0	0
7	After coming from Outside	6	26	46	23
8	After Cleaning (Houses or yard	30	43	23	4
9	After Wiping children Bottom	24	45	17	14
10	Before go to Bed	16	31	47	6

Further, it was established that consistent hand washing is highest before eating and when hands are dirty , both percent followed by before handling food or cooking and after handling infant faeces 24 percent . It is therefore clear there is little regard for the primary barriers to the spread of faecal borne pathogens but most people make observance of secondary barriers to the spread of faecal borne pathogens



Hand Washing with soap and without cleaning agent

Chart 25 When Wash Hands

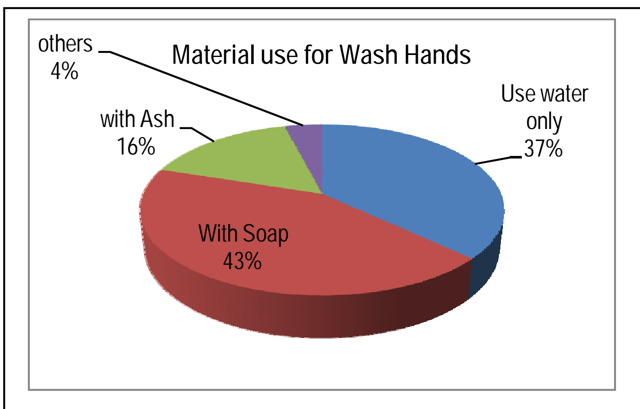


9.9 Hand washing cleaning Agent

The efficacy of hand washing is further diluted by the cleaning agent used; 37 percent use water only and 43 percent use water and soap, the rest use water and abrasives, mainly ash. The main reason for this is low level is lack of awareness.

To achieve the desired hygiene transformations, PHAST[2] trainers will have to reach over 70 percent of households in the intervention area through direct dissemination of messages on better hygiene behaviour practices and also the link with safe water chain. The method used by most of respondednt to wash hands in a bowl(26%) or water poured overhands from container(41%).During further discussion after deficate they mostly wash hands with mud if water available or they go to river and clean their hand(without cleaning agent)

Chart 26 Hand washing Cleaning Agent



9.10 Reason for washing Hands

62% respondent mentioned that the wash hand for removing dirt and stains from water. The link between disease and hygiene (hand washing) is very weakly appreciated , asked why it is important to wash hands , only few respondents said this helps remove germs , on the other hand some said it simply removes dirt. While 2-3 percent didn't know and not responded.and some mentioned was for other reasons such as religious reasons or told by others

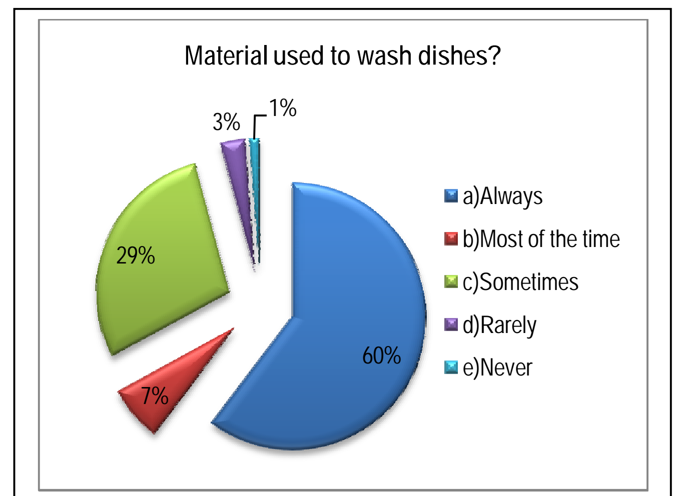
Table-13 Reason for Washing hands

#	Reason for Washing Hands	%
1	Remove visible dirl and stains on hands	62
2	Better Hand Smell	20
3	Remove germs	9
4	Told by Others	1
5	Improve health	5
6	No response	3

9.11 Cleaning Agents for washing utensils

60% of respondednt mentioned that they always used detergent for cleaning of utensils. 29% mentioned that most of time they clean dishes with water/ Ash/ mud and some time with detergents. 3% mentioned the rarely used detergent to clean utensils.

Chart 27 Cleaning Agents for utensils



F 10. AWARESS ABOUT HYGIENE

10.1 Impediments for health and Hygiene Tasks

In considering the practice of hygiene, it is beneficial to approach the matter from how well individuals understand the risk between hygiene and disease, and how much this informs their decisions on hygiene. It is also important to appreciate that individuals may practice hygiene behaviours, not necessarily from disease avoidance motivations, but also from visceral and social ones.

Impediments to people undertaking hygiene and health task and response are:

[2] Participatory Hygiene Sanitation and Transformation

Table-14	Impediments for health and Hygiene Tasks

Impediments for health and Hygiene Tasks	Response in %			
	Don't have physical resources	Not important enough to them	Did not know it was an issue	Other
Removing objects where water pools to prevent mosquito breeding	25	45	18	12
Keep left over food in covered containers to stop flies spreading germs	35	48	15	2
Always use a toilet for defecation and urination to prevent spreading disease	34	52	12	2
Wash hands with soap and clean water before preparing or eating food	26	32	22	20
Place and use a mosquito net on all beds	78	20	2	0
Dispose of solid waste so that rats, dogs and other vermin cannot feed from it	13	20	64	3
Drinking only treated or boiled water	84	10	6	0

84% of respondednt mentioned that they dont have resources to treat or boil water. Most of respondent are had lack of awareness about impediments of health and Hygiene tasks.

10.2 Observation About Hand Washing:

Approximate 90 to 95% house found the following kind of Hand washing facility:

1. Water Pot-Mud /Ceremic (Big size) are at nearby entrance of House (30-65%)
2. Plastic /steel Water Bowl big size at near to cooking places (15-20%)
3. Plastic/ Steel bucket at near to Laterine(10-15%)
4. Water barrel/Iron or plastic at near to bathing place or near to handpump.(2-3%)

