

Feasibility Study Report on Women's Business Centre's in waterlogging areas of SW Bangladesh

**Submitted by
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1. Introduction

United Purpose, with funding from the Blue Gold Program Innovation Fund, conducted a six-month feasibility study on the Women Business Centre (WBC) approach in four unions under Batiaghata Upazila in Khulna district. The feasibility study included an in-depth assessment of the most prominent value chains, identification and consultation with key stakeholders, identification of entrepreneurs and WBC sites and design of the wider project approach in line with findings. The study will inform piloting of the WBC approach based on specific markets, actors, opportunities and challenges identified. WBCs ultimately are designed to improve rural women’s access to services and their inclusion in market activities, increasing income and improving women’s position in agricultural value chains in rural Bangladesh.

This study has been carried out to identify problems, opportunities and assess the feasibility of identifying and training women entrepreneurs and establishing WBCs in polder areas of Botiaghata upazilla.

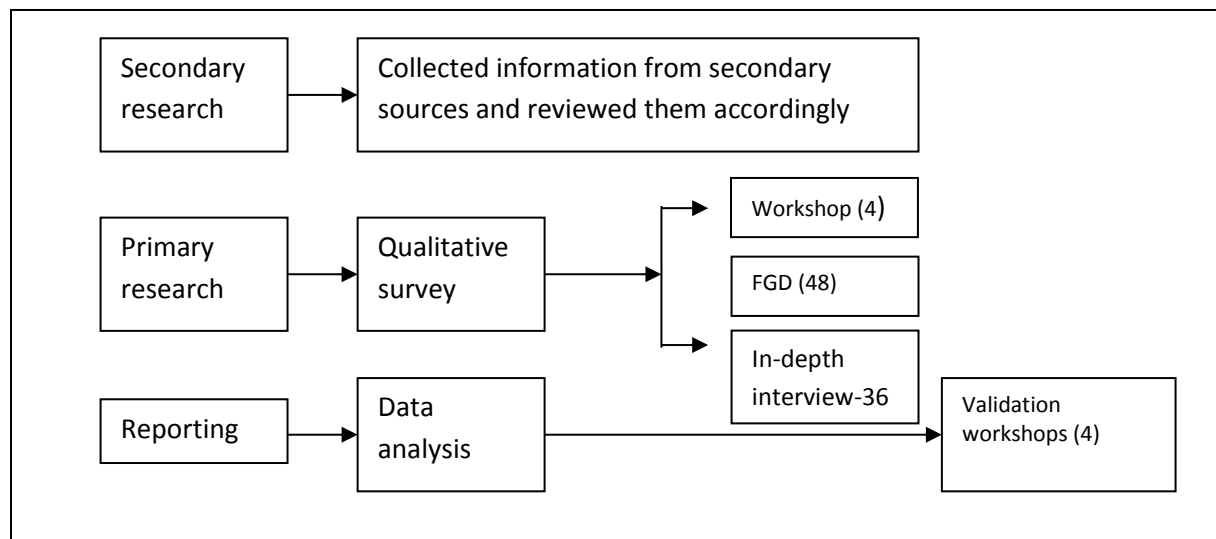
2. Area Context

The study was conducted in four unions under three polders (28/2, 30, and 31-part) of Botiaghata upazila of Khulna district. The upazila occupies an area of 248km² and consists of 7 unions. The total population of the upazila is 171,691 of which 86,685 are males and 85,006 are females (population and housing census 2011).

3. Study Methodology

The Feasibility Study has been designed to conduct a thorough analysis of the value chains, actors, functions and links in the polder areas.

The assessment was conducted from May to October 2017 in four unions of Botiaghata upazila. The assessment employed quantitative and qualitative methods, including 48 Focus Group Discussions (FGD), 36 key informant interviews (KIIs), and available secondary data. During the survey, different market actors were asked to provide information on their production costs, marketing costs, selling prices, and profits. They were also requested to identify scope and constraints of different aspects according to their priority. The study followed three key stages, which included secondary research, an in-depth primary assessment and data analysis and reporting. The pathway of conducting assessment is given below:



3.1 Secondary Research

The Feasibility Study involved collecting secondary data from sources, which were defined as actively working as key drivers in the agriculture sector in Bangladesh. Data was gathered from the Department of Agriculture Extension (DAE), the Department of Livestock (DoL) and the Department of Fisheries (DoF). Blue Gold of Botiaghata upazila was asked to validate this information and data.

3.2 Primary research

The Feasibility Study involved conducting primary research with key stakeholders, including producers, traders and input suppliers. Value chain selection workshops, focus group discussions (FGDs) and key informant interviews (KIIs) provided an understanding of the social and technical feasibility of WBCs and the potential to pilot this approach in Khulna district. Local Service Provider (LSP) coaches/entrepreneurs were directly involved in this field research. In addition, this primary research involved 68 Water Management Groups (WMGs) of four unions. The locations were selected with the support of Blue Gold and representatives from the Water Management Association (WMA). Before conducting this primary research, survey questionnaires were developed and distributed to gather baseline information and an understanding of the conditions, roles and involvements of producers, input providers and traders.

The primary research comprised the following activities:

1. Union Value Chain Selection Workshop:

A total of four value chain selection workshops were organized in Batiaghata Union, Gongarampur Union, Jolma Union and Surkhali Union to identify which value chains were functioning, a list of different value chains were prioritised which varied in each Union, the four most prominent agricultural value chains across all unions were milk production; fish farming; vegetable cultivation; and, poultry rearing. The workshops were participatory and involved a cross section of actors, these 160 participants (49 women) included 42 WMG members, 11 Farmer Field School (FFS) members, 45 Local Service Providers (LSPs), 15 market actors, 12 Blue Gold staff amongst others.

2. Key Informant Interviews (KIIs):

36 key informants (72 % women) were selected from four unions. The informants included WMG group members, SLPs, WBC members, Local Elite person, and union representatives (UP members, Upazila Agriculture officer, Upazila fisheries officer and Upazila livestock officers, UNO and UP female members). They shared important information in the value chain selection workshop, which helped project activities move forward.

3. Focus Groups Discussions (FGDs):

48 FGDs (consisting of 8-10 people per group) were conducted in three unions involving producers of WMGs, 12 input sellers and 12 buyers. A total of 524 people (66% female and 34% male) participated.

4. **Transect walk:** Project staff conducted transect walks in four unions visiting important places and talked with LSPs, SPA members and community people. The main purpose of the transect walk was to get general ideas about the people, places and important resources of the area.
5. **Market Surveys:**
The input sellers and buyers were selected after collecting information from the producers about where they collected inputs and to whom they sold their products.
6. **Analysis and reporting:**
Data collected through questionnaires were analysed. At the initial stage of the report writing, a workshop was organized in which information collected was shared and feedback was received.

4. Results and Project Approach

4.1 Overview of Value chains

Participants of the value chain selection workshops identified the value chains in their respective Unions. Based on this, the study has prioritised the following value chains for the project:

1. Milk production
2. Fish farming
3. Vegetable cultivation
4. Poultry rearing

The findings of this report are presented based on core functions, supporting functions and an enabling environment currently impacting value chain efficiency, income, livelihoods and gender dynamics. The current environment and sociocultural context in which these individuals and organisations are operating has informed the design of the WBC approach and reinforces the need to pilot the approach in Botiaghata upazila; an area where women significantly contribute to agricultural activities, income-generating activities and value chains, yet lack access to information and resources.

1) **Core Actors:** Market actors that deal with the buying and selling of products, including producers, traders (*paikar/ buyer/arotdar*, retailer), input sellers and mobile seed vendors;

2) **Supporting Actors:** Actors that deal with relevant services affecting the buying and selling of products. These actors are involved indirectly to provide support for stimulating market change to leverage a response within a specific market system. The actors are Micro-Finance Institutions (MFIs), Line Agencies and Research institutes, such as the Department of Agriculture and Extension (DAE), Department of livestock (DoL), Department of Fisheries (DoF), private companies (specialising in seeds, fertilisers, pesticides, etc.), LSPs/SPA etc.

3) **Enabling Environment:** The existing rules and regulations, which also affects the buying and selling of products. The main actors under this role create a conducive environment for the value chain to function smoothly and efficiently, i.e. the Union Parishad. The functions include different government policies, rules and regulations, trade licenses, registration, quality control etc.

4.2 Core Actors

Core function actors have been identified as market actors that deal with the buying and selling of products, including producers, traders, input sellers and mobile seed vendors. This section will present findings on the current value chain activities of **producer groups** and **market engagement** in Batiaghata upazilla, identifying reported problems and propose project intervention feasibility.

4.2.1 Producers

The field research conducted in this Feasibility Study identified that women make up a large proportion of producers buying and selling products directly to and from traders. Out of 108,115 households across four unions, 22% (75% female) of households (HHs) were involved in poultry rearing; 27% of HHs (65% female) in vegetable cultivation; 27% of HHs (40% female) in fish farming; and, 27% of HHs (70% female) in dairy farming/milk production. Female producers were found to be key household and market actors responsible for the management and production of poultry rearing, vegetable cultivation, fish farming and milk production. Women tended to sell products directly to traders (*paikar*) or at the local bazaar (*hat*), limiting their exposure to fair market prices and wider consumer demand.

Despite playing a key role in income-generating activities, women live, work and manoeuvre within a patriarchal society. Whilst poverty is unbound by gender, women experience the state of poverty differently to, and often more acutely than, men (Kabeer, 2008:241). The study found that women lack access to market information and are subject to entrenched gender norms, particularly around what part of the value chain they could engage in, restricting their control over, and access to, services, assets, markets and finance. Through the WBCs, these services will be brought directly to Batiaghata upazilla, increasing both women and men's access to markets with a specific focus on women to assume a more active role in economic development and gender-sensitive market participation.

Batiaghata upazilla has 23,622 hectares of land, with 19,127 hectares being cultivable. Approximately 33,355 (78 % women involved directly/support male members) farmers are involved in vegetable cultivation across seven unions of the upazilla. This field research identified the common use of traditional farming methods of vegetable cultivation with many farmers purchasing low quality seeds from local sellers resulting in low production and efficiency. Approximately 65% of male farmers and 35% of female farmers in Batiaghata upazilla engage in subsistence farming, cultivating enough food for household consumption. Women were more likely to engage in subsistence rather than commercial farming due to limited access to finance as well as social gender norms. Commercial farmers were found to invest in quality seeds and modern technology to a greater extent, increasing their overall production.

In Batiaghata upazilla, poultry rearing makes up a significant proportion of daily activities. 85% of rural women rear between 1-5 poultry (e.g. chickens, ducks) at the household level, providing households with a protein-rich diet and diversifying income streams. 32% of male producers and 68% of female producers purchase their poultry from local vendors at Tk.30 per duckling/chick. Despite their involvement in poultry rearing, women typically lack ownership of these assets, restricting their independence and decision-making capabilities at the household level.

In the case of milk producers (82% female), female household members are largely responsible for milk production and cattle rearing. Rather than purchasing nutritional cattle feed from local markets, cattle grazers largely rely on the surrounding grass as grazing land. These households are therefore exposed to flood-related shocks such as crop destruction. Fish farmers are subject to similar risks and shocks in periods of heavy rainfall and flooding. In Batiaghata upazilla, two types of fisheries exist: Gher farming and pond culture farming. Emerging commercial fish farmers (27% women) use supplementary fish food to ensure healthy growth, increasing production and profit. In Batiaghata upazilla it was observed that many subsistence and small-scale farmers lacked access to quality fish food supplements and information on best practices.

Producers: Identifying and tackling the problems

The Feasibility Study identified the major constraints and limitations experienced by producers, particularly women, in Batiaghata upazilla. On the basis of these findings, the project has been refined to offer a sustainable approach to contribute to the wellbeing and resilience of both women and men through economic empowerment, affordable services and access to vital information, which is currently lacking in Batiaghata upazilla.

Limited knowledge on sustainable/modern cultivation techniques:

The majority of women producers and input sellers were unaware of, or less skilled in using, modern cultivation and management techniques in agricultural production. Producers had limited knowledge on alternative, hybrid seed varieties, poultry and cattle protection shelters, hatcheries, nutritional livestock feed, vaccinations, etc. Though services exist and LSPs are available to distribute information on diversifying cultivation techniques, these resources and services are under-resourced and many farmers, particularly women, were found to be unwilling to approach them.

The WBC project will provide scope to **increase producer knowledge and awareness of sustainable/modern cultivation techniques and post-harvest knowledge**. Female entrepreneurs will be trained by the project to offer training on modern cultivation and post-harvest-handling techniques through the WBCs supporting producers, both male and female, which will reduce their production costs and increase their yields. Women entrepreneurs, rather than male entrepreneurs, are better placed to reach out to female producers due to cultural sensitivities and norms. The project will tackle health-related risks associated with the practice of overusing unsafe pesticides and fertilisers. Established linkages with private sector companies present capacity-building opportunities for male and female LSPs/ entrepreneurs, input sellers, traders and producers alike and training sessions and workshops delivered from the WBCs will improve crop cultivation and post-harvest technologies.

Through the WBCs, the following technologies and skills training will be promoted to develop and diversify knowledge and skills of women producers:

- Organic vegetable cultivation technology
- Year-round fish cultivation

- Gender sensitive WISH pond and fish cage culture
- Improved technique of indigenous poultry rearing
- Post-harvest handling of agricultural products to reduce waste and ensure quality
- Dairy milk processing
- Spirulina production
- Medicinal plant production and processing
- Honey production and processing

Inadequate knowledge of input diversification:

Producers and input sellers were unfamiliar with their options available to them (i.e. quality seeds, fertilisers, pesticides, vaccinations etc.). Unfortunately, inputs were unavailable during peak times due to high demand in rural areas. Farmers lack access to vaccines in rural markets and, where available, a strict vaccination schedule is not adhered to.

The WBC project will provide scope to **increase the availability of quality inputs**. High quality seeds, fertilisers and pesticides are essential for productive crop cultivation and would increase quality yields. By establishing linkages with the private sector, entrepreneurs will gain access to input sellers and wholesalers supplying quality and new varieties of seeds, fertilisers, pesticides and livestock vaccination and artificial insemination services. The WBCs will ensure materials and inputs are supplied to establish gender-sensitive farming techniques, including improved poultry production, soil testing, organic compost production, improved vegetable cultivation and fish production through the utilisation and application of the successful WorldFish WISH Pond concept. This innovative fish farming technique allows producers to simultaneously harvest an average of 73kg of fish and 83kg of vegetables per year, increasing their production and overall household income (see Cost-Benefit Analysis below)

Table 1: Cost-Benefit Analysis of WISH pond

(1 year cost considering 3 cycle per year and continuous consumption & stocking)

Cost and Profit	Total (BDT)	Remarks
Expenditure breakdown		
Installation cost considering depreciation cost (4 years)	552	Total cost breakdown: BDT 2,210 (Aerator: 250BDT, pipe: 200BDT, Stone: 20BDT, polythene: 1,430BDT, empty sac: 10BDT, shade net 10feetx8 feet: 300BDT, own labour cost)
Fry stocking (6 times/year)	1200	
Vegetable seedling (4 times/year)	200	
Feed, fertiliser & other inputs	1000	
Total Expenditure	2,952	
Profit breakdown		
Fish sale (73kg per year)	8,800	
Vegetable sale (80kg per year)	3,200	
Total Profit	9,048	

Insufficient knowledge and unawareness of post-harvest techniques:

Both male and female producers and traders lack the knowledge and awareness of post-harvest packaging and processing in order to minimise in-transit damage to produce or preserve organic produce from spoiling. Perishable goods make up the vast majority of produce in poor, rural areas leading to a situation of high wastage.

Training to entrepreneurs will include **post-harvest techniques** to reduce wastage and increase prices for producers. Linkages with private sector companies will also provide opportunities for producer groups to produce collectively for companies with guaranteed sales; this may include cultivating and drying spirulina.

Inadequate knowledge about water management:

Heavy rainfall and flash flooding prevents production and risks serious damage to crops, livestock, inputs and machinery. The low-lying area increases vulnerability to flooding and many fields are only suitable for one annual harvest restricting production.

WBCs will be connected to WMGs and WWA sharing information regarding **water management** in polder areas. The project will facilitate WBCs to update WMGs about the status of water by regularly collecting information and actively participating in meetings. Knowledge-sharing visits can be arranged for the WBC members in established WBCs in Khulna building confidence and capacity-based learning. WBC entrepreneurs will encourage other female producers to actively engage in WMGs for the benefit of their businesses. Increased income and greater productivity in the area will encourage more investment in water management activities.

4.2.2 Market Engagement

The field research conducted in this Feasibility Study identified a lack of access to markets across all value chains. Many producers, particularly women, instead sell their produce directly from their farm or households or from the local *hat*, limiting the feasibility for wider distribution. Vegetable producers and smallholder farmers largely take responsibility for the local sale and distribution of their products and do not have a link with upazila- and district-level buyers. A lack of exposure to these buyers prevents producers from accessing important information about market demand and fluctuating market prices. In Batiaghata upazila, there are no specific collection points from where farmers can sell their products at a fair price.

Female poultry producers lack access to the market tending to sell their produce directly from the farm/household instead. Producers generally do not keep a record of sales made.

Consumers and traders were found to travel to the local *hat* to buy milk directly from producers. Milk is then loaded into containers and transported by rickshaw van to processing plants, shops and restaurants.

In the case of fish production, there are no specific collection points for buyers except for local bazars, which are held twice a week. Fish prices tend to increase during festival periods and when vegetable production falls. During these times wholesalers make contact with fish producers by cell phone and place large orders of fish. The majority of farmers, almost entirely men, harvest 70% of their fish stocks in September and October whilst the price is high and before the climate becomes cool and dry, stunting fish growth, delaying harvesting until March-May when prices begin to increase. Women's participation in harvesting and marketing fish is

significantly lacking due to social gender norms around women going into pond to physically harvest fish and traveling to distant markets. Fresh fish is often transported at night which is culturally not appropriate for women.

Market Engagement: Identifying and tackling the problems

The Feasibility Study identified some major constraints and limitations experienced by producers, particularly for women, in Batiaghata upazila. On the basis of these constraints the project has been refined to offer a sustainable approach to contribute to the wellbeing and resilience of both women and men through economic empowerment, affordable services and access to vital information and markets, which is currently lacking in Batiaghata upazila.

Women producers and traders are **constrained in their access to, and analysis of, and information on markets**, including information on supply and demand, input quality and cost information. As a result women are forced to sell their product at a low price, often to middlemen who take a cut of the profit. Women have less bargaining power when it comes to selling to male traders or middlemen. Informal and often unreliable sources are relied upon for market information and producers were found to be unaware of the importance of up-to-date information. This is particularly profound for women who are constrained by negative social gender norms which limited their mobility.

The project will address this issue through the **provision of up-to-date, pertinent, quality market information and collective selling** through the centres. The project will train entrepreneurs to deliver information to farmers/producers through the WBCs. Bringing services directly to communities will allow women and men to access information in a secure manner limiting the need to travel long distances for services and inputs. The WBCs will improve market infrastructure and physical facilities by acting as a collection centre reducing transactions costs and ensuring fair prices for products, bringing alternative business points to rural communities. Female entrepreneurs will build their confidence and bargaining power through their negotiations with largely male private sector representatives, government extension officers and traders. This will also influence how women are perceived by male value chain actors and will inspire other female producers to overcome cultural constraints to market access. The project will provide relevant equipment to the WBCs, including computers, smart phones, printers, cameras, charging points, tool kits, etc. These costs are reflected in the budget (see activity line D.1.2 *Demonstration on establishment of Women Business Centres*). Women entrepreneurs will also invest in the WBCs, purchasing furniture, paying rent for the building and ensuring cash is available to purchase goods and provide change for transactions.

Producers require financial assistance in order to purchase inputs yet have **limited access to financial support**. Microfinance institutes (MFIs) are available in Batiaghata upazilla, however they attach high interest rates (over 12%) to their loans and have conditional weekly repayment schedules deterring producers and buyers from applying. This is heightened for female producers who are largely more risk adverse due to their limited exposure to financial services and access to information about finance and markets. In many cases producers do not know which sources are reliable for loans, instead opting to sell on a smaller scale, receiving lower prices for their products due to a lack of bargaining power.

The project will **increase access to finance and alternative finance**. The project will collaborate and establish links with relevant actors, including Bank Asia, ensuring access to

finance in remote areas. Increasing access to finance will support producers, traders and input sellers to invest in new modern technology or quality inputs currently limiting livelihood and income-generating opportunities in Batiaghata upazilla. With the provision of financial support, women entrepreneurs will be able to invest more money into purchasing inputs, such as quality seeds, pesticides and fertilisers purchased from reliable sellers linked to the WBCs, increasing production and, therefore, income, wellbeing and empowerment.

4.3 Supporting Functions

Government

Farmers are often sceptical about the advice given by government agencies and departments, particularly around new technology. Limited staff capacity means that extension services cannot meet the needs of the farmers in time. The government is however, investing in the agriculture sector and has access to new technologies. Drawing on BlueGold Programme experience, extension government staff often have limited training on how to reach and engage female producers in diverse value chains. Participatory and soft skills training approaches are lacking in current government service delivery.

The WBC project will provide scope to conduct exchange visits for Government extension agent staff to visit established WBCs in Khulna to see the benefit of female leadership in agriculture. Government officers of the Department of Agriculture Extension (DAE), Department of Livestock (DoL) and Department of Fisheries (DoF) will be oriented on the benefits of training female farmers on a range of agricultural techniques and how to use a participatory and inclusive approach for better outcomes. In this context, government officers will be encouraged to train women entrepreneurs to develop knowledge and skills on technical issues for a number of value chains. The project will establish linkages with 1 or 2 SAAOs (DAE staff) already trained in polder 30 under the wider Blue Gold programme to adopt these methods in other areas. Special training and orientation can be arranged for Government line agencies for their capacity building. Initiative can be taken to create effective networking between different WBCs. Training to Government extension workers will also increase their ability to be able to conduct participatory, inclusive and engaging training that will be more accessible to both female and male farmers with limited literacy and technical agricultural experience. This will mean that more farmers are exposed to the new technology that government extension services have access to.

Private Sector

In Batiaghata upazila more than 50 companies are in operation however, many producers do not have access to these companies limiting their markets and limiting their diversification to other crops/products.

UP has already signed agreements with many of these companies and the WBCs will provide a meeting point between producer groups and the private sector. Producers will therefore benefit from a diversification of inputs and services, including quality seeds, pesticide, training opportunities, technology and information developing a mutually beneficial relationship between the private sector and rural communities. Based on experience through prior establishment of WBCs, linkages with district and national companies could generate significant profit. Private sector companies will sell inputs (seeds, fertilizers, mobile banking, etc) at wholesale prices through the WBC entrepreneurs and provide training to entrepreneurs free of cost. Private companies will buy products through the WBC entrepreneurs at a fair market price and provide

a commission to entrepreneurs. This will significantly stimulate rural local markets and provide a mutually beneficial arrangement for entrepreneurs and producers. Selected private companies, such as ACME, will offer primary processing opportunities for producers, such as growing and drying medicinal plant leaves and producing honey, with buy back contracts for greater income generation.

4.4 Enabling environment

Union Parishad

There are 3-4 Community Clinics per Union Parishad. These Union Health Centers and Community Clinics offer family planning services, primary healthcare and nutritional advice. Community Clinics are often stretched with more than the targeted 6000 people reached per clinic. Limited human resources mean that community members often seek out private clinics or pharmacies for more reliable services. There is also limited community awareness of the services available through public health institutions.

The Union Parishad is responsible for providing safe drinking water, promoting sanitation and hygiene programmes and constructing and maintaining roads and small scale irrigation and water resources. There is difficulty, however, in providing these services to hard to reach people and communities.

Agricultural development is a key priority of the Union Parishad annual budget. The government is paying more attention to developing and investing in the agriculture, livestock and fisheries sector at the grassroots level for the overall benefit and development of the country. This will be drawn on by the WBCs that will benefit from the Union Parishad's interest and investment in these sectors.

Union Parishads are playing an important role in the management and development of local markets, committed to creating an enabling environment. The Union Parishad Chairman is the Chairperson of the Market Committee and a member of the Upazilla Market Committee.

The Union Parishad have expressed interest and support of the approach and will be an advocate for the WBCs. WBC entrepreneurs will sign post to relevant public services and supplement basic government nutritional advice to producers. The Union Parishad will guide and support WBCs through the application of trade licences. The Union Parishad will link WBCs to Union Digital Information Centres for increased demand by the community and for shared learning. The Union Parishad will be consulted in the final selection of suitable building for the WBCs.

Water Management Groups

In the project area 60 Water Management Groups are jointly working with Blue Gold and Bangladesh Water Development Boards in four selected unions. There are 10,770 group members of the 60 groups, where 6,120 members are male and 4,650 are members are female, both involved in different activities in polder areas. The main activities of the WMG include water management, monthly savings collection, loan distribution to group members, vegetable cultivation; and tree plantation. WMG are also linked with Farmers Field School (FFS) and Market-oriented Farmers Field School (MFS).

WMGs have been engaged to select the locations of the WBCs and are fully supportive of the project approach. WMGs will provide support to the WBCs through financial services in the form of loans as well as ongoing water management activities. WMG committee members will share

information on markets and technology with WBC entrepreneurs. WMG will also help to establish links to FFS and MFS and will be included in the WBC process throughout the project cycle. Women members of the WMG will also directly benefit from the WBCs through participating as women entrepreneurs at the Centres. Receiving training from the project, women members of the WMG will increase their income benefitting from fair market prices and increased levels of production, sharing this knowledge and services with other women WMG members. United Purpose's proven WBC model has successfully provided community members across Bangladesh with access to a variety of products and services. Each WBC comprises of 5 women entrepreneurs providing services to an average of 1,000-1,200 clients (approximately 90% women and 10% men). Table 2 presents a breakdown of products and services supplied by the WBCs in Khulna and the profit margins of products sold between 2015 and 2016 benefiting women entrepreneurs and producers. WMG members in Khulna will also economically benefit from access to these products and services with similar profit margins.

Table 2: WBC – Product Availability, Production Levels and Market Prices between 2015-2016 in Khulna

Products	Item	2015 (BDT)	2016 (BDT)	Difference	%
Rice	Inputs cost/Decimal	164	176	13	8
	Production(KG) /Decimal	19	23	3	16
	Market price/KG	14	17	3	21
Cucumber	Inputs cost/Decimal	345	380	35	10
	Production(KG) /Decimal	78	85	7	9
	Market price/KG	19	21	2	9
Tomato	Inputs cost/Decimal	455	431	-23	-5
	Production(KG) /Decimal	69	96	27	39
	Market price/KG	24	27	3	13
Bitter gourd	Inputs cost/Decimal	169	176	7	4
	Production(KG) /Decimal	27	30	2	9
	Market price/KG	18	21	3	15
Bottle Gourd	Inputs cost/Decimal	206	223	17	8
	Production(KG) /Decimal	83	87	4	5
	Market price/KG	12	13	1	11
Red Amaranth	Inputs cost/Decimal	163	170	7	4
	Production(KG) /Decimal	99	110	12	12
	Market price/KG	21	24	3	12
Okra	Inputs cost/Decimal	194	209	15	8
	Production(KG) /Decimal	14	15	1	10
	Market price/KG	19	22	3	15
Turnip	Inputs cost/Decimal	175	200	25	14

	Production(KG) /Decimal	550	600	50	9
	Market price/KG	13	15	2	15
Brinjal	Inputs cost/Decimal	164	180	16	10
	Production(KG) /Decimal	24	28	4	15
	Market price/KG	21	24	3	13
French Bean	Inputs cost/Decimal	75	90	15	20
	Production(KG) /Decimal	8	9	1	13
	Market price/KG	23	25	2	9
Carp	Inputs cost/Decimal	964	998	4	
	Production(KG) /Decimal	38	40	6	
	Market price/KG	140	152	8	
Prawn/Shrimp	Inputs cost/Decimal	980	1034	6	
	Production(KG) /Decimal	5	6	3	
	Market price/KG	684	719	5	

5. WBC concept and objectives

Selection of WBCs

The project has primarily identified four suitable locations and 20 potential women entrepreneurs to establish Women Business Centres in four unions of Batiaghata upazila in polders 28/1 and 31. WBCs will be established and managed by the five female entrepreneurs already identified who will provide services to approximately 1,000 female producers formed into mixed and same sex producer groups. Male producers will also be actively engaged as beneficiaries of the centres through the mixed producers groups and users of the WBCs.

The selection process engaged WMAs representatives, Government line departments, private sector organisations and Blue Gold zonal staff. Through consultation, WMAs selected the strategic locations, value chains and the potential entrepreneurs which included FFS, FMS or local women who have existing entrepreneurial skills. Locations have been identified considering distance from the market places, areas that avoid existing conflict and have an ongoing Blue Gold presence.

In line with the needs and demands identified in the feasibility study, WBCs will offer a variety of services specifically targeted towards women focusing on three areas: IT and communication services, such as mobile banking, access to the internet and market information; agriculture and home industries, such as training, input supply and marketing; and, general preventive healthcare and nutrition for women and children.

Overall outcome

Increased household income and livelihoods of vulnerable women in Botiaghata upazilla in Khulna district and improve gender norms and equity.

Specific objectives

1. To increase household income
2. To strengthen women's position in agricultural value chains
3. To increase access to affordable and quality services for women producers
4. To increase women's decision making power

Outputs & activities

Output 1. Enhanced capacities of rural women in business management

Output 1 will contribute towards natural resources based development (Blue Gold Specific Objective II) through building the technical skills and business knowledge of entrepreneurs whilst also contributing to increased income of entrepreneur households (BG SO III).

Activity-1.1 Training: Entrepreneurs will be trained on 1) Business plan & management 2) entrepreneurship development and 4) information technology and 5) communication.

Activity-1.2: Promoting women business centres: Entrepreneurs will be supported to identify their centre building and their requirements. The project will supply the centres with hardware equipment which will include: fridge; laptop; printer; scanner; camera; and projector. Services established by the centres will include (budget line D.1.2); 1) Product collection services 2) IT services; mobile banking, internet, photo services and market info 3) Selling agricultural inputs and necessary products 4) services for women on health and nutrition. In line with the limitations identified in the study equipped WBCs will provide services to female and male producers with limited access to inputs, market information, markets, and nutrition services.

Activity 1.3: Orientation to Government extension officers: The project will orient selected DAE, DoF and DoL officers to improve their ability to be able to train female farmers on a range of value chain technologies and techniques using participatory and inclusive approaches. Exchange visits will be hosted for officers to visit other WBCs to see and learn about the model. This will increase the ability of officers to be able to increase the skills and knowledge of producers both female and male. Ensuring improved skills of extension officers and links to WBCs will mean that entrepreneurs and producers can continue to access services beyond the lifespan of the project.

Output 2. Increased access to relevant and affordable information, innovative resilient technology and services

Output 2 will contribute to both BG SO II and SO III by providing services and products that will lead to development of productive sectors as well as significantly increase household income, reduce costs and increase yield.

Activity-2.1: The project will support WBCs to organise workshops to share technical information with producers groups. Entrepreneurs will regularly provide free quality information from their centres to producers through engaging qualified professionals from public and private sectors, for example the DAE, Megafeed, Isphani and ACME pharmaceuticals among others. Information will be shared through face to face discussions, presentations or remotely through

internet services. Entrepreneurs will regularly visit producer groups and provide advisory services. Visits will also be an opportunity for entrepreneurs to promote products available at the centres, vice versa to purchase products from producer groups as well as coordinate collective selling.

Activity-2.2: Demonstration on establishment of gender sensitive technology: Women entrepreneurs will support producers at group level to establish trial demonstrations on gender sensitive agricultural technology in order to develop their business management capacity, expand their businesses, increase income, increase market access, increase efficiency and reduce losses. Gender sensitive technology will include the establishment of WISH pond demonstrations that are targeted to increase the participation of women in fish farming by establishing small 5ft x 6ft x 2ft small pond using only earth filled concrete bags and a tarpaulin. These ponds are designed to be set up near the homestead where women can farm and harvest fish using low cost and light weight equipment without traveling outside of their home. Other gender sensitive technology such as light weight nets developed by WorldFish will also be demonstrated to increase women's participating in harvest and selling fish. The action specifically addresses environmental issues through the promotion of Low External Input and Sustainable Agriculture (LEISA) technologies.

Output 3. Capacity building of women in establishing linkages with market

Output 3 will contribute to BG SO II by facilitating the establishment of producer groups and networks that will become a collective driving force for natural resource based development, including agriculture, fisheries and livestock improvement.

Activity-3.1: The project will engage new WBC entrepreneurs in existing WMAs and Service Providers Associations (SPAs) already established by UP. Engaging in these networks will enable entrepreneurs to meet regularly to share business ideas, marketing information and techniques for improved natural resource based development. Mutually beneficial links will be formed to regularly update the knowledge and skills of women business centre entrepreneurs. The networks will host regular trainings, meetings and workshops.

Activity-3.2: The network will publish newsletters which will be designed by entrepreneurs. The entrepreneurs will be encouraged to take an active role in the WMAs as both members and in key committee positions to promote the role of women in agriculture through sharing information at regional and national market. This will further promote the role of WBCs in areas outside the immediate project.

Under Output 4: Monitoring and knowledge management

Outcome 4 will contribute towards BG SO IV by strengthening the knowledge and evidence leading to a strengthened institutional framework for development services in South West coastal zones.

Activity-4.1: Project staff will provide ongoing light monitoring to support to entrepreneurs for the continual development of the business, skills and networks.

Activity-4.2: Knowledge and experiences will be shared among stakeholders and the wider community. The project will develop project booklets to share findings and results which will be

communicated through workshops and a short documentary film. The aim will be to share the successful model for scalability and sustainability.

All outputs will be focused on addressing gender inequality and will target women who are most marginalised in agriculture value chains. By working at grassroots level, with local actors, private sector and government extension services the project will contribute to component 1 and through the improved agricultural production and entrepreneurship business development the project will contribute to Component 3 and 4.

6. Monitoring, Evaluation and Learning

The monitoring and evaluation (M&E) system will be developed on the basis of the project theory of change. Monitoring will be presented in annual reports while the monitoring of activities will be included in the monthly reports. Both qualitative and quantitative aspects will be considered and analysed in the outcome and activity monitoring. The monitoring system of the project will also consider the indicators of United Purpose country strategy thematic priority and BGP aim and objectives.

Besides the usual collection of quantitative and qualitative monitoring data, which will be disaggregated according to gender and poverty levels, studies will capitalise the experience of the project regarding its approaches, behavioural changes, institutional development and the impacts on the BGP.

