AN EXPLORATIVE MARKET STUDY OF ENTREPRENEURIAL OPPORTUNITIES IN RURAL WASH SECTOR OF BANGLADESH
AUTHORS
Sadam Hussain
Sajia Mridha
Chetan Kaanadka

PROJECT TEAM
Thomas Schuurmans (Research Manager)
Chetan Kaanadka (HCD Research Expert)
Sajia Mridha (Lead Field Researcher)
Sadam Hussain (Field Researcher)

CLIENT
WASH Alliance
represented by Sara Ahrari

RESEARCH EXECUTION
January – March 2018

REPORT PUBLICATION
April 2018

TITLE
An Explorative Market Study of Entrepreneurial Opportunities in Rural WASH Sector of Bangladesh
Dear reader,
In front of you lies the explorative market study report that will give you insights on the opportunities and barriers in the WASH sector of rural Bangladesh, and how WASH micro-entrepreneurs can tap into these making WASH products and services more accessible for rural citizens.

We thank the WASH alliance for the opportunity to conduct this market study. It is always a privilege to be able to spend time in the field with WASH users, WASH entrepreneurs and other WASH related stakeholders. A special thanks to the research team and all the research participants in the field who shared their thoughts and ideas.

Warm regards,

THOMAS SCHUURMANS

Director ProPortion
# INDEX

1 / INTRODUCTION 5

2 / RESEARCH OBJECTIVES 7

3 / RESEARCH BACKGROUND 9

4 / RESEARCH METHODOLOGY: HUMAN CENTERED DESIGN 12

5 / WATER-RELATED INSIGHTS 15
   5.1 Aesthetics quality & convenience 17
   5.2 Women and children most affected 19
   5.3 Re-use existing water sources 20
   5.4 Design Recommendations for water 22

6 / SANITATION-RELATED INSIGHTS 24
   6.1 Space and water determines toilet type 26
   6.2 Lack of trust in local sanitation providers 28
   6.3 Competition between rural and (per-)urban 29
   6.4 Rural sanitation providers depend on support 30
   6.5 Design Recommendations for sanitation 31

7 / HYGIENE-RELATED INSIGHTS 32
   7.1 Menstrual products are awkward 35
   7.2 Low affordability is just an excuse 36
   7.3 Lack of focus on product life cycle experience 38
   7.4 Boys & men are not part of the equation 39
   7.5 Design Recommendations for hygiene 40

8 / CONCLUSION 42
INTRODUCTION
WASH Alliance Bangladesh is supporting the capacity development of sanitary entrepreneurs to provide sanitation services at scale and to promote initiatives that will inspire the rural poor to install hygienic toilets and adopt other relevant sanitation products and services.

Small-scale sanitary enterprises play a very important role in helping to achieve increased access to safe water and hygienic sanitation products and services in rural Bangladesh. Most sanitation products in the rural areas have been, and continue to be, privately acquired by households from small-scale sanitary business providers in the local markets. The WASH market in rural and peri-urban Bangladesh is large enough to provide economically viable business opportunities for private WASH enterprises to survive and thrive. Despite of such great market potential for private enterprises to thrive in the rural sanitation market, the access to affordable WASH facilities continues to be a major challenge in rural Bangladesh.

As per Study report on ‘Sanitation Market promotion through private entrepreneurs development’, conducted WASH ALLIANCE Bangladesh in April 2017, the local sanitary enterprises who have contributed towards the improvement of rural sanitation services in the past years are now facing several challenges and barriers to sustain and grow their businesses on their own without any external support. The study indicates that as the demand for WASH products and services are growing, the existing sanitation enterprises are struggling to cope and adapt with the rapidly changing market dynamics due to lack of updated technical and market knowledge, cash flow constraints and other supply chain constraints. Many sanitation enterprises continue to follow traditional business approach and are slow in adopting new technologies/products and diversifying their service offerings in accordance to the changing market demand.

The study also highlights the vast opportunity that exists for women entrepreneurs to play an active role to help improve the rural sanitation markets. The study found that currently female entrepreneurs are only involved in the value chain of women specific WASH products and services like the production and distribution of sanitary pads. Participation of women entrepreneurs in the value chain of other mainstream sanitation products and services is very scarce mainly due to public perception and social barriers associated with sanitation market and the role of women in the society.

By unlocking the potential of women power in WASH market value chain, the WASH Alliance believes that the WASH standards and norms will achieve new heights in the WASH development sector.

WASH Alliance has requested ProPortion to conduct a qualitative market study, being an international Human-Centered Design agency, with long track record and field experience in Bangladesh and the WASH sector in particular.
RESEARCH OBJECTIVES
The main objective of the research study is to explore potential market opportunities for women entrepreneurs to play an active role in improving the rural WASH value chain. The study aims to explore various roles women entrepreneurs can play to positively impact the rural WASH market by:

- supporting the rural WASH entrepreneurs to improve affordability and market availability of various relevant WASH products and services.
- supporting the rural consumers (including BoP & marginalized households/women) to actively adopt various WASH products and services available in the market.

**RESEARCH QUESTIONS:**
- What are the market opportunities for women entrepreneurs to actively participate in WASH market value chain?
- How can women entrepreneurs play a role in addressing the existing gaps and issues in the WASH supply chain?
- What are the barriers and limitations for increased participation of women entrepreneurs in rural sanitation markets? What support do they need to overcome these barriers?
RESEARCH BACKGROUND
Bangladesh is facing many challenges in improving the rural WASH conditions. The NGOs are working alongside the government in tackling these challenges for a long time. Bangladesh has made progress in recent years in the WASH sector but still more progress is needed. Bangladesh even lags behind compared to neighboring countries in terms of overall WASH conditions. It is important to ensure safe water, proper sanitation facilities and hygiene for the people of Bangladesh otherwise the socio-economic development will be hampered. Lack of safe water, proper sanitation and hygiene greatly hampers the improvement of living standard of the people.

Some examples: Many people are forced to drink contaminated pond water due to lack of safe drinking water. However, Bangladesh achieves a tremendous success in the field of sanitation: Open defecation is almost zero here. Unfortunately Women hygiene situation is Bangladesh is worrying, since most of the rural women and girls have still no idea about proper menstrual hygiene.

**RESEARCH AREA: BARGUNA SADAR UPAZILLA**

The WASH Alliance has requested ProPortion to conduct the research in Barguna Sadar, since the overall WASH condition there is very poor. The overall situation in Barguna Sadar is more or less same compared to other places of Bangladesh in terms of Water. Almost every household uses pond water for cooking purposes and tube well water for drinking purposes. Some villagers are forced to drink pond water due to lack of accessibility of deep tube well. People are not able to invest around 20,000 BDT in deep tube wells, which is a big amount for maximum rural households.

Many female entrepreneurs started the water supply business to the city shops and households to earn money. There is a huge opportunity for them to expand their business because water scarcity in city areas has been increasing day by day. But in this case, they need some government or NGO support as well.

Barguna district is far behind in the field of sanitation and hygiene compared to many places of Bangladesh. Households use single pit toilets which are made from 1-5 rings and slab. Only a few households use offset or hygienic toilets. Even most of the households have no idea about offset toilets. Rural people have not purchased sanitary products from local sanitary components producers more due to poor product quality. They purchase products from the city’s market since urban producers produce better quality products compared to rural producers.

Most of the women and girls in rural areas of Barguna sadar upazilla do not use sanitary pads during their menstruation. They use cloths instead of pads. Some girls and women have an idea about sanitary pads and also know about how to use it. They showed their interest in pads, but they can’t use it due to the lack of availability in local pharmacy. Actually they are not aware of their menstrual health.

We took assistance from several related reports and research papers which helped us to understand the study background. These papers also helped us to identify the problems and gave probable solutions as well. To reduce the water problems, we gave more importance to the proper maintenance of existing water sources. We also shared our view on why proper maintenance of existing water sources is more important rather than creating new alternatives to reduce water problems. To improve the sanitation situation and encourage people to adopt new sanitation technology mass awareness is needed. Apart from that, accessibility of quality products in local sanitation markets is also needed to improve the overall situation. In the field of women’s hygiene, to improve the situation awareness building and easy access of menstrual hygiene products are important.
RESEARCH METHODOLOGY

Human Centered Design
ProPortion has been applying Human Centered Design (HCD) methods in Base-of-Pyramid context since 2009, with the purpose to create impact at scale that lasts. ProPortion always applies a tailor made process with the best elements of Human-Centered Design, Service Design and Business Model Generation.

The human Centered Design (HCD) approach has been used in this research. This research puts the emphasis primarily on women led households, rural women and households, different market actors, DPHE, Union Parishad etc to collect data on their individual and overall WASH condition.

We have applied selected few methods within HCD for the purpose of this research:
1. Contextual observations
2. Contextual Interviews
3. Focus group workshops (9)
4. In-depth interviews & Key informant interviews (26)

Through Human-Centred Design (HCD), we try to understand solutions for problems and opportunities by focusing on the needs, contexts, behaviours, and emotions of the people. The HCD research team members have immersed themselves in the context, observed stakeholders and probed deeper into the thoughts, actions, and experiences of people experiencing the WASH products and services.

RESEARCH RESPONDENTS
- CUSTOMER / USER SEGMENTS:
  - Women lead households (decision makers)
  - Rural Women & Young girls
- MARKET ACTORS:
  - WASH Enterprises / Entrepreneurs
  - WASH Supply chain actors
  - Women Entrepreneurs
  - Women Self Help Groups
- MARKET ENABLERS
  - DPHE
  - Union Parishad
  - Community leaders & influencers
  - NGOs & other institutions
Existing water sources can be the best solution.
KEY POINTS:
• Aesthetic quality and convenience access of water is the most influential factors for rural households.
• Effective maintenance of existing public water sources can reduce problems a lot.
• An improved water supply system through women entrepreneurs can ensure water for urban people and can be a potential source of income for women suppliers.

Bangladesh has one of the highest population densities in the world, with a population of over 160 million living within 57000 square miles. According to WHO, of those 160 million, 97% of the people of Bangladesh have access to water. The availability this water greatly fluctuates throughout the year as the summer season brings massive amounts of water in frequent monsoons and the winter season brings drought. Of the water that is available, over 80% is used for agriculture.