11.0 Health Information - related to Water and Sanitation:-

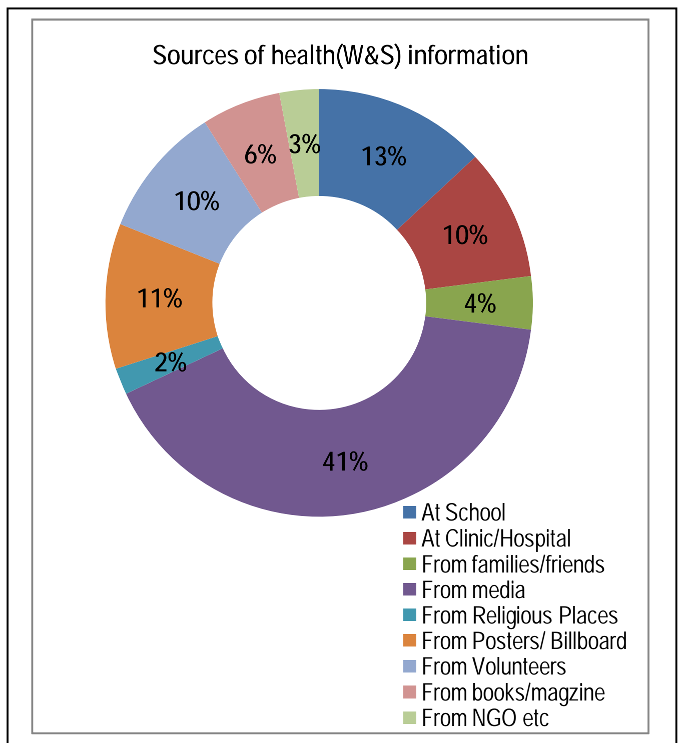
In respect to preventive services, only 20-30 percent of respondents have not been reached by community health outreach messages. Among those who have been reached by these messages, other than the need for clean environment and malaria control, health messages have focused on aspects of water, sanitation and hygiene also.

The most common means of information is through Media is 41 percent , public health inspectors, public notices account for only 10 percent while religious places is 2 percent similarly with 4 organisations and neighbours or family. The frequency of this information is either monthly 8-10 percent, 2-3 percent for weekly and 5-6 percent for bimonthly.

Table-15	Health related Information

#	Health related information	%
1	At School	13
2	At Clinic/Hospital	10
3	From families/friends	4
4	From media	41
5	From Religious Places	2
6	From Posters/ Billboard	11
7	From Volunteers	10
8	From books/magzine	6
9	From NGO etc	3

Chart 28 Sources of Health Information



11.1	Health Matter concern in Community:

Following health matter is major concern in community are:

Table-16	Health Matters

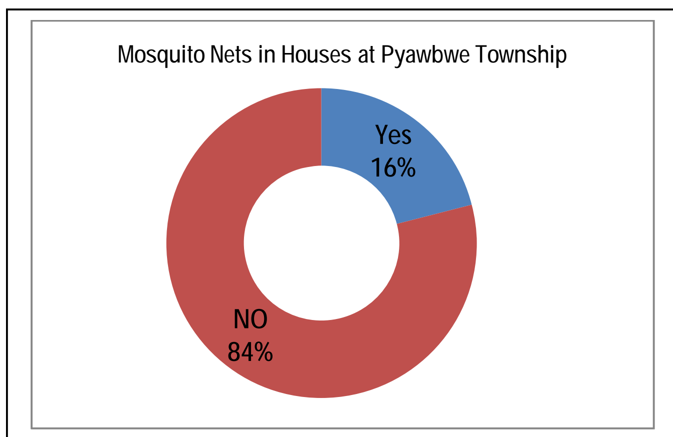
#	Health Matters	%
1	Dengue fever, malaria and chikungunya	18
2	Road accidents	5
3	Diarrhoea and stomach upset	30
4	Respiratory infection	7
5	Hunger and malnutrition	2
6	HIV and infectious disease	0
7	Skin infections, insect bites, itches	20
8	Heart Disease	1
9	Cancer	0
10	Eye and Ear Infection	12
11	Snake bite	5

G	12.0 -VECTOR CONTROL:
12.1	Mosquito nets in Households:

Pyawbwe Township:

16% respondent mentioned that they have mosquito nets in their houses

Chart 29	Mosquito nets in PBE Tsp.



Yasagyo Township:
20% respondent mentioned that they have mosquito nets in their houses. The condition of mosquito nets is unhygenic and with small and big holes can not protect from mosquito.

Some of families mosquito nets are good in shape and cleaned.

Chart 30	Mosquito nets in YSG Tsp.

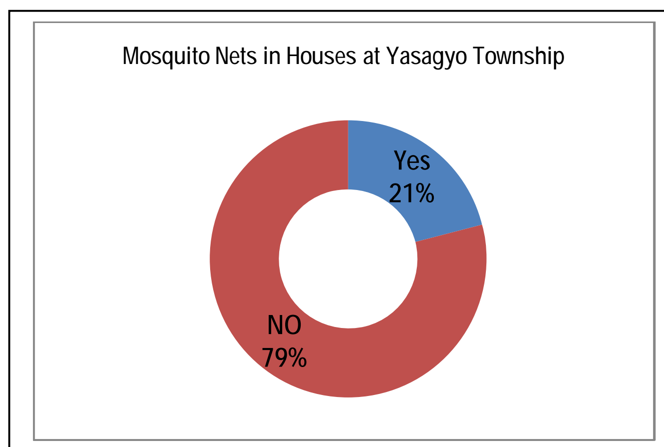


Table-17	No of Mosquito Nets per HHs in PBE and YSG

#	Mosquito Nets(nos)	At PBE (in%)	At YSG (in%)	Total (in%)
1	1	4	7	5.5
2	2	3	6	4.5
3	3	3	4	3.5
4	4	3	3	3
5	>4	1	1	1
	Total	16	21	18.0

Most of respondent for villages are unable to buy good quality of mosquito nets, due to unavailability in markets and cost is high. Some of mosquito nets has holes and dirty.
Overall in both village 18% has mosquito nets. And 5.5% respondent has only 1 mosquitonets for per families.

12.2	Vector Control in community/ villages.

Most of villagers dont aware the vector control process
63% respondent mentioned they do nothing for vector control except cleaning of area. For larvaciding and residual spraying only 2% responded but shows they dont have resources for that.
30% respondent mention for fumigate for vector control, and that easy for them.

Table-18	Vector Control Method

	Vector Control Method	%
1	Nothing	63
2	Larvaciding	2
3	Residual Spraying	2
4	Fumigate	30
5	No response	3

13 Knowledge, attitude and practice (KAP) ANALYSIS

	KAP	PBE	YSG
A	Diseases that your family has suffered from in the last 3 months (in %)		
	diarrhoea	32%	29%
	malaria	28%	34%
	dengue	12%	27%
	respiratory infection	5%	10%
	HIV	0%	0%
	Other- Flu	3%	4%
B	What causes diarrhoea(in %)		
	Germs	2%	0%
	dirty objects	3%	0%
	dirty food	39%	44%
	dirty fingers	1%	0%
	dirty fluid/Water	22%	23%
	flies	12%	14%
	open defecation	2%	0%
	Other	17%	19%
C	What is the best way to prevent diarrhoea (in %)		
	washing hands	40%	32%
	use of latrines	38%	42%
	use of safe drinking water	22%	26%
D	What do you do when your child (under 5) gets diarrhoea(in %)		
	give ORS	32%	29%
	give more fluids	28%	34%
	given more food based fluids	12%	27%
	more breastfeeding	5%	10%
	refer to health service	3%	4%
E	When was the last time a member of your family got diarrhoea(in %)		
	within the last 2 weeks	32%	38%
	within the last 1 month	42%	38%
	within the last 3 months	26%	24%
F	Where do you generally get your information about health (in %)		
	media (TV/radio/newspaper)	29%	32%
	place of worship	34%	18%
	your family	27%	12%
	your neighbour	2%	5%
	health worker	8%	20%
	other	4%	13%
G	Frequency for recieving Information (in %)		
	once a week	25%	20%
	once a month	10%	15%
	Twice in Month	35%	45%
	Bimonthly	15%	20%
	Other	15%	0%
H	What are the hardest hygiene behaviour for you to change(in %)		
	use of clean drinking water	40%	55%
	use of latrines	30%	35%
	hand washing at key times	5%	3%
	disposal of children's stools	23%	7%
	don't know	2%	0%

14 FINDINGS

This discussion focuses on the bearing of the findings to the project's objectives, and more importantly, to the control of disease and the provision of water supplies of acceptable quality. It is therefore necessary to lay a brief background to the project, and the methods that will be used in its implementation.

The project will be implemented with the goal: To improve health of the target population in of Pyawbwe and yasagyo by improving sustainable water supply, sanitation system and hygiene within the beneficiaries. Interventions to increased access to and use of safe water in target community has three components which are

(i) water is transmitted through open Defication to water sources with significant leaks or contamination

(ii) adequate clean water storage capacity (water tank + pumps) needed to supply distribution network

(iii) clean water is consistently supplied to households via distribution network / stand pipe location

These hardware components will be supported by a software component with an objective of improved hygiene practices related to safe water usage and vector control in target communities comprising of sanitation and hygiene training for MRCS volunteers and communities levels in PHAST methodologies to carry out community and school hygiene promotion using channels apart from household visits .The third objective of the project will involve enhancing the capacity of the Township Red cross to operate and supervise the programme

The findings of this baseline survey indicate there is great need for these interventions, particularly for safe water supplies and better understanding of the aetiology of disease to create demand for better hygiene behaviour. The provision of these water services on a sustainable basis will require supporting institutional infrastructure such as that planned under the TSP components. The baseline also finds there is

demand for these components, particularly capacity building in maintenance and operations. The need for O&M capacity will become even more critical with the construction of distribution network and the storage tank with community contribution will be required.
The findings of the survey in respect to the three core components i.e. water,sanitation, hygiene and management capacity.;

14.1 Water Supply

The water supplies is characterised by a high degree of use of unsafe water sources which are also seasonal, with pronounced water shortages in the dry season. These shortages are exacerbated by the increased cost of water in the dry season. The seasonal patterns consist of high usage of generally cost free surface water in the wet season. Protected and unprotected shallow wells are therefore the main water supplies in the dry season, used by 30 and 29 percent of households respectively. The number of households purchasing water from vendors (trucks and vendors) 6-9 percent increases during the dry season. This creates incentive to reduce consumption especially during the dry season. The 27 percent of households using boreholes also increases.
Reducing seasonal shocks as well as ensuring safety in water supplies is therefore a priority transformation. These seasonal changes are not only damaging to health and welfare, but they also threaten the benefits of any hygiene and sanitation training carried out among the communities; The practice of hygiene will definitely be impacted by dry season water shortages and the recovery with increased availability of water in the next water season will definitely be to a lesser degree. Further water supply needs to be stabilised to reduce the risk of water washed diseases, which comprise a substantial part of the morbidity burden.
Another parameter of importance to the implementation of the project is user preference in water supplies. The unprotected shallow wells, protected wells and communal boreholes are the most preferred water supplies in that order. The strongest preference criteria parameters are time, safety, distance and improved health. While cleanness is the strongest preference criteria, the second and third criteria proximity and time imply that households will use whatever water is available simply because there are no choices. This means that for water supply improvements to have the desired impact, they must be available within reasonable distance and cost, and be available all year round.
The proportion of households that have to pay for water all year round rises dramatically by at least 50%.It will be important to examine the willingness to pay for water as the need for user fees through billing will become more critical to ensure sustainable operation. The current cost of water ranges between10-20 Kyat; Further, it is important to take note that households try avoiding paying for water when it can be accessed for no cost, therefore, the number of households using water from vendors and water bullock cart is very low in the wet season. Considering the price sensitivity of water consumers, they must also offer other tangible benefits such as safety, consistency, proximity and cost. The sustainable management of water points sought by the intervention will very much depend on good financial management as much as technical measures. The charging of water by monthly must balance the need for cost recovery and the need to ensure that cost does become a barrier to access.
In terms of water consumption, quality and quantity are the primary factors in terms of health outcomes. It established that quality of most water is poor. In terms of quantity, there is need to maintain the mean daily per capita consumption of over 20 litres per person per day benchmark of consumption levels which are needed to meet basic hygiene and consumption needs . Water availability has implications on the ability of individuals to practice proper hygiene, creating especially conducive conditions for the spread of water washed diseases such as skin diseases, which are quite prevalent. However, at the current low levels of awareness on certain aspects of hygiene, lack of water is not the only reason hygiene standards are poor. The quantity of water supply must be increased in tandem with hygiene promotion to ensure there is enough water for individuals to practice what they learn. While there are strong indications, there other reasons for poor hygiene, the lack of sufficient water compounds the problem by constraining hygiene when and if demand for it is present.

14.2 Domestic Water handling

Domestic water handling and storage is critical in the safety of drinking water supplies, if done unhygienic ally, it can contaminate water that was previously safe, negating the benefits of developing safer water sources. Efforts to improve water therefore need to be simultaneously undertaken both at the point of use and supply.
Only 3 percent of households consistently treat their drinking water, and the main reasons cited by those who don't were that it's too expensive 43 percent and don't know how to 6percent. 51 percent said it is not important, illustrating an opportunity for substantial changes through awareness creation which would also address those who don't know how to treat. The cost impediment has to do with the need to purchase fuel for boiling, or treatment tablets ,even where wood fuels is used , there is an expense in the time used to collect it and boil the water . A water filter option would address these issues, but for a filter to effectively substitute boiling or chemical disinfection, it must meet the relevant safety standards. For a sterile water filter the standard is an effective pore size between of .01 micron and .45 microns. Filters with effective pore sizes between .45 micron and 1.0 micron are considered to be bacteriologic ally safe. This can be an option to be explored by the project for those families

that will not be able to afford to connect up to the water supply system despite subsidization. Further, as ceramic filters can leave residual levels of bacteria it is imperative that filtered water be stored very safely to reduce multiplication of these residual pathogens to infectious levels.

Interventions that manage to improve water quality at source will have their impact diluted by contamination in transit and storage, with a concomitant reduction on their impact in reducing diarrhoeal diseases. Regarding these, the survey found that water storage and handling in the house are poor. While 67 percent of households store their drinking water in a metallic pot or jerry can which being narrow necked container reduces the possibility of in house contamination, with 17 percent of these containers were observed to be uncovered and not clean. There are numerous opportunities for contamination of water in storage or handling, a risk amplified by the poor hand washing behaviour enumerated in this survey.

In any case, only 31 percent of households consistently treat their drinking water, the main some of these methods such as filtration and sedimentation have negligible impact in reducing micro organic pathogens, but can remove some larger pathogens.

The main impediments cited in this regard were the expense and lack of knowledge on how to do it. Therefore, considering the water sources used by households, supplies are very likely to have been contaminated at source let alone within the household.

14.3 Water Management Structure at Village Levels

The survey indicates that no water management structures in villages and or weak and poorly supported by the community. The main complaint was being delays in repairing water points (there are very many broken wells), and failure to keep the water point clean. Operational and maintenance weaknesses are of specific concern, considering the water supply proposed to be implemented by the project. Failure to keep water points clean may well negate the benefits of increased water supplies. The management structures in place are predominantly community elders and water committees, and they may very well lack the technical capacity to implement their mandate. Community support for these structures and O&M at water points is also weak.

14.3 Hygiene and sanitation indicators

Food Hygiene

There is relative good practice with food being prepared just before eating or the morning before eating this reduces the risk of food poisoning. However as indicated previously, the practice of hand washing with water and soap and more so before handling food is low. While on food storage only 12 percent do not cover the food and this is stored outside.

On environmental hygiene, indicators in this theme are average of 46 percent households had either human or animal defecation in the compound at the time of the survey, increasing the risk of disease transmission within the household. Garbage disposal is predominantly by crude dumping or burning with 34 and 35 percent of households respectively applying these methods thereby creating a favourable environment for vermin and insect vectors. 89 Percent said rats were a problem and the figure was confirmed to be higher. With 20 percent indicating lack of knowledge on what disease rats spread .But even the 80 percent could not mention the specific disease.

Other aspects of sanitation, namely the disposal of infant's faeces are equally poor; only 28 percent of households, put infant are faeces in the latrine .The main disposal method is dumping in the open or drains thus a health hazard.

14.4 Sanitation

A majority of both men and women do not own latrine and only 38 percent have their own latrine but during the feedback session on access to latrines they reported the access was lower with only about 15percent having own latrines. What they reported was the most commonly used method was cat method and bushes. However the survey data indicates at least 72 percent use neighbourhood concept with families sharing one latrine. There is every little gender differentiation on the method or place of defecation. But what is obvious is that there over 180 households indicated they use cat method for the children under five which is a health risk. On latrine usage 38 percent of the latrines were not clean and there were signs of urine or faeces and the main reason cited were low level of awareness. While only 72 percent of the latrine were cleaned daily.

Access to sanitation is included in the project objective hence budget allocation made for this.

14.5 On School Water,Sanitation and Hygine Situation

On school water, sanitation and hygiene situation all the eight schools within the target area were surveyed. On access to safe water, three school use shallow communal wells and the quality of the water is not guaranteed. The water is saline. On latrine coverage all school has zero access or dilapidated in nature. Where latrines are available they were not cleaned and it was not clear who was responsible. In addition there was no soap available for hand washing except in one school and even there the soap was not used. While on waste disposal all schools have no dustbins.

15 Conclusions

The survey concludes that residents in the target area are exposed to multiple paths of infection, some of which are opened by poor infrastructure and others by poor knowledge and hygiene practice. The following are the main findings of the survey;

15.1 RISKS EMANATING FROM THE WATER

Contamination of water at source and within the household is exposing residents to water borne transmission and measures to prevent both are required .To prevent contamination at source , it is necessary to improve sanitation and conservation measures , while at the household level , improvements in storage and handling are required , coupled with the household treatment to ensure safe drinking water. In promoting household treatment, provision of low cost options will be critical to sustained uptake of the safeguard.

Although water usage per capita is fair, the sources are polluted thus placing individuals and communities at risk of water washed diseases. Increasing safe water supplies will reduce this risk coupled with better personal hygiene, which nevertheless has to be actively promoted.

15.2 RISKS EMANATING FROM POOR SANITATION

Poor sanitation is posing a threat to water supplies and its presence in the domestic arena especially that of infants is presenting additional risk, including encouraging insect vectors. Low levels of overall sanitation are also putting households that have invested in proper sanitation at risk because vectors move freely between compounds as cited with the rats, mosquito and flies problem. Improved sanitation for individual households will have to be matched by much wider coverage for full benefits to accrue.

15.3 RISKS EMANATING FROM POOR HYGIENE

Poor hygiene is as much a product of poor awareness as it is a result of lack of necessary facilities. Hygiene promotion will have to be matched by provision of better sanitation and water services. On a balance of probabilities, primary barriers, namely proper sanitation and hand washing after defecation or handling infant's faeces are more critical to the control of diarrheal disease.

16 MONITORING AND EVALUATION CONSIDERATION

To track the effect of improved water and sanitation and enable the use of disease patterns in fine tuning the intervention, it is necessary to collect disease incidence data at health centres, and also using PHAST trainers record sheets.

17 DESIGN CONSIDERATIONS

Much greater impact will be achieved if available resources are allocated for subsides for water connections since the majority of the expected beneficiaries are poor estimated to be over 65 percent by Pradeshiya Sabah existing data and may not afford to connect up to the water supply system within the lifespan of the project. However for those households which cannot still connect up, alternatives may be sought such as introduction of ceramic water filters to maximise on their efficacy.

On sanitation the project has no component to fully address access to sanitary latrines yet hygiene promotion benefits can only be realised if access to sanitary latrines is addressed. Efforts will be made through hygiene promotion to encourage the households without access to look for alternative donors since this is a glaring gap which by all means needs to be addressed to add value to the existing project and the beneficiaries' lives

18 RECOMMENDATIONS

Based on the findings, the following recommendations are made to target actions at areas which have the comparative impact in reducing water related diseases, improve access to safe water and key hygiene practices.

18.1 FACILITATING HEALTH THROUGH IMPROVED WATER SUPPLY

Development of water supply system focusing on improving per capita water consumption, and ensuring water supply is acceptable quality. This will require;

§ The construction of the water supply system is intended to reach at least 70 per cent of the population of in yasagyo and pyabwe selected 10 villages.This will stabilise, and increase the capacity and quality of the water.

§ For the households who will not have access or will prefer to use the existing traditional water sources actions will include installation of conservation measures to stop water contamination at source thus sustain safe water chain. Communities shall also be encouraged to use protected water supplies in preference to other sources

- § For sustainability in improvements to water supply, the MRCS will be trained on community on management issues, and provided with technical capacity through training of local technicians to carry out maintenance and repair work..
- § To prevent water contamination in the household, safe water handling, treatment and storage shall be promoted among the target communities.

18.2 FACILITATING HEALTH THROUGH IMPROVED SANITATION

Although the project has no component on provision of sanitary latrines, safe sanitation shall be promoted so that in conjunction with good hygiene, pathogens shall be prevented from entering the living environment and spreading to new hosts. The project will partner with the Pradeshiya Sabah, the MOH and DHO and other stakeholders together with the local communities in conducting periodic clean up campaigns and community health awareness promotions using various multi media channels and also the conventional ones such as use of religious places.

18.3 IMPROVING HEALTH THROUGH HYGIENE

- § Hygiene promotion shall be carried out through the PHAST methodology and shall place particular emphasis on primary barriers to disease spread i.e. safe sanitation and hand washing after contact with faeces. Emphasis will also be placed on domestic hygiene, food and water handling through encouraging cleanups, safe water storage, construction of dish racks and food cupboards etc.
- § Hygiene and Sanitation Awareness/Training shall be carried out at schools to address risk factors manifest there.Further , the intervention shall take measures to ensure all schools in the intervention area are provided with safe and sanitary facilities

18.4 MONITORING AND EVALUATION

To demonstrate the impact on improved hygiene health outcomes, PHAST trainers/ RCV volunteers shall maintain records on disease incidence among beneficiary households and schools, including the extent to which households are adopting various counter disease measures. The intervention shall also work with midwifes/ nurses/ teachers to maintain aggregated community level disease incidence data. This data shall be used to gauge the efficacy of various measures and adjust intervention as appropriate.

In totality, these recommendations, if implemented with other project components will provide protection from most routes of infection and therefore reduce the incidence of water elated disease.

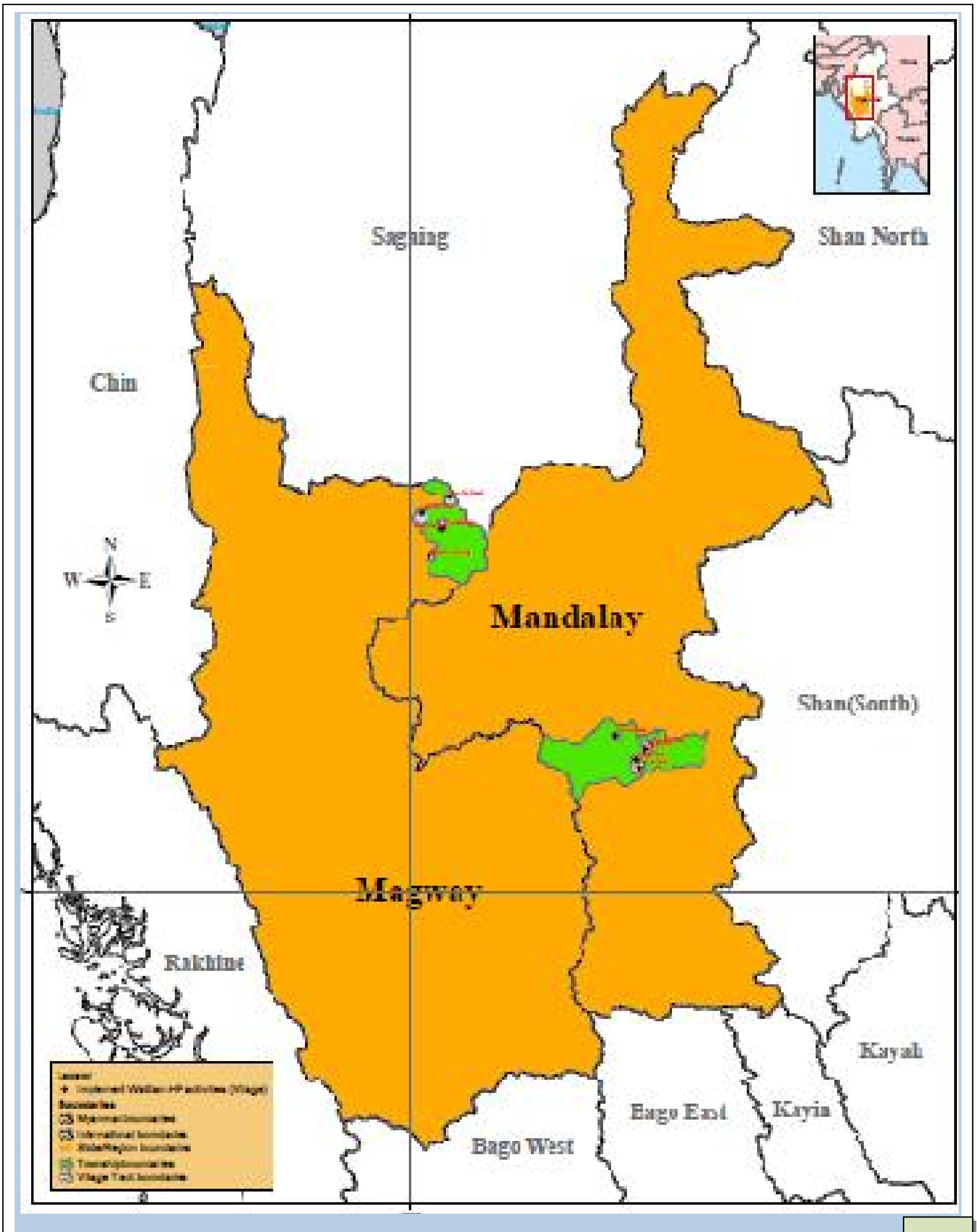
Annexure-1 Summarize Information About Townships

		PBE	YSG	Tot
1	No of villages Surveyed	8	7	15
2	Sample Size	29%	30%	29%
3	HHs surveyed	233	199	432
4	Male Population Surveyed	113	107	220
5	Female population Surveyed	120	92	212
B	Gemder wise respondednt in Percentage			
6	Male	49%	54%	51%
7	Female	51%	46%	49%
C	Head of HouseHold in Percentage			
	Male	82%	76%	79%
	Female	18%	24%	19%
	No response	14%	10%	12%
D	Education level of Head of HHs in Percentage			
	Graduate	1%	0%	1%
	High School	2%	4%	3%
	MiddleSchool	14%	10%	12%
	Monastry Education	43%	39%	41%
	Able to read/write	3%	3%	3%
	Illitrate	8%	6%	7%
E	House Characteristics in Percentage			
	Detached Houses with Private Yard+ Animal Pen	58%	52%	55%
	Houses without Private Yard	1%	1%	1%
	2-3 Story House/Multi story	13%	11%	12%
	Houses with Yard+ Animal Pen	30%	34%	32%
F	Water Supply in Percentage			
	Dug well- HS	3%	1%	2%
	Dug well- Remote	36%	32%	34%
	Tube Well-HS	4%	4%	4%
	Tube Well- Remote	10%	12%	11%
	Pond	18%	24%	21%
	River/Creek	10%	16%	13%
	Buy from Vender/Cart etc	3%	3%	3%
	Public tank	1%	1%	1%
	Other	1%	1%	1%
G	Changes in Water Sources –season wise in Percentage			
	Rainy	24%	30%	27%
	Winter	19%	19%	19%
	Summer	53%	55%	54%
H	Time used for Collection/Fethcing of Water in Percentage			
	15- 30 min	40%	36%	38%
	30- 60 min	20%	24%	22%
	60-120 min	21%	21%	21%
	120-180 min	8%	10%	9%
	>180 min	6%	4%	5%
I	Water Usage per Household in Percentage			
	4-13 Gallon	2%	2%	2%
	13-30 Gallon	3%	5%	4%
	30-60 gallon	18%	16%	17%
	60-90 gallon	30%	30%	30%
	>90 Gallon	47%	47%	47%
J	Current drinking water Problems in Percentage			
	Dirty/ Brackish	9%	7%	8%
	Taste is Bad	12%	14%	13%
	Disrupted supply (not enough for fullfilling present needs)	43%	43%	43%
	Diffcult to collect	25%	29%	27%
	Water cost is high	2%	4%	3%
	Others	6%	6%	6%
K	Water Treatment in Percentage			
	No treatment / boiling	51%	35%	43%
	Boiling	27%	26%	26%
	Filtering	14%	31%	23%
	With Alum	3%	3%	3%
	Solar/Chemical treatment	2%	2%	2%
	Some member drink treated water	3%	3%	3%
L	Water Container Cleaning in Percentage			
	With water	48%	31%	79%
	With Sand	4%	6%	5%
	With Soap and Water	12%	6%	9%
	With Ash	1%	1%	1%
	Dont Clean	6%	4%	5%
	No response	0	2%	1%
M	Sanitation			
	Defication Places in Percentage			
	In house Laterine	46%	52%	49%
	In bushes	14%	20%	17%
	behind the house	14%	8%	11%
	Communal laterine	0%	2%	2%
	Family/Rel. laterine	18%	12%	15%
	Outside the village	5%	5%	5%
	Near river /creek	0%	1%	1%
N	Benefits of laterine in Percentage			
	Less time to walk	22%	26%	24%
	Privacy	24%	22%	23%
	Decrease in diarrhoea disease	26%	28%	27%
	Social Status	12%	12%	12%
	Feel shame to deficate in open place	13%	15%	14%
O	Reason for No laterine in Hs. in Percentage			
	Too expensive/No Money	65%	55%	60%
	Lack of knowledge for Const.	4%	8%	6%

	No Tools	8%	12%	10%
	Not enough Space in House	14%	22%	18%
	Not Intrested	6%	6%	6%
P	Age group for children to Start using Laterine in Percentage			
	1-3 years	17%	15%	16%
	4-6 years	48%	50%	49%
	7-9 years	26%	30%	28%
	>9 years	9%	5%	7%
Q	Children Stools Disposal Places in Percentage			
	Mixed with Cattle waste	33%	35%	34%
	Throw in Laterine	29%	27%	28%
	Throw beind the houses	22%	20%	21%
	Left in Courtyard	2%	2%	2%
	Throw in forest	14%	16%	15%
R	Availability of Laterine and Type			
		PBE	YSG	Total
		No	No	Nos
A	Total Laterine	121	112	233
1	Pit Laterine	16	22	38
2	Fly-proof with Bamboo Soak pit	98	86	184
3	Fly-Proof laterine with Con. Ring Soak pit	7	4	11
B	Condition of laterine (super st.+soak pit) i(n Nos.)			
1	Good Condition	16	22	38
2	Dilapidated Condition-(Privacy issue)	40	50	90
3	Bad condition- (Need repair)	61	40	101
4	Laterine has Concrete slab	4	0	4
C	Distance of laterine from house (in percentage)			
1	Inside house	33%	31%	32%
2	Within 10-20 mts	14%	22%	18%
3	Within 20-150 mts	24%	16%	20%
4	Within 150-250 mts	6%	10%	8%
5	>250 mts	10%	10%	10%
6	>500mts	13%	11%	12%
D	Laterine Clean(No faecal Matter& urine on the floor) (in percentage)			
1	Is laterine has Smell	46%	52%	49%
2	Soakpit full	14%	20%	17%
3	Visible waste	14%	8%	11%
4	Human faeces visible in yard	5%	3%	4%
5	Animal faeces visible in yard	1%	1%	1%
6	Open sewage/stagnant water	20%	16%	18%

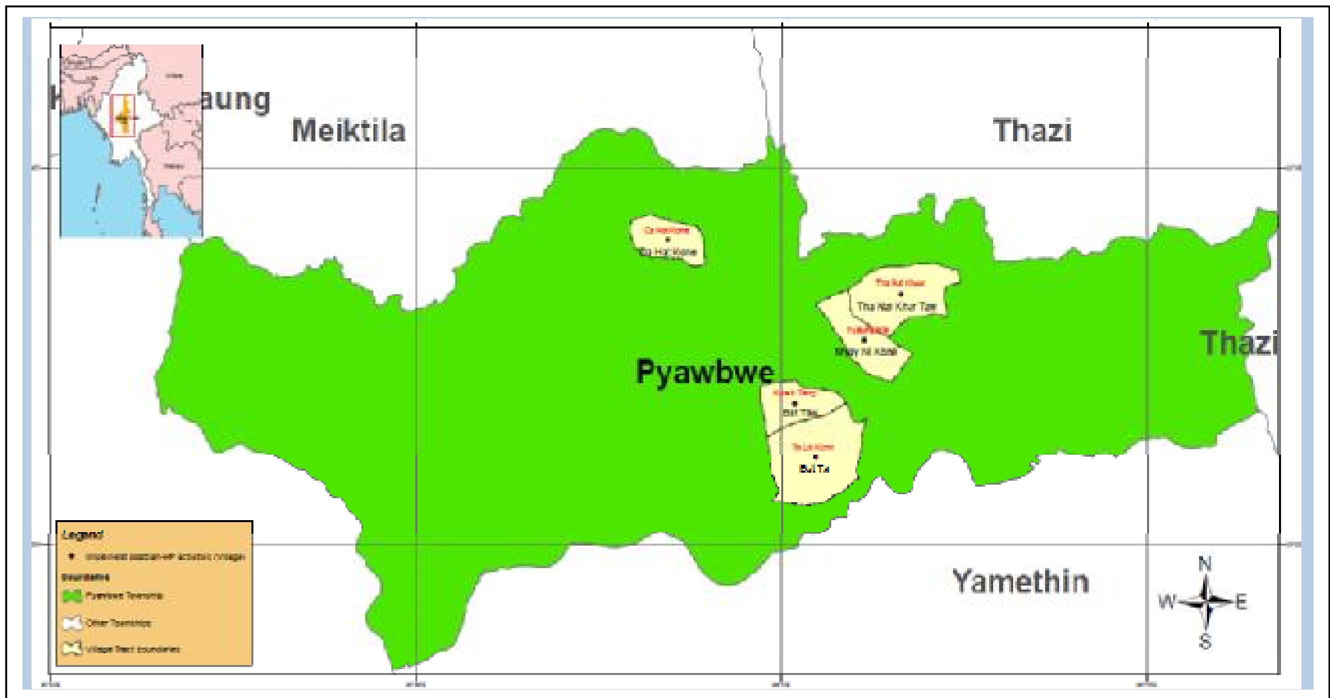
Annexure-2

Survey villages (Green Color and Township (Orange color)



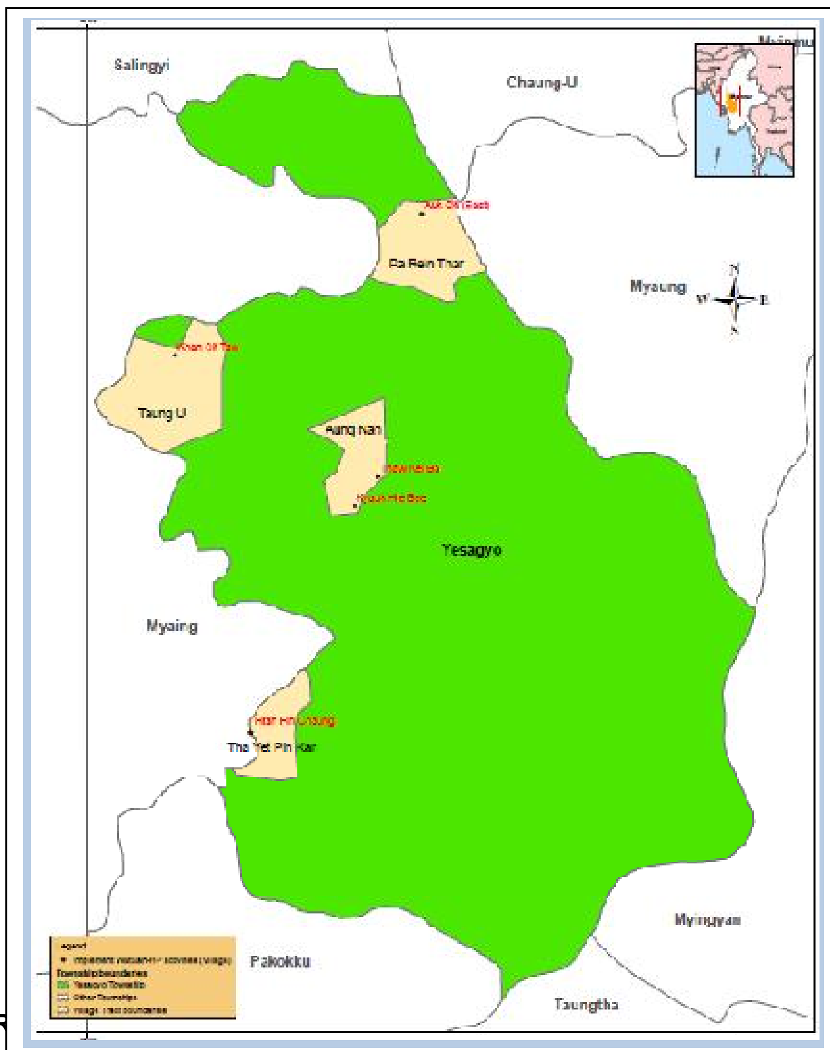
Annexure-3

Pyawbwe township and villages



Annexure-4

Yasagyo township and villages



Red Cross and Red Crescent WATSAN base-line survey

Myanmar Red Cross Society Water, Sanitation and Hygiene Promotion Programme

Date of Interview / / 2011 Questionnaire Number ____________

Interviewee Age ___________ Sex male female

Relation to Head of the Family: ____

Location (Village Name)____

House No: _________________

A. Information on household members

1) Household member numbers

Female < 5 years		Male < 5 years	
Female 5 – 16 years		Male 5 – 16 years	
Female > 16 years		Male > 16 years	
		TOTAL HOUSEHOLD MEMBERS	

2)Head of the Family: ☐ Male ☐ Female

3) Head of the Family Education level: ____

4) Length of time lived in house: ___________

Observations

Type of House

Detached house with private yard	☐
House without private yard	☐
Multi-story unit	☐
A pen in vicinity of house	☐

B. Information on water use

1) Which water source is currently used for which purpose?

	Drinking & Cooking	Washing Hands	Washing body	Washing Clothes	Cleaning cookware & house	Garden and Animals	Is a Pump Used?
Dug Well at House							
Dug Well (remote)							
Tube Well at House							
Tube Well (remote)							
Pond							
River or Creek							
Rainwater							
Buy - Bowser / Tank							
Pipeline to House							
Pipeline (remote)							
Other		`					

2) Does the source of water change depending on the season (Describe)?

NO ☐

YES ☐ Summer ....

Winter ....

Rainy ....

3) Is any of your water used or from a source away from your house?

NO ☐ YES ☐ Ê

How much time per day is spent collecting, walking to, or accessing water? ☐ minutes

4) Is water brought from the source and stored inside the house?

NO ☐ YES ☐ Ê

Who is responsible for collecting and storing this water? ☐

5) How much water is used by people within your household per day?[3]

Less than 4 gallon	
4 – 13 gallon	
13 – 25 gallon	
25- 50 gallon	
50 – 130 gallon	
More than 130 gallon	

6) Are there any problems with your current drinking water supply?

NO [ ] YES [ ]

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It is dirty	
It does not taste good	
It sometimes makes us sick	
Supply is sometimes disrupted	
Not enough for all our needs	
It is difficult to collect	
It is expensive	
Needs too much maintenance	
Other	

7) Which of the following statements best describes your attitude to your water supply?

I am generally happy with the quality, quantity and delivery method of our water	
Our water supply is not perfect, but it is not a major issue to us	
Our water quality is OK, but getting sufficient volume for our household use is sometimes difficult	
We have enough water to use, but I am concerned about its quality	
I am concerned about our water quality, and it is not always easy to get a sufficient volume to our house	

8) What are the benefits of your drinking water supply?

saved collection time	
reduced walking distance to collect	
improved quality of water	
decreased diarrhoea	
more water for domestic use	

[3] Include only water used at the house or yard. Do not count water used at a communal well or lake/river for washing etc.

9) Do you treat your water supply before drinking it?

No	
Yes, boil it	
Yes, filter it	
Yes, other treatment (chemical, solar)	
ONLY SOME MEMBERS OF THE HOUSEHOLD DRINK TREATED WATER	

10) If you don't treat your water what is the reason

it is expensive	
No need	
It is safe	
Other ………………..	

11) What do you clean your drinking water container with?

soap and water	
water	
ash	
sand	
don't clean	
don't know	
other ……..	

C. Financing water supplies

1) How much did/do you contribute towards the initial costs, installation, repairs of the water point?

……………………………. Kayt □ per month □ per year

D. Information on Sanitation

1) Does your household have a latrine?

Yes [ ] No [ ]

2) Where do different people defecate?[3]

	Women	Men	Children over 5	Children under 5
Latrine in House				
In the bush				
Near River/Creek				
Communal Latrine				

Behind the House				
Other ………………		`		

If you have a latrine:

3) What are the benefits of your latrine?[4]

less time to walk to defecate	
more privacy	
decrease in diarrhoea	
increase in social status	
Other ………………………………..	

4) Are you happy with your latrine?

Yes ☐ No ☐

If not, why not? ………
………

5) If you don't have a latrine, why not?

Too expensive	
Don't know how to build	
No tools	
Don't want one	
Too sick to build one	
Other ………………………	

6) What age do children start to use the latrines? …………………

7) What happens to the stools of young children?

left on courtyard	
thrown in the latrine	
Thrown behind the house	
Other ………………………	

[4] Allow multiple answers

Observations for sanitation

1) Toilet Available (Type/Condition/Location) ________________________________

____

2) Does the latrine have a concrete slab?

- yes no

If not what does it have?____

-

3) How far is the latrine from the house?

inside the house directly behind the house
other...

4) Is the latrine clean (no faecal matter/urine on the floor)

yes no

5) Is the latrine smell?
- yes no

-

6) Is the latrine full?
- yes half no

7) Visible Waste

Human faeces visible within private yard ☐

Animal faeces visible within private yard ☐

Open Sewage, stagnant water in vicinity of house (30m) ☐

Permanent solid waste in vicinity of house (30m) ☐

E. Household waste

1) Where do you dispose of your household waste?
refuse pit bush
burning burying
other ....

1) Where do you dispose of your animal/cattle waste?
refuse pit bush drying for reuse (fertilizer) burning
burying other ....

2) Is waste disposal a problem?

yes – if yes, why? ....
no

Observations for **household waste**

1) Does the house have a refuse pit?
yes no

2) Is the surrounding courtyard clean?
yes no

F. Information on hygiene awareness

1) In your community, what do you consider to be the biggest causes of diarrhoea and stomach upset?
i) ....
ii) ....

2) When do you wash your hands?

	Always	Sometimes	Never	N/A
When I wake up in the morning				
After I take a pee				
After I defecate				
After I have handled animals				
Before I eat				
After I eat				
Before I start preparing food				
When I get home from school / work / shopping				
After cleaning house or yard				
After wiping children's bottom				
Before I go to bed				

3) What do you use to wash your hands?
□ use water only □ ash □ soap
□ other ....

4) How do you wash your hands?
□ under a running tap □ in a bowl □ water poured over hands from a container
□ other ....

5) What are the 2 main reasons that you wash your hands?

Removes visible dirt and stains more easily □

Makes hands smell better	
Best to remove germs from hands	
Told by others to use soap	
It will improve my and my family's health	
Other ………………………………………………	

6) In your household, is detergent used to wash dishes?

Always	
Most of the time	
Sometimes	
Rarely	
Never	

7) For people in your community, what do you think are the impediments to people undertaking the following hygiene and health related tasks?

	Don't have physical resources	Not important enough to them	Did not know it was an issue	Other
Removing objects where water pools to prevent mosquito breeding				
Keep left over food in covered containers to stop flies spreading germs				
Always use a toilet for defecation and urination to prevent spreading disease				
Wash hands with soap and clean water before preparing or eating food				
Place and use a mosquito net on all beds				
Dispose of solid waste so that rats, dogs and other vermin cannot feed from it				
Drinking only treated or boiled water				

8) Have you ever received any health related information on water and sanitation?

NO ☐ YES ☐

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At school	
From health clinic / hospital	
From family or friends	
From media (TV/radio/newspaper)	
From place of worship	

From poster or billboard ☐
Other …………………………………….. ☐

Observations for hand washing

1) Is there a hand washing facility in the house?

yes no

G. Information on health

1) Which of the following health matters are a concern to your community?[5]

		Of the above health matters, which two are of most concern you?
Dengue fever, malaria and chikungunya		
Road accidents		
Diarrhoea and stomach upset		
Respiratory infection		
Hunger and malnutrition		
HIV and infectious disease		
Skin infections, insect bites, itches		
Heart Disease		
Cancer		
Eye and Ear Infection		
Snake bite		

2) Have any children in your household under 5 years had diarrhoea in the past week?

YES ☐ NO ☐ Don't Know ☐

3) Has anyone else in your household had diarrhoea in the past week?

YES ☐ NO ☐ Don't Know ☐

E. Vector control

1) Do you have mosquito nets in your household?

YES ☐ NO ☐

If yes, how many: 1 2 3 4 more than 4

[5] Allow multiple answers, prompt for greatest concerns.

2)What do you use for vector control in your community/village?
□ nothing □ larviciding □ indoor residual spraying
□ other ……………………………………………………………………..

3) What causes malaria
□ mosquitoes □ germs □ don't know
□ other ………………………………………………………………………

4) What can you do to prevent malaria
□ cover up body □ spraying □ clearing grass/scrub □ clearing stagnant water
□ don't know □ other ……………………………………………………………………..

Observations for vector control

1) is the mosquito net(s) erected properly?
yes no

If no, why? ………………………………………………………………………………

G. Knowledge, attitude and practice

1) What are the three diseases that your family has suffered from in the last 3 months?
□ diarrhoea □ malaria □ dengue □ respiratory infection □ HIV
□ any other ……………………………………………

2)What causes diarrhoea?
□ germs □ dirty objects □ dirty food □ dirty fingers □ dirty fluid
□ flies □ open defecation □ other………………………………………

3) What is the best way to prevent diarrhoea?
□ washing hands □ use of latrines □ use of safe drinking water
□ other ……………………………………………………………………………………

4)What do you do when your child (under 5) gets diarrhoea?
□ give ORS □ give more fluids □ given more food based fluids □ more breastfeeding
□ refer to health service □ other ……………………………………………………………

5) When was the last time a member of your family got diarrhoea?
□ within the last 2 weeks □ within the last 1 month □ within the last 3 months
□ other …………………………………………………………………………………

6) Where do you generally get your information about health from?
□ media (TV/radio/newspaper) □ place of worship □ your family
□ your neighbour □ health worker □ other …………….............

8) How often did you receive it?
□ once a week □ once a month □ other ………………………………………

9) What is the hardest hygiene behaviour for you to change?
□ use of clean drinking water □ use of latrines
□ hand washing at key times □ disposal of children's stools
□ don't know □ other ……………………………………………………………

13) And why?
………
………

	Name	Signature	Date
Volunteer (1)			
Volunteer (2)			
Team Leader			