



ASSESSMENT REPORT OF KARAKER SETTLEMENT, KNOWLEDGE, ATTITUDE AND PRACTICES [KAP] ASSESSMENT

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EXECUTIVE SUMMARY

The water, sanitation and hygiene KAP [knowledge Attitude and practices] assessment was conducted in Karakrer Village, Kompong Luong in the month of July 2015 to assess the situation of water, sanitation and Hygiene knowledge of community. The focus Group discussion and closed discussion was conducted with village community focused on households' current socio-economic status in addition to information about households' water sources, water treatment, and productive use for water, water management, hygiene, sanitation and environmental conservation.

The Karakrer Village situation in reveals a vicious cycle in which numerous factors contribute to ongoing poverty. Living conditions are difficult as witnessed by low purchasing power, low levels of education, lack of access to information, overcrowded households, houses made on water as type of floating boat with timber, latrines in poor condition with no proper disposal mechanism, and poor access to safe drinking water etc. These factors lead to inadequate hygiene and basic sanitation, resulting in a prevalence of waterborne diseases in the community. As there is a lack of awareness about waterborne diseases and preventative measures are not widely known or practiced by the local population, preventable common illnesses afflict the households.

The assessment finding shows that:

62.8% of were in the youthful age 25-35 years and 72.7% of the households had families of between 3-6 people.

The household findings revealed that out of every ten female household heads (90.5%), have basic education or are outright illiterate or lacked education.

In terms of available sources of drinking water during the rainy season, 72.8% of the households reported that they source water from surface water (lake) while 21.2% have purchased water or treat the water. However, during the dry season there is an increase in the number of households that use surface water from lake.

48.2% of the households travel for more than a half kilometer to the water sources during the dry season compared to 43.2% who cover the same distance during the rainy season. Majority had water sources within 1-2km of the household.

64.6% of the households take 30-60 minutes or less to reach a water source during the rainy season compared to 60.4% who take 30 minutes or less to reach their main source of water during the dry season. During the rainy season, more than half of the households (77.6%) reported that there water quality deteriorated at the water sources,

while during the dry seasons majority of the households take comparatively longer to get water.

Six out of ten households (62.4%) of the households use between 60-200 litres on a daily basis for drinking, cooking, hygiene, cleaning and other household needs. Considering the household sizes, this quantity is far below the WHO standard of 40 liters per person per day for rural areas.

At the household level 89.7% of the respondents reported that they treat their drinking water with slightly more than half (58.7%) of the respondent saying they believe the water is safe and there is no need to treat it in dry season. The assessment also shows that only 32.3 % of households use water sources managed by community [church].

Sanitation

80.1% of the households reportedly have toilets but unimproved disposal facility and majority of these households (68.5%) defecate in their houses and faces directly dispose in lake water.

Most of the households with children under 5 years do not practice safe disposal of feces with 98.1% reporting throwing in lake, while 7.4% dispose the feces near the house and bushes/shrubs near to lake forest arrest areas.

Hygienic behaviour

On soap use within the household, 63.2% reported using soap to wash their hands. More than six out of ten respondents (62.9%) wash their hands after defecation, 88.6% wash their hands before and after eating. More significantly, most respondents adhere to the Islamic faith and hand washing is done before prayers. The level of hygiene awareness is relatively low.

On observations of latrines, 98.3% did not have any hand washing facility in or nearby. 91.8% did not have soap at the hand washing place. Likewise, 91.8% lacked water at the hand washing place. Generally, available sanitation facilities are ordinary and do not take into consideration key hygienic practices.

On soap use at the household level, 68.7% of the respondents reported using soap.

Based on results of the assessment, the following actions are recommended:

- **Training and capacity building of community management committees where they exist**
- **Educate the community about waterborne disease prevention and how to treat contaminated water.**

- Increase access to clean water by providing locally available water treatment methods and through IEC.
- Strengthen and support behavior change for improved sanitation and hygiene.
- Strengthen partnership with community members in the area to construct improved latrines/ bucket latrine

- Water resource management

1.0 Introduction:

Access to adequate clean drinking water, basic sanitation and hygiene, are widely recognized as pivotal to realizing poverty reduction and economic transformation outcomes, because of the strong links with health, education and human productivity. These links form the basis for the Millennium Development Goals (MDGs) 1 and 7.

The ASEAN with the funding support of the USAID, developed Youth Volunteer programme called “ASEAN Youth Volunteer Program (AYVP)” for the ASEAN Countries. The execution of this programme has been assigned to the University Kebangsaan Malaysia (The National University of Malaysia -UKM), who acts as the AYVP secretariat, leading its implementation.

The AYVP aims to develop and support the ASEAN Youth volunteerism for innovative solutions to the social, cultural, economic and environmental challenges facing communities across ASEAN. The programme’s purpose is to send AYVP volunteers to carry out work in other ASEAN countries (Priority has been given to Cambodia, Philippines, and Myanmar). The AYVP secretariat is now in the process to develop its first country programme in Cambodia, developing some pilot tools, structure and principles that can provide direction and be replicated in different ASEAN countries with various partners. As mentioned above, Cambodia was selected for 2015, Philippines will be implemented in 2016 and Myanmar in 2017.

2.0 Objectives of the KAP assessment

The assessment was aimed at setting benchmarks and establishing the current status of water, sanitation, hygiene, governance, learning and natural resource management in Karaker villages in order to provide for measurements of indicators at both the institutional and household levels.

Specific objectives: In specific terms, the assessment was intended to establish the following:

- Access to drinking water
- Access to water for other purposes
- Rain water collection
- Household water usage
- Drinking water at the household handling and storage
- Sanitation
- Participation in community leadership institutions , communities and social groups
- Households socio-economic demographics

3.0 METHODOLOGY

3.1 Assessment instrument

The KAP assessment consisted of a questionnaire divided into eleven sections. The sections required that questions on various topics be asked to the respondents during focus group discussion. Demographic information, water sources, water treatment, productive use for water, water management and satisfaction, sanitation, hygiene, tree planting, other household characteristics formed part of the assessment. All responses were unsolicited, so most questions included a space for “other” responses. Several observations were also made by the enumerators including drinking water container, latrines. The last section of the questionnaire required that the enumerator record observations in regard to water and sanitation issues within the households and community.

3.2 Structured Observation

Facilitators were also provided with guidelines to undertake observations of households’ settings, latrines, hygienic practices, and general environment.

3.3 Brief orientation of enumerators/facilitators

The 2 facilitators was selected by AYVP and brief orientation provided by IFRC for the KAP assessment, the instructions on how to fill out the questionnaire were reviewed to familiarize the enumerators of the skip patterns and open ended questions.

Assessment procedure

During the actual assessment facilitators conducted the following:-

- Focus group discussion, discussion and conduct questionnaire with community
- Social Mapping exercise
- Transect walk in terms of assess the location of settlement and major institutional facility inside the community.

4.0 FINDINGS AND ANALYSIS

4.1 Typology of Settlement and household demography

The settlement named Kompong Luong (or Phumí Kâmpóng Luông) is a large floating village located on the north of Krakor, on Tonlé Sap Lake. Kompong Luong village consist of commune of 5 floating villages in the Pursat province of Cambodia.

Kompong Luong is inhabited by about 1,217 families, bringing the total population to about 7,000 people The village is equipped with basic facilities such as petrol

stations, schools, shops, markets, hospitals, garages, restaurants, etc. The location of the village, changes according to it climatic season: during the monsoon season the village is moved to the banks, in order to avoid the storms, and in the dry season, it is moved into the open lake as the water level gets lower.

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4.2 Climate

The karaker village is generally dry and hot most of the year. Temperatures range between 20°C to 38°C. The district had bimodal types of rainfall: the long rains (April-August) and short rains (October to December). The average annual rainfall is 520mm.

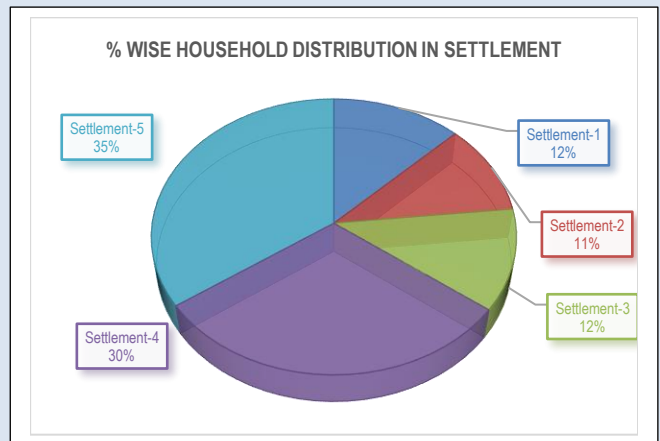
4.3 Vegetation

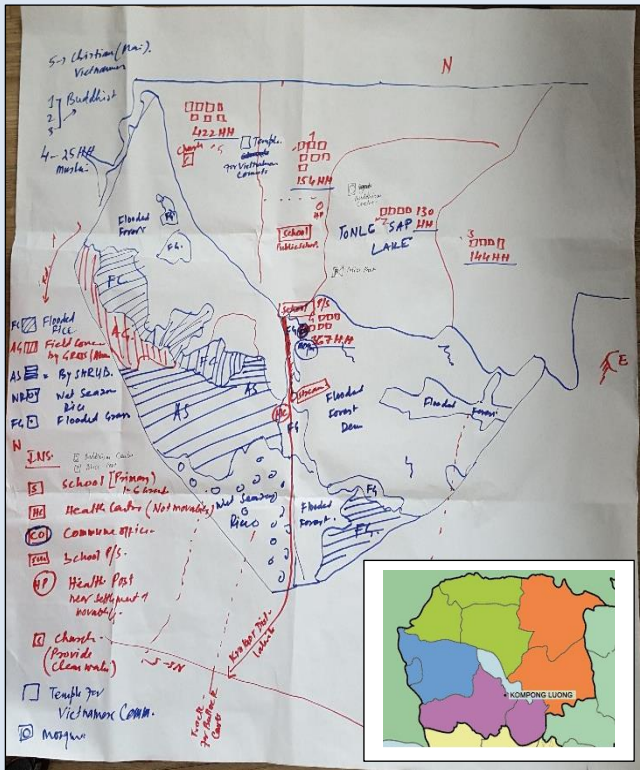
The vegetation in the area has been utilized for firewood/ charcoal burning leaving the area vulnerable to wind erosion, which may lead to desertification in the near future. Shrubs, Floating grass are covered in the surrounding areas of settlement. Flooded forest are on the periphery of the settlement.



#	Settlement	No of Household's	Type of community	location
1	Settlement-1	154 HHs	Cambodian Buddhist community	North-eastern part of lake
2	Settlement-2	130 HHs	Cambodian Buddhist community	North-eastern part of lake spreading till southern areas of lake
3	Settlement-3	144 HHs	Cambodian Buddhist community	North-eastern part of lake
4	Settlement-4	367 HHs	Cambodian Buddhist and Muslim community	South-eastern part of lake
5	Settlement-5	422 HHs	Christian and Vietnam community people	North-western part of lake
Total		1217 HHs		

[Table showing settlement wise Household division and their religion].

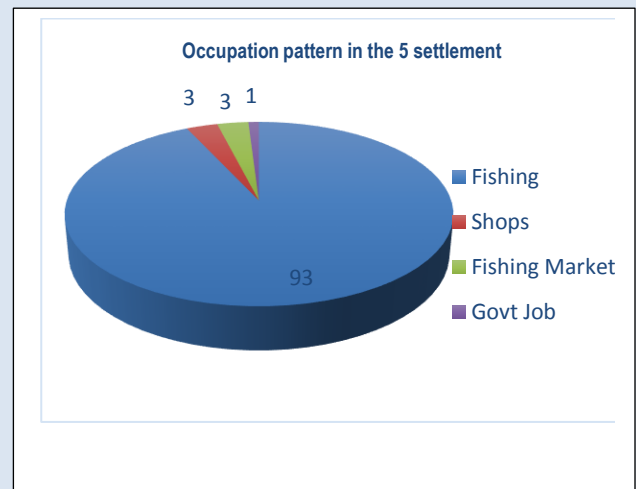




[KARAKER village settlement Map and infrastructure]

4.4 Household Occupation Pattern

During FGD with 5 selected settlement community representative was conducted and assess the situation regards to with projection methods for the common response of community. Most of household adopted primary occupation as fishing approximately 93 the remaining household adopted secondary occupation as boat renting, small shops business, fishing business linked to bigger market or loan services for fishing equipment to small fisherman.



4.5 Education

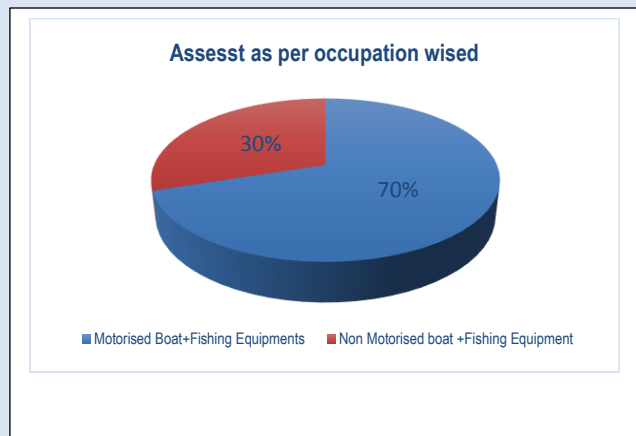
The household findings revealed that out of every ten female household heads, nine (90.5%), have little education or are outright illiterate compared to 72.1% of the male household heads who were illiterate or had no education. 13.1% of the male household heads are able to read and write in comparison to 3.0% of the female household heads who are able to do so.

However, 4.2% of the female household heads have been to school between 1-8 years while 10.8% male household heads had been to school for a period ranging between 1-14 years. This finding underscores the general low level of literacy

4.6 Asset Holdings

To gauge the level of household asset holdings, we asked respondents about their ownership of various items in working order including, vehicle, motor boat, refrigerator, television, radio, bicycle, telephone, solar power and electricity. Seldom does any household have any of these items in working order with the exception of the radio and telephone (mobile phones) albeit with still lower density. Mobile phone penetration and motor boat (90.8%) and ownership of the television (82.5%) might provide an indication of access to information and social networking which are key to risk management in a dynamic environment.

An important asset like solar power is owned by almost 99.21% of the households that were founded during transect walk and FGD.



4.7 Participation in Decision making process

Other household characteristics like membership in committees at the village or sub-village committees indicate that an overwhelming, 82.20% do not have any household member in these committees. This clearly indicates that most households do not participate in decision making processes and in many cases ignore activities in the community.

During the assessment we realized that women make decisions on the domestic arrangements like what is eaten, fetching water, sleeping arrangements etc. However, when it comes to greater decision making, it is men who call the shots. This presents a challenge to realization of goal three of the MDGs whose aim is to *Promote Gender Equality and Empower Women*.

4.8 Other Household Characteristics

5.0% or less of the households have a member who is disabled (visual impairment, hearing impairment, speech and language difficulties, physical disabilities, mentally retarded, self-care difficulties and others), 0.3% of the households have a member who is chronically ill (bed ridden for 3-4 months in the last 12 months in settlement 4 and 2.

These findings reiterate design of programs and activities that focus more on the vulnerable and weak in the society in regard to provision of water and sanitation for the numbers are considerably high.

4.9 Household Fuel consumption

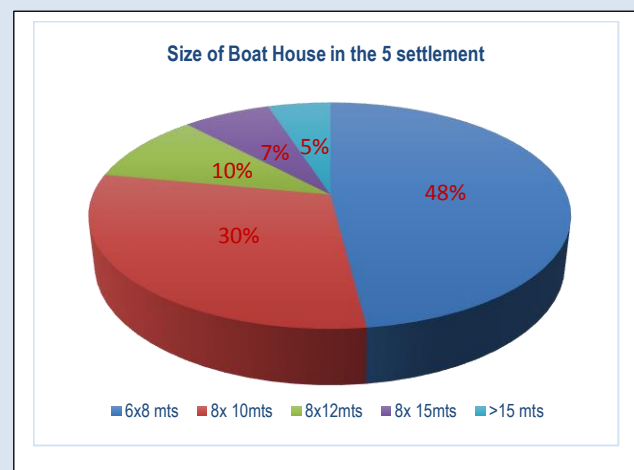
Three quarters of the households (95.2%) use firewood/ straw/ timber for cooking, 23.4% use charcoal from wood with a paltry 1.4% using electricity. Typical of communities

most households use firewood as the main source of fuel. This in some instances has devastating effect on the environment for such sources of energy are not sustainable and they destabilize the ecosystem. The households should be encouraged to use more environmentally friendly energy sources and harnessing solar energy.

4.10 Observation on the Main Houses

The team make several observations while at the homestead of the sampled participants. 99.6% roofs of the main houses of the households have been G.I sheet or corrugated metals. Other roofs were made of wooden/ timber or tin roofs. The floors of the main houses within households were also observed, 99.6% were timber. Observations made on walls of the main house noted that out of every households had walls constructed using timber, most households had walls has timber with enamel paint as exterior covering. These observations on the main households are a manifestation of high incidences of poverty in this area.

The size of house are varied from settlement to settlement 48% of houses are size of 6x8 mts and 30% of size in range of 8x 10 mts consist space for sleeping, cooking and additional space for storage and for animals.





					purpose only in settlement 4 for Christian community.
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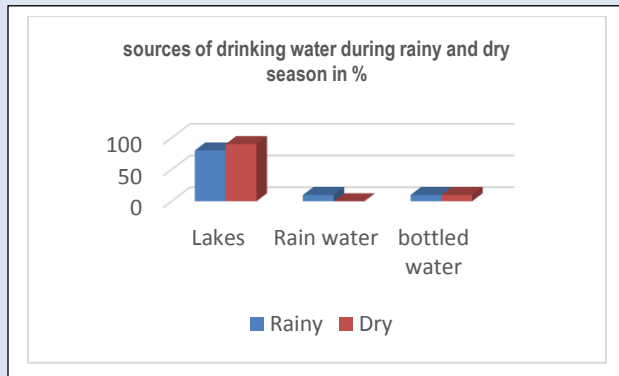
Amongst community with cleaner water source are in north east direction for drinking purpose but affordability of water as fetching cost to households and hygienically unacceptable source of water for drinking water. The importance of water in sustaining life and preventing disease is clearly demonstrated with the findings of this assessment survey. There are recommendations on the quantity and quality of water that must be available to the population. These recommendations serve as benchmarks in establishing water supply systems. None of the households cited rainwater as a main source of drinking water during the rainy season; this presents challenges to implementation of rain water harvesting.

5.0 Access to water

5.1 Water Sources

On sources of drinking water to the households, the main sources were surface water from surrounding lakes

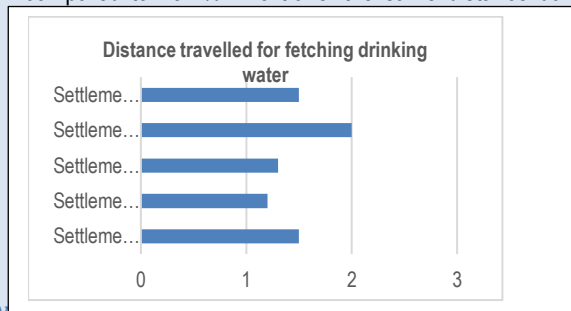
Sources	Rainy [%]	Treated	Dry [%]	Treated	Remarks
From lakes	95 %	Yes, boil the water, some put chlorine and local methods alum in water	80-90%	Yes, boil the water, some put chlorine and local methods alum in water	Dry season to rainy season sources of water changes from north east to north west.
Rainwater collection	80-90 %	Yes, boil the water	X	X	Approx. 60-80 HHs use water for domestic purposes. Only 20% use for drinking purpose.
Water Distribution from church	yes		yes		Safe water provided for drinking



5.2 Distance to water sources

During FGD with community mentioned that the sources of clean water for drinking purpose from lake was located 1 km to 1 ½ km from the settlement in the north eastern direction.

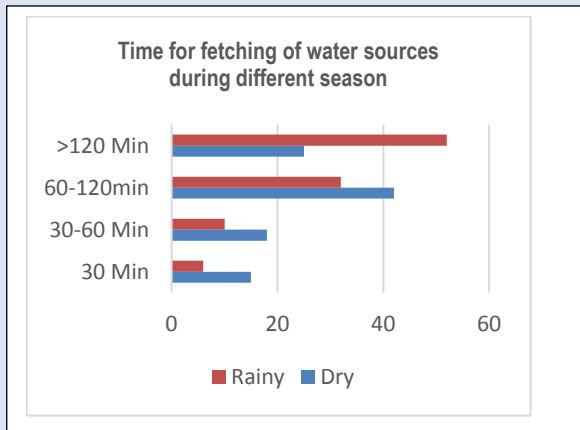
Typical of most Asian societies, women and girls children were most often cited during focus groups discussions as the household members responsible for water collection. Thus the burden of collecting water is placed upon the female household members. During the rainy season distances travelled to water sources reduce compared to the dry seasons. 48.2% households travel for more than half kilometer to the water source during the dry season compared to 43.2% who travel the same distance during



- Lack of water storage facilities at the household levels.

5.3 Time HHs take to reach water source

The findings indicate that time taken by households to fetch water varies depending on the season. 64.6% of the households take 30 minutes or less to reach a water source during the rainy season compared to 60.4% who take less than 30 minutes to reach their main source of water during the dry season. Therefore, 26.0% of households take more than 30 minutes to reach a water source during the rainy season compared to 30.8% who take more than 30 minutes to reach a water source during the dry season. Households with water on premises also reduced from 9.4% during the rainy season to 8.8% in the dry season. Geographic accessibility is poor, but the biggest problem is the quality of water in the targeted areas, as was observed during the field through collected sample of water.



5.4 Quantity of water

Without water, life is impossible. Lack of water will result in increased morbidity due to increased transmission of germs and poor hygiene in a community. Specific findings show that the amount of water used in each household in liters each day for drinking, cooking, hygiene, cleaning and other household needs is insufficient in the Kraker village considering the household sizes.

Many factors may contribute to this problem including distance coverage, time spent to fetch water and other challenges and have access to sufficient quantities of water. For households with insufficient water the following reasons were cited:

- Lack of public water facility in main land areas.
- Water sources are far away and safety is major concern
- Lack of water sources protection

The amount of water used by households is often simultaneously an indicator of overall wellbeing and of sanitation standards. Most households (62.2%) reportedly use less than 100 liters of water daily for drinking, cooking, hygiene, cleaning and other needs including watering animals and bathing. When requested to state whether the amount of water used in the household is enough, 67.3% were negative, 32.2% were positive while 0.5% respondents did not know whether the water was sufficient. (The required minimum is 40 liters per person for rural /ASAL areas classified to have low potential (rainfall below 500 mm)

5.5 Water treatment

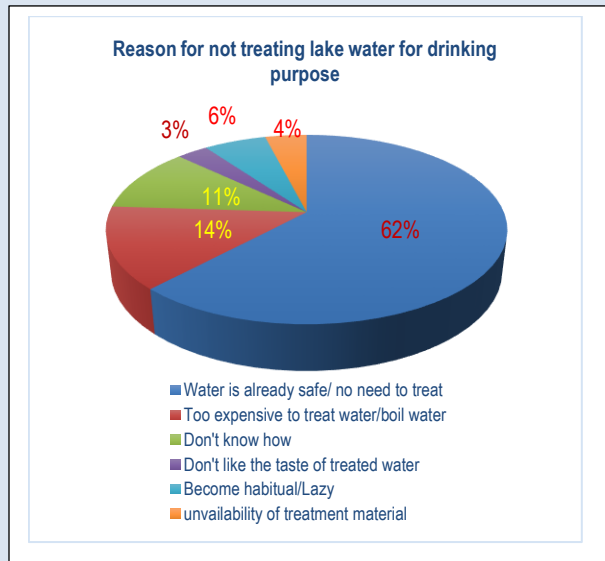
Water treatment is considered key in ensuring that water is clean and safe. However, an overwhelming 62% of households do not treat their drinking water. The proportion of households that do not treat their drinking water is significantly high suggesting a high level of exposure to water borne diseases. Those households who do not treat their drinking water cited several reasons, notable was that the water is already safe (62%), too expensive to treat water (14%). Table below illustrates the main reasons for why majority of households do not treat water.

For households that do treat their drinking water, methods are varied: 25% boil, 22.0% use chlorination/ add water guard or tabs/ bleach, 2.5% use water filter, 7.5% let it stand, 30.0% use alum and the rest use other methods. We further sought to know how often households treat their drinking water and it emerged that only 28.2% of those who treat their water did so always. We also realized that traditional herbs are used in some household for water treatment.

There are still considerable efforts required to treat water in the communities in Karaker.

In some households, water is stored for a long time in storages without treatment and is used for drinking and other household purposes. At times the water has alga and makes it very dangerous for human consumption. For households that treat water, the practice is not regular, only 28.2% treat water regularly other households do this sometimes (60.9%) or never (10.9%).

Table : Main reason for not treating water							
	Reasons	Settlement					Percent
		1	2	3	4	5	
Reasons	Water is already safe/ no need to treat	60	65	76	52	56	62
	Too expensive to treat water/boil water	15	17	12	13	14	14
	Don't know how	10	13	10	10	12	11
	Don't like the taste of treated water	3	1	2	3	4	3
	Become habitual/Lazy	5	3	0	10	12	6
	Availability of treatment methods	7	2	0	8	6	4



5.6 Productive use for water

The survey also established that households use water for other productive uses in addition apart from drinking. Such initiatives sustain their coping mechanisms in this harsh environment and subsidize household's main livelihood activities. Apart from drinking water and other livelihood uses apart from cooking, washing, cleaning and bathing, most households (43.2%) use water for livestock watering.

5.7 Waste water disposal

The Assessment further sought to understand how households dispose of waste (grey) water. In response, well over half of the households (98.9%) said that they dispose grey water on the lake directly.

5.8 Community water management

In response to the question whether households uses any water source managed by a local committee, more than two thirds (66.8%) of the respondents were negative, one third (32.3%) confirmed using sources of water managed by a local committee and 0.9% said they did not know. This finding ascertains that most community members do not know that water sources are managed by committees or the committees are very weak and ineffective in regard to water management.

6.0 Sanitation and hygiene

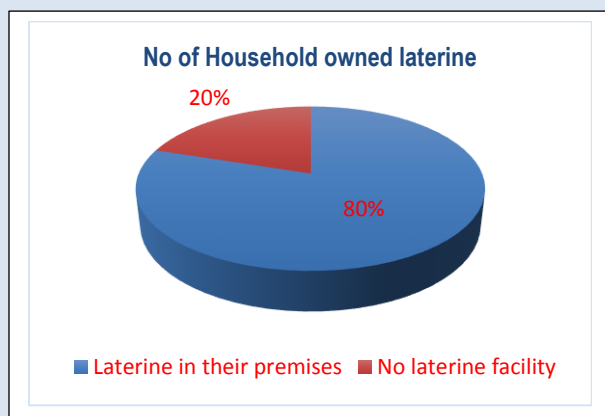
6.1 Availability of Latrines

Availability of latrines for most household was abysmally low. Only 80.0% of the households have their own latrines while an overwhelming 20.0% households lack own latrines. Observation of most latrines revealed that they were not in good condition and this remains a key concern in the communities. Among those without latrines, 68.5% defecate in the shared or open defecation). Others (31.5%) reportedly use the neighbors' latrine.

Our findings are in tandem with observations showing that 60.4% lacked a toilet facility within their compounds and households have no excreta disposal facility directly dispose to the Lake. These findings call for concerted efforts to ensure households in this area have hygienic toilets.

Most respondents (89.3%) explained that they do not own latrines because constructing latrines is too expensive and they cannot afford. This is supported by the low levels of expenditure as can be seen from findings on household's asset ownership. 6.7% however cited lack of manpower, yet still 1.2% of the respondents did not offer any reasons.





6.2 Other observations made on household latrines

6.3 Cleanliness of latrines

The Assessment team observed that approximately 50.6% of families have a slightly dirty or have feces or used paper outside of latrines while only 49.4% of the households have clean latrines. 52.4% of the latrines also were noted to smell inside while only 47.6% were clean and did not smell. However, observations revealed that 56.6% of the household latrines had no flies, 41.6% (a few flies {4-5}) while 1.8% of latrines were observed to have many flies. The high incidences of unclean latrines indicate why some households that own latrines would rather go to the bushes near to shrubs to defecate.

Most of the latrines observed (61.3%) were noted to have superstructures constructed using natural materials like wood, sticks, etc. while 38.7% of these latrines were constructed with improved materials. 68.9% of the households' with latrines were observed to be secure and 31.1% were noted to be unsafe, 51.9% of these latrines have doors while 48.1% latrines observed lacked door or had door that do not close.

6.4 Sharing latrines / toilets

52.5% of households possessing latrines share with two, three, or four people. 41.9% of households having a latrine share it with five to ten other people and only 1.1% of the households share their latrines or toilets with more than 10 people. However, virtually all respondents would like to have their own family latrine for convenience purposes as was realized during focus group discussions. Where latrines are shared by many households, there is need for hygienic standards to be maintained.

6.5 Household Kitchen waste [Rubbish] Disposal

In response to the question on rubbish disposal, 86.0% reported that they scatter their rubbish, 12% said they directly through in the lake. The rest of the households either dispose rubbish on the main land No household representative mentioned that they give refuse or rubbish to the animals, bury or compost their rubbish. This finding emphasizes the need for concerted efforts to educate the community on issues of sanitation and public health. There is need to also build the capacities of village leaders and elders to play a leading role on these issues.



6.6 Disposal of children's feces

It should be noted that knowledge of disposal of feces in proper manner is quite wanting in this area. More than half (52.9%) of the households dispose children feces in the lake or open in the mainland area. 7.4% dispose children feces near their compounds latrine. However, 26.4% use containers and put in the lake.

7.0 Hygiene practices

In response to a question on where household livestock spend their nights, more than half (61.8%) of the households stated that the animals spend nights in separate shed, 8.6% (within the compound). However, 7.3% of the households who own livestock stated that their livestock spend the night in the house. This they say is for security reasons, but it has negative repercussion are regards hygienic issues within households.

7.1 Hand-washing

In response to the question "When do you wash your hands?" households responded as follows:

Hand Washing practices		Responses
		Percent
Hand washin g	After defecation / using the toilet	33.0%
	Before/ after eating	46.5%
	Before food preparation	8.6%
	Before feeding the child	1.8%
	After changing the baby	.1%
	After touching dirty things	8.8%
	Before praying	1.2%
Total		100.0%



More than six out of ten respondents (62.9%) wash their hands after defecation, 88.6% wash their hands before and after eating. More significantly, 2.3% of the respondents wash their hands before prayers even though this was not included as a response in our questionnaire. Subsequently during focus group discussions, it emerged that the communities here are predominantly Muslim; hence hand washing before prayers is paramount.

In response to the question "What do you primarily use for hand washing?" 63.2% of respondents said that they use soap, 0.5% use ash and 36.4% of respondents use water only.

When asked "whether washing hands with water but without soap is as good as washing hands with water and soap", an overwhelming 92.0% disagreed while only 5.5% agreed with 2.5% saying that they did not know.

7.2 Reasons for Hand Washing

Asked why it is important to wash hands with soap or ash, 35.2% cited health reasons (prevent diseases, remove germs, prevent dirt from getting into mouth or food) while

more than half of (56.8%) cited hygienic reasons. Group discussion however cited scarcity of water in some places.

		Percent
Reasons for Hand Washing	Health: prevent disease/ remove germs/ prevent dirt from getting into mouth or food	33.4
	Hygiene	56.8
	Other people: everybody does so, its normal	0.7
	Appeal or appearance: smells good/ looks good/ feels clean	3.0
	Don't know	1.1
	cleanliness	5.0
	Total	

7.3 Drinking water Observations

Safe drinking water is a factor for healthy living. The assessment was thus concerned with drinking water storage within households. For households with a container designated for drinking water, enumerators were to observe whether it was covered. As illustrates 81.4% have covered containers for drinking water while the rest of households (18.6%) had drinking water containers not covered. 76.3% of the drinking water containers were observed to be narrow necked / mouth or the households respondents couldn't fit hand into the opening while 23.7% had drinking water containers observed to be wide necked/ mouth.

The FGD respondents were also requested to how they draw water out of the drinking water container and 69.2% pour drinking water into cups. How FGD respondents draw water from drinking water containers. This finding invites concerted efforts in sensitizing target communities on perceptions regarding safe drinking water as well practices for making water safe.

8.0 Environmental conservation

Karaker areas is classified as Arid and Semi Arid Lands (ASAL), where insufficient, erratic and poorly distributed

rainfall results in chronic water shortages and food insecurity. The area is prone to prolonged floods, which results in the contamination of water sources.

Thus, environmental conservation and preservation is vital for the livelihoods in this region where temperatures range from 20°C to 38°C and a bimodal type of rainfall, long rains (April to August) and the short rains (October to December) with average annual rainfall is 520mm.

Overall, the existing water sources/areas/locations are prone to contamination with human waste as the majority of the households have no improved latrines, as well as animal wastes, HHS waste increased risk of health.

Due to the fact that the water supply infrastructure is not evenly existed, there is severe environmental degradation of land and pasture resources.

9.0 RECOMMENDATIONS AND CONCLUSIONS

9.1 Water

All protected water sources that are introduced to a community should include the formation and training of a water point committee to ensure that there are community members to repair the pump, collect money to purchase spare parts and ensure hygiene around the well

In areas where there are insufficient protected water sources, the treatment of drinking water should be taught. Either boiling or filtering and treating with chlorine bleach should be an integrated part of the water point committees training program

Link should be developed with community and Commune to determine the reliability of water point/sources, their proper maintenance and protection, the effectiveness of the water committees maintenance and protection of water sources.

Additionally, the regular cleaning of water storage containers and promotion of a lid to minimize opportunities to contaminate drinking water should be part of a water hygiene program

9.2 Sanitation/Latrines

When mounting a latrine promotion campaign, the safety, security and hygiene of excreta disposal methods should be emphasized. The former to encourage households teach their young one use the latrines. However, the construction of any type of latrine should be encouraged. If people do prefer a traditional design, govt. staff should offer maximum help to ensure that the latrine is safe and can be maintained properly.

In cases where people do not have latrine because of lack of tools or there is no one to dig it, means to eliminate these excuses should be offered.

Sanitation education should include messages about excreta disposal when away from home. As the majority of the rural population is pastoralists they spend long periods of time away from the house. In addition, use of lake for defecation and urination should be strongly discouraged, especially because many people obtain their drinking water from this source.

Households should be trained to properly locate latrines so that at the end when and if people continue to construct latrines, they will not risk contamination of water sources.

9.3 Hygiene

Many people reported washing their hands before eating or after eating and before prayers. Relatively few, however, reported washing hands after "using the latrine" it is recommended that education should proceed to increase community awareness.

Additionally, proper rubbish disposal should be encouraged as part of hygiene education campaign. For example, disposing waste/ grey water on the street surface or empty space outside the premises, avoiding leaving empty tins, bottles and broken utensils or glasses around the compound or the house where mosquitoes can breed and metal and glasses that can cut children should be part of the campaign.

9.4 General for Capacity building and awareness creation

Water and sanitation activities should be fully integrated so that people understand links between unprotected water

sources, diarrheal diseases (as well as other water related diseases such as bilharzia), latrine use and interruption of the fecal-route of disease transmission, and importance of hand-washing.

Health education should be done on all of the topics included in this survey, with particular emphasis on areas where knowledge was weak. In cases where misconceptions appeared to be fairly general across the population, they should be addressed through health education in target population.

Any intervention on water and sanitation should encourage ownership, self-reliance and self-help. An attitude of "CARE MUST DO FOR US" was frequently encountered during the quantitative and qualitative study (especially when enumerators asked the respondents if they had "any other comment". There is need to emphasize community's ownership of particular water points or latrines to promote ownership.