Although Bangladesh is encircled with almost 300 rivers, but still water is a huge concerned issue in many parts of the country. Salinity, iron and arsenic plays major role in generating further scarcity of water. Apart from that, people in many areas of Bangladesh have faced a shortage of water resources that forced them to drink contaminated pond water or lake water. Although the situation is getting better gradually but still it remains a problem here in Bangladesh.

Barguna is a coastal district located in the southern part of Bangladesh. It has six upazilla including Barguna Sadar Upazilla. Scarcity of getting fresh water for regular drinking and cooking purposes is becoming flagrant here in all 10 unions of sadar upazilla. The Water crisis has become a very common phenomenon here among the local people. They are not facing such kind of crisis overnight. Most of the families have no individual tube well. Most of them totally dependent on the neighbors tube well or adjacent school tube wells. They are facing immense problems during water collection from other houses or school because many families don’t allow others to use their tube wells. Sometimes school authority put embargo to the local villagers because they think that mass use of tube well may reduce its durability. Even considering all the issue the villagers still go to the neighbors houses as they have no other alternatives.
Households give more importance to aesthetic quality and convenience of access to water sources for drinking and cooking purposes.

Tube well is the most common source for drinking water, all over the country. In Barguna sadar upazilla, most of the families prefer tube well water for drinking purposes, although many of them have no individual tube well. They collect water from neighbor's tube well or adjacent school tube wells. It's a common belief that the quality of tube well water is better than any other water sources and can be directly consumed without any pre-treatment. Hence, tube well water has become very popular for drinking purpose. In some areas it has been found that only a few families use Alum tablets to purify tube well and pond water before consuming. It takes almost 2-3 days to become pure. Almost everyone are aware of this method of purifying water using Alum tablets.

Iron contamination of tube well water is a very common scenario here. Although there is no clear evidence on this matter because no one ever done a water test to find out iron contamination. Still, most of the communities firmly believed that they consume iron contaminated water on a regular basis.

During the rainy season, rain water becomes the prime source of drinking water for the local villagers. At that time, they collect water with the big water vessel and tanks to store it for domestic usage and consumption.

FIGURE 5.1: PITCHERS ARE USED TO COLLECT AND STORE POND AND TUBE WELL WATER IN MAXIMUM HOUSEHOLDS.
The main reason behind not having many tube wells in this locality is poverty. Most of the family is living here below the poverty line. It needs more than Twenty Thousand Taka to set up a deep tube well, which is almost impossible for maximum families to afford without appropriate financial support.

The average depth of a deep tube well to access safe drinking water also has doubled in the past few years, thus driving up the cost of accessing safe water. Although for some household poverty is not an issue, but yet they do not set up a tube well because they think that government or NGO will certainly provide assistance to them to set up tube well in near future. Some NGOs like CODEC, ASHA offers loans to the households for launching tube well. These NGOs provide loans to people without interest, but he/she must need to reimburse the loan with weekly installments. Again, those who want to take loans from these NGOs should follow their tube well set up method as well. Loan receivers also bound to buy tube well instruments from the NGOs. Many lose interest in taking loans due to these terms and conditions. It has also been found that some households took loans from NGOs to set up a tube well, but uses that money for business purposes. Sometimes villagers gave bribe to the local representative (Union Parishad Chairman/Union Parishad Member) for getting government subsidised tube well in return. Abdul Jalil Mridha, A farmer, living in 7 no Dhalua union once gave Tk. 500 to his local Chairman to get free tubewell approved but he didn’t get a tube well in return.

Almost every household uses pond or lake water for cooking purposes. Pond water is also used in making tea. They do not use tube well water because tube well water with traces of iron when used for cooking often creates bad taste, unpleasant odor and colour in the food. For that reason, households and businesses prefer to use iron free water from pond or lake. They use pond water for cooking after purifying it through alum as it removes silt and other suspended particles.
5.2 WOMEN AND CHILDREN MOST AFFECTED

Women and Children are the most affected due to water problems and yet it is the men who are largely in charge of operating and managing the water sources in the communities.

As most of the families in Barguna Sadar Upazilla have no individual tube wells so they need to collect water from other houses or adjacent school or mosque tube wells. Every village has an average of 2-4 tube wells. There is no tube well in 10 no union. Those households, have an individual tube well, sometimes do not allow others to collect water. Women and children in rural households are often tasked with collection of water for domestic usage. Sometimes they need to go half a kilometer away from their home to collect drinking water. It takes almost 20-30 minutes. Women and children also collect pond or lake water as well. Pregnant women face more difficulties during water collection. Collecting and carrying water while pregnant can cause difficulties in pregnancy and other reproductive health consequences, such as uterine prolapse. Male members usually do not help them in this regards. However, the operation and maintenance of water sources such as tube well, pond sand filter units, water treatment plants, etc is mainly the responsibility of men.

FIGURE 5.2: AVERAGE POND’S CONDITION IN EVERY UNIONS OF BANGUNA SADAR UPAZILLA.
5.3 RE-USE EXISTING WATER SOURCES

Creating new water sources for improving access to safe water is not a viable approach, while the existing water sources are deteriorating due to negligence and insufficient usage.

Tube well, Rain water, pond, lake, etc are the available water sources in Barguna. But, still water remains the major concern here. Does that mean, creating an alternative water source is the best suitable option? Proper management and maintenance of existing water sources could be the best solution for reducing water problems rather than creating new water sources and the reasons discussed below.

During the field study, we have found some alternative water sources such as pond sand filter, shared ownership of a private tube well, rain water harvesting, etc which was created by some local NGOs and DHPE. Pond Sand Filters (PSFs) are built around artificially constructed ponds, locally known as “sweet water ponds” which are replenished by rainwater during the monsoon season. In these systems, rainwater collected in these ponds is pumped by hand into a storage tank through a filter chamber. We found such kind of chamber in 7, 8 and 10 no unions of sadar upazilla. But surprisingly, now none of these are active. The reasons behind this is that, NGOs and DHPE just built it and they have no responsibility to maintain it. Local villagers and representatives are the responsible person, but they have failed to do so due to lack of knowledge on how to maintain this. Again, if major repairs are needed, and the related maintenance expenses are large, the community can only apply to the DPHE for assistance. Apart from that, as public water sources (ponds and tube wells) and water treatment plants are maintained making them highly susceptible to bacterial contamination, thus increasing the health risk for the local communities and driving up the cost of accessing safe water.
Plan Bangladesh took some initiatives to solve water problems in 2 no Gourichanna Union. They made a big water tank on the north side of the canal. Within a few months, it becomes inefficient. For a while, the water tank was used by the locals. The tank was quickly damaged due to lack of maintenance. Actually locals had no idea on how to use this water tank properly and plan Bangladesh didn’t also provide them with any technical training on use and maintain this infrastructure.

Shared ownership of a private tube well is also an alternative water sources for many villagers. But it is becoming a challenging scenario in rural Bangladesh. Deductively, every member of a shared ownership wants the tube well to be placed in his/her house. So the members never come to a solution and thus the problem remains unsolved.

It has also been found during the field visit that the amount of water sources in the city or urban areas is less than those available in rural areas. So the limited water sources and changing lifestyle in urban areas is fuelling a steady growth in demand for water delivery services.

As there is a strong demand for water delivery services, many women entrepreneurs have started this business in Barguna city. As mentioned earlier that women played a significant role in water collection. They are also involved in water distribution business as well. It has been found in urban areas that women collect water from tube well and ponds through pitcher and sell it to the hotels, normal shops and households. Almost 15-20 women involved in this business in the whole Barguna city. Women often conduct this water distribution business with the help of their husband. They use normal bicycle rickshaw to carry the water pitchers. Husbands usually work as van or rickshaw puller. They get Tk. 5 per pitcher of water from hotels and shops and Tk. 10 from households. Every day, they sell nearly 40-50 pitcher of water. These women entrepreneurs started their business with personal finance. They didn’t get any government or NGO support yet. Unfortunately, women entrepreneurs are not empowered enough to control and maintain the water sources to ensure uninterrupted access to quality water from these water sources to keep their business running.
5.4 DESIGN RECOMMENDATIONS FOR WATER

- Increasing awareness among mass people is a very common and initial solution and recommendation for many problems around us. To solve or reduce water problems in Barguna sadar upazilla, awareness building among the locals is a must. Local people have to understand what should we drink and what should we not. As most of the parents in village areas are not well educated so they will not have a good idea on safe or unsafe water. The School teacher and educated person can play a vital role in this regard. As their children go to school so they can learn something about safe water from their teachers and can able to tell their parents as well. If they have clear ideas about water, then they will able to choose safe water for both drinking and cooking purposes.

- Severe water crisis in urban areas will only cause the water delivery businesses to grow day by day. Women are directly involved in this business. Men help them in many ways. Many husbands helping their wife alongside his job. Although women do maximum task in this business, men take decisions and maintain everything. Women are not well empowered to operate, manage and maintain drinking water sources in the communities and thus men take control of the business. Thus we recommend that women entrepreneurs and women’s self-groups should provide training on pros and cons of business, and how to manage and maintain their business. Women have to be aware of their rights and responsibility. NGOs can help them in this regards. One workshop or seminar dedicated to this topic can drive up their business a lot.

- There are plenty of public water sources are available in Barguna. But these are not able to reduce people’s sufferings. Several pond sand water treatment plant has been found there, but almost all of them are now inefficient. Experts say that pond sand treatment plant are very effective and viable solutions for the water crisis, but then why are these treatment technologies not benefiting the public? The answer is, people do not know how to use these properly. Since using a water treatment plant is not so easy for everyone, they get quickly damaged. Normally a local representative is responsible for supervising it and for that reason local users do not feel any responsibility for it. When it is damaged, it is very expensive to repair. In general, NGOs and DPHE do not want to pay money for maintenance and repair.

To solve all these issues, we need to design and establish a market driven system where all kinds of services will be made available. This market system should consist of several things including,

- The ability for everyone to easily purchase all kinds of good quality water treatment components from local markets with relatively lower price.
- The availability of people who can repair them using components from local markets.

FIGURE 5.4: MANY WOMEN ENTREPRENEURS INVOLVED IN WATER SUPPLY BUSINESS THROUGHOUT THE BARGUNA CITY

CH. 5 WATER-RELATED INSIGHTS
SANITATION-RELATED INSIGHTS

Local producers have huge opportunities to grab sanitation market by ensuring quality products.
KEY POINTS:
• Available land and access of water gets first priority before set up a toilet.
• Customers keep faith on urban producers rather than rural producers due to product quality.
• Rural sanitation providers are highly dependent on institutional support and urban providers are dependent on regular conventional customers.

The overall sanitation situation of Bangladesh was not in a satisfactory level, even a few years ago. Now Bangladesh is a global success story in sanitation, reducing open defecation from 34% in 1990 to less than 1% today. But despite this initial progress, nearly 40% of the country still lacks access to improved sanitation. In Bangladesh, the main problem is proper management of human wastes. In the country, only 16% of the 90 million rural people use sanitary latrines; another 22% use the so-called home-made pit latrines. People are now becoming conscious of using latrines.

The condition of Barguna is not so different to the other areas of the country. Most of the households use the single pit toilet. Only a few people have ideas about offset or hygienic toilets. Majority knows that, brick made toilet is the other name of offset or hygienic toilet. It has been found in Barguna that almost every household has individual toilets which is made from 1-5 rings and a slab. Most of the villagers buy sanitary products from urban market because the product quality of urban producers is far better than rural producers.

During our field visit, we have seen many sanitary shops in both rural and urban areas. Rural area producers produce only some selected most common product like ring, slab, pillar etc. On the other hand urban producers produce a variety of products. They also sell all types of components for establishing an offset toilet. The overall sanitation conditions of Barguna Sadar are described below under four insights.
6.1 SPACE AND WATER DETERMINES TOILET TYPE

Space and water requirements for installing and using a particular type of toilet greatly influence the households preference and purchase decision making process.

Available land and easy access of water greatly influence the households to set up a toilet. Land is scarce for both rural and urban households. Hence, rural households prefer direct pit toilets and urban households prefer toilets with septic tank.

Water and sanitation are closely related in rural areas. The toilets are made in the rural areas in such a manner, where there is no direct water supply system. The situation is slightly different in Barguna city areas. Some households get easy access of supply water within municipality areas. The people of the village have to go to the toilet with water. But there is water scarcity. So it becomes very difficult for them to use the toilets comfortably. So when someone plans to build a toilet, he or she also has to think about the water sources as well.

Offset toilet needs more water for flushing and cleaning. Hence, they are not very popular among the rural and peri urban households as they face water scarcity during dry season and also do not have the convenience of piped water connection in their toilets.

Due to severe the shortage of land, many cannot build the toilet in a convenient place. Some people are forced to place a toilet near the house. Since the toilets are not healthy, family members have to face many problems like bad odor.

FIGURE 6.2: NORMAL OUTSIDE AND INSIDE CONDITIONS OF TOILETS
Lack of trust on local sanitation providers and high dependency on peri-urban or urban markets to procure high quality, durable and aesthetically pleasing toilet substructure might be influencing their choice of toilet structure technology.

Most people do not trust local producers because they produce low quality products. For that reason, households are hesitant to purchase new and complicated toilet technologies from them. Actually local producers produce low quality products because they think that local people will not buy their products with good quality since it costs more money. But the view of local people is totally opposite from local producers. Local people want to buy quality products. There is a lot of demand for quality products. So they are forced to buy from the Barguna city because they can’t buy from the local sources. Although some people are buying products from local sources, but their numbers are not very much.

Those who go to city for buying sanitary products, have to spend additional money as transportation cost. That means, High quality products are available at a reasonable price in peri-urban and urban markets, but the transportation, installation and service costs are higher due to distance. Hence, many households prefer to buy high quality single pit toilets from urban markets to keep their costs as low as possible.
6.3 COMPETITION BETWEEN RURAL AND (PER-)URBAN

Rural WASH entrepreneurs are unable to compete in terms of product options, quality and price offerings with the peri-urban and urban sanitation enterprises. Rural WASH entrepreneurs do not have access to quality raw materials at affordable price unlike their counterparts in the peri-urban and urban areas. This drives up the cost of production of high quality toilets. They have to collect quality inputs from the city and bear an additional transportation cost. Also, they can’t leverage the economy of scale by purchasing large amounts of input materials at a time because of limited capital and limited market size in their village or union. Thus, small market size with limited scope for scaling up discourages rural wash entrepreneurs from making investment to produce high quality products or to introduce new technologies.

On the other hand, Urban and peri-urban producers have an advantage with access to quality inputs at a reasonable price. Hence, they can easily buy inputs from nearest places and keep their transportation cost low. Thus, they can produce good quality products and sell them at affordable or competitive price to the customers.
6.4 RURAL SANITATION PROVIDERS DEPEND ON SUPPORT

Rural sanitation providers are highly dependent on institutional support for sustaining and growing their sanitation business.

Local sanitary producers usually produce traditional products. They get limited facilities compared to their urban counterparts. Local customers come to them to buy traditional products like ring, slab, etc. They have limited ideas about new products. They are unable to introduce new products in their local market without advocacy and marketing support from NGOs and other institutions. They often work for local NGOs and DHPE. Many rural wash entrepreneurs acknowledge institutional sales as their main sources of income, which has enabled them to pay back their investment/loans. They often look for institutional sales, as a booster to scale their production and customer base.
6.5 DESIGN RECOMMENDATIONS FOR SANITATION

- Strong competition is available between rural and urban sanitary components providers in terms of product quality and price. Urban providers can provide more quality products to the customers with a lower price in comparison to the rural sanitary component providers. It's an uneven competition and local providers have to accept losing. Hence, we recommend the rural WASH entrepreneurs to collaborate with large sanitation enterprises in the urban and peri-urban areas instead of competing with them over price and quality. In this case both the sides will be benefited.

- Another way the local WASH entrepreneurs can benefit is by becoming the local distributor or retailer for high quality products from the large sanitation enterprise in the urban/peri-urban areas. Since local producers can't provide good quality products to the local people so they can supply it to them and can get commission from urban enterprises.

- Water and sanitation are closely related with each other. To establish a hygienic toilet, easy access of water is also needed. So a combined system should be introduced where anyone can easily set up a hygienic toilet and safe water sources like deep tube well at a time.
HYGIENE-RELATED INSIGHTS

Endless Potential for Women Entrepreneurs
KEY POINTS:
• Lack of market accessibility and social awkwardness retain women to accept menstrual hygiene products.
• High cost and lack of knowledge on how to use sanitary pads and importance of using pads keep them away from using menstrual hygiene products.
• There is a huge market for local women entrepreneurs to start sanitary napkin producing and delivery business.

One of the most effective ways we can protect ourselves and others from illness is through maintaining good personal hygiene. The overall hygiene situation in Bangladesh is not a satisfactory level. Although the situation is getting better day by day, but still its need a huge boost to reach a satisfactory level.

Like the overall sanitation situation in Barguna Sadar Upazilla, the hygiene situation is also not in a satisfactory level. Women and girls are not getting proper care during their menstruation. Most of the women and girls don’t know the basic information about menstrual health. Almost everyone uses cloths during menstruation. Some have knowledge about the negative impact of using cloths, but still they use it. The idea of sanitary pads is a new concept here for many women. Some girls knew about pads from TV advertisements. Those who use both cloths and pads must wear panty as well.

Sanitary pads are not becoming popular here because pads are not available in the local pharmacy. If someone wishes to buy pads, then she has to go to the city’s pharmacy.

Pads are commonly perceived as expensive, even without knowing the actual market price. Although the price of sanitary pads appears high for someone, but it has been found in our study that some rural women entrepreneurs have started a sanitary pad business. They are trying to provide quality pads at a low price. Mariam Akter is one of them. She started a sanitary producing factory in 2015 by receiving training from DORP Bangladesh. The name of her factory is ‘Uccash Sanitary Napkin Factory’ and the brand named of her sanitary pad is also uccash. Her main aim is to provide good quality pads to the women and girls with relatively lower price. She usually sells products in the city’s pharmacy. She wants to supply it to the whole Barguna district. Her initiatives open a new window for the local girls and women to buy and use pads. So it can be said that there is an immense potential for women entrepreneurs to start a sanitary napkin business.

The overall research findings for hygiene in Barguna Sadar is described below under four insights. Appropriate recommendation is also given, after that.
FIGURE 7.2: SOME SCHOOL GOING AND LOCAL YOUNG GIRLS EXPRESSING THEIR INDIVIDUAL EXPERIENCE AND OVERALL SITUATION ABOUT WOMEN’S HYGIENE.
7.1 MENSTRUAL PRODUCTS ARE AWKWARD

‘Market Accessibility’ and ‘Social Awkwardness’ precedes ‘Product Affordability’ as the main barrier for adoption of menstrual hygiene products.

Almost none of the married woman and most young girls use pads during their menstruation because menstrual products are scarcely available in the local pharmacy and retail outlets in rural areas. Many girls cannot easily access urban markets due to the high cost and time required to travel. It has been found in many areas in Barguna that many girls want to use pads, but local pharmacies don’t understand their needs. So they are forced to use cloths.

Those girls who want to buy pads should go to the Barguna city which is 5 to 20 kilometers away from their home. They feel awkward to ask a male family member to purchase menstrual products from the market while the male family members feel equally uncomfortable to purchase them from the market. Pharmacies and retail outlets in the market areas are often managed by a male and are crowded with male customers, which make the girls feel uncomfortable and unsafe to purchase menstrual products from these shops.

It has been found in our field visit that all kinds of menstrual and hygiene related products are available in urban pharmacy. Every pharmacy usually sells 20-30 packets of pads in every month on an average. Some sanitary pads named Senora, Zoya, Freedom and Nirapad (BRAC made sanitary pad) are available in city pharmacy. Mainly school and college going girls is their main customer. Apart from that, many caesarean patients also purchase pads from them.
7.2 LOW AFFORDABILITY IS JUST AN EXCUSE

Most often ‘affordability’ is just an excuse for not having to deal with the social awkwardness associated with menstrual health products.

During the field visit, we have seen a common scenario that, almost everyone does not know the actual price of sanitary pads. But at the same they perceived menstrual products like pads as expensive. As most of the people living in rural area are poor, so they focus on prices more. When we talked to some women in 7 no dhalua union, they said that they will use pads if the price was low. Then they were asked about its price. They said the prices will 150-200 taka per packet. But in the city’s pharmacy BRAC made pads is available at Tk. 70. Many women have the ability to spend this money, but they use cloths because pads are not available in the local pharmacy. That means money is not an excuse for everyone rather lack of convenient access to the rural customers is the prime barrier of not to use pads.

Those who are engaged with the marketing policy of sanitary pads also focuses more on price rather than on the cost benefit of using a menstrual pad. If their marketing policy focused on the benefit of using pads then the hygiene situation will be different. Again traditional distribution channels and payment modalities are further reinforcing the affordability factor as a barrier and slowing down adoption rate.
7.3 LACK OF FOCUS ON PRODUCT LIFE CYCLE EXPERIENCE

Much focus is on solving the issues surrounding distribution/purchase of menstrual products but not so much on addressing the issues of the product lifecycle like shortage, usage experience and disposal.

Rural girls do not feel comfortable talking about menstrual health. Many girls are even ashamed to discuss with their mother. There is no safe, hygienic and comfortable washroom or changing room available in rural school and college. So without safe and comfortable environment, students hesitate to go to school during menstruation even when they have access to menstrual pads. As a result, their education is hampered.

Most of the women and girls have no idea about proper menstrual health. Some girls achieved knowledge on it by attending relevant seminars or workshops. Many women are not aware of how many pads are required per cycle and how to store, change and dispose them due to lack of knowledge on menstrual health. Many think that using pads in more complex rather than cloths. Again, they think that, cloths are so cheap then why would they buy pads. They never give first priority to their menstrual health. Many women know the negative impact of using cloths, but still they use it because of easy access and easy to use.

In case of reusable pads need water to be washed. But some girls use it again without cleaning it properly due to lack privacy to clean and dry reusable pads. As a result, they are prone to various diseases such as bacterial infection, scabies, etc.
7.4 BOYS & MEN ARE NOT PART OF THE EQUATION

The awareness creation and distribution strategies currently adopted by NGOs and other institutions are exclusively for women and alienates boys & men from the equation.

Men/Boys could play a vital role in solving women’s menstrual and hygiene related problems, but they are not well equipped to help. Most of the men and boys in both rural and urban areas are not aware of the menstrual health and hygiene requirement of women. Actually, they weren’t conscious about the women’s health issues. As a result, they never bothered to gain any knowledge on menstrual health and hygiene issues and hence are unable to actively contribute towards improving women’s health.

Also, many girls and women are not comfortable to talk about their menstrual needs to their male family members; hence men are unable to help them with their health and hygiene needs. Many women think that it would be inappropriate to tell their menstrual problems and needs to their husband, father or brother. Thus, in the traditional approach, men/boys are not considered as part of the solution to improve access and remove social stigma associated with menstrual health and hygiene.

FIGURE 7.4: THERE ARE SOME JUVENILE DEVELOPMENT CENTER AVAILABLE IN BARGUNA AND THEY PROVIDE WASH RELATED INFORMATION AMONG THE MEMBERS AND VILLAGERS.
7.5 DESIGN RECOMMENDATIONS FOR HYGIENE

To improve the overall hygiene situation in Barguna Sadar Upazilla, several solutions or recommendation is needed. We have found some recommendation during our field research which is shown in below. The following recommendation will certainly help improve the hygiene situation Barguna.

- Since the prime reason for not using pads is unavailability and inconvenient access in local markets, so a convenient market channel has to be introduced. In this case, women self-help groups (SHGs) and microcredit groups in the village can play an important role. Everyone has to go to city to buy hygiene products like sanitary pads, soap, toilet paper etc. It costs lots of money as transportation cost and time as well. If the women SHGs and microcredit groups take initiative to sell this product from door to door then the villagers could buy easily. There is a youth social welfare club named 'Chandra Jubo (youth) Club' in 7 no Dhalua Union. Almost 40 girls and boys members are there. We have talked to them about their menstrual hygiene. Almost 60% girls of that club use sanitary pads during their menstruation. They purchase pads from Barguna Sadar. The rest of the 40% wants to use pads, but they can't go to Barguna Sadar. If the pad was found in the local pharmacy or someone came to them to sell it then they will certainly use pads. So a smooth market channel linkage between local consumers and women SHGs and microcredit groups can eliminate the barriers in distribution and affordability.

- Building conscious among the men and boys will be very effective in reducing menstrual hygiene related problems. In this case, NGOs or DPHE can organize some workshops or seminars for both men and boys to provide menstrual hygiene related information to them. BRAC and Plan Bangladesh conducted several seminars on this issue in Barguna Sadar. Plan Bangladesh also introduced a project named ‘Ujjibito’ in some unions of Barguna Sadar Upazilla. They appointed 13 female paramedic doctors to provide health related advice to the men, boys, children, women and girls. Everyone listens with their suggestions carefully. As a result, both male and female people can understand everything about women’s hygiene issues. Once men or boys get proper information, they will try to contribute for his family at least. Proper consciousness among the men and boys will also reduce social stigma. Men or boys can talk with this issue with women or girls more naturally than before.

- One of the core problems for the school and college going girls is, they do not get a safe and comfortable environment in public spaces like school washroom or hanging room. Most of the public washrooms are unhygienic and better place for bacterial growth. So girls can’t use it comfortably and for that reason many refused to go to school or college. So a proper conducive and safe environment needs to be created. School or college authority should take necessary steps to ensure safe and comfortable changing place for girls. This initiative will encourage adoption of menstrual hygiene products by women and girls.
CONCLUSIONS

Overview of insights & recommendations
<table>
<thead>
<tr>
<th>KEY INSIGHTS</th>
<th>DESIGN RECOMMENDATIONS</th>
</tr>
</thead>
</table>
| **WATER-RELATED** | - Households give more importance to aesthetic quality and convenience of access to water sources for drinking and cooking purposes.  
- Women and Children are the most affected due to water problems and yet it is the men who are largely in charge of operating and managing the water sources in the communities.  
- Creating new water sources for improving access to safe water is not a viable approach, while the existing water sources are deteriorating due to negligence and insufficient usage. |
| - Design and establish a market driven system where all kinds of services will be made available. This market system should.  
- Provide easy access for everyone to purchase good quality water treatment products and components from local markets at an affordable price.  
- Provide access to well-trained technicians and experts to provide after sales service and support for water treatment products and technologies used by the rural communities. |
| **SANITATION-RELATED** | - Space and water requirements for installing and using a particular type of toilet greatly influence the household's preference and purchase decision-making process.  
- Lack of trust on local sanitation providers and high dependency on peri-urban or urban markets to procure high quality, durable and aesthetically pleasing toilet substructure might be influencing their choice of toilet structure technology.  
- Rural WASH entrepreneurs are unable to compete in terms of product options, quality and price offerings with the peri-urban and urban sanitation enterprises.  
- Rural sanitation providers are highly dependent on institutional support for sustaining and growing their sanitation business. |
| - Design and establish a market driven system where rural WASH entrepreneurs collaborate with large sanitation enterprises in the urban and peri-urban areas instead of competing with them over price and quality.  
- Water and sanitation are closely related with each other. To establish a hygienic toilet, easy access of water is also needed. So a combined system should be introduced where anyone can easily set up a hygienic toilet and safe water sources like deep tube well at a time. |
| **HYGIENE-RELATED** | - Market Accessibility’ and ‘Social Awkwardness’ precedes ‘Product Affordability’ as the main barrier for adoption of menstrual hygiene products.  
- Most often ‘affordability’ is just an excuse for not having to deal with the social awkwardness associated with menstrual health products.  
- Much focus is on solving the issues surrounding distribution/purchase of menstrual products but not so much on addressing the issues of the product lifecycle like shortage, usage experience and disposal.  
- The awareness creation and distribution strategies currently adopted by NGOs and other institution are exclusively for women and alienates boys & men from the equation. |
| - Design a smooth market channel linkage between local consumers and women SHGs and microcredit groups to distribute affordable pads locally.  
- Design ways to make men and boys more conscious about menstrual hygiene.  
- Design proper conducive and safe changing facilities for girls and women at schools and other public facilities to encourage adoption of menstrual hygiene products (design positive user experience). |
RECOMMENDATIONS FOR NEXT STEPS

This qualitative market study functions as a first scoping exercise, where we have explored various opportunities to increase the access and availability of WASH products and services for rural customers and identified several business opportunities for female entrepreneurs to play a more active role in the market system including the provision of business development support.

When taking a helicopter view, we see that female entrepreneurs can take a pro-active role in the management, distribution, operations and maintenance of WASH products & services. This would require a further deepdive to validate our insights and to identify the most feasible business idea for piloting. We will need to actively engage with rural female entrepreneurs to understand which business opportunities best fit their desire, ambitions and aspirations. We will also probe several market actors and enablers of the rural WASH market value chain to validate which business opportunities would be most feasible and viable for female entrepreneurs to pick up.

After a deepdive, we will select and focus on a particular product-service concept for female entrepreneurs that needs to be further developed for pilot testing. Through a human-centered design process, we will design and prototype the business ideas, create the market linkages and test the service delivery models.

The pilot testing of business and service models will help us to validate several questions like:

- How do customers value the service?
- What is the effectiveness of the service on WASH impact?
- Who are willing to pay for these? For what price?
- What is the most effective marketing & communication strategy?
- Are micro-entrepreneurs the most appropriate channel to deliver these services? Are female entrepreneurs accepted by customers, suppliers and other system actors?
- What are the costs structures to deliver these services?
- What kind of support (like training, marketing support) and resources (capital, technology) would the female entrepreneurs need?
- What are the cost structures?
- How viable is the business case?

Doing a service experiment, we can harvest user feedback to further revise and improve the service design, which can now be run in a small scale commercial pilot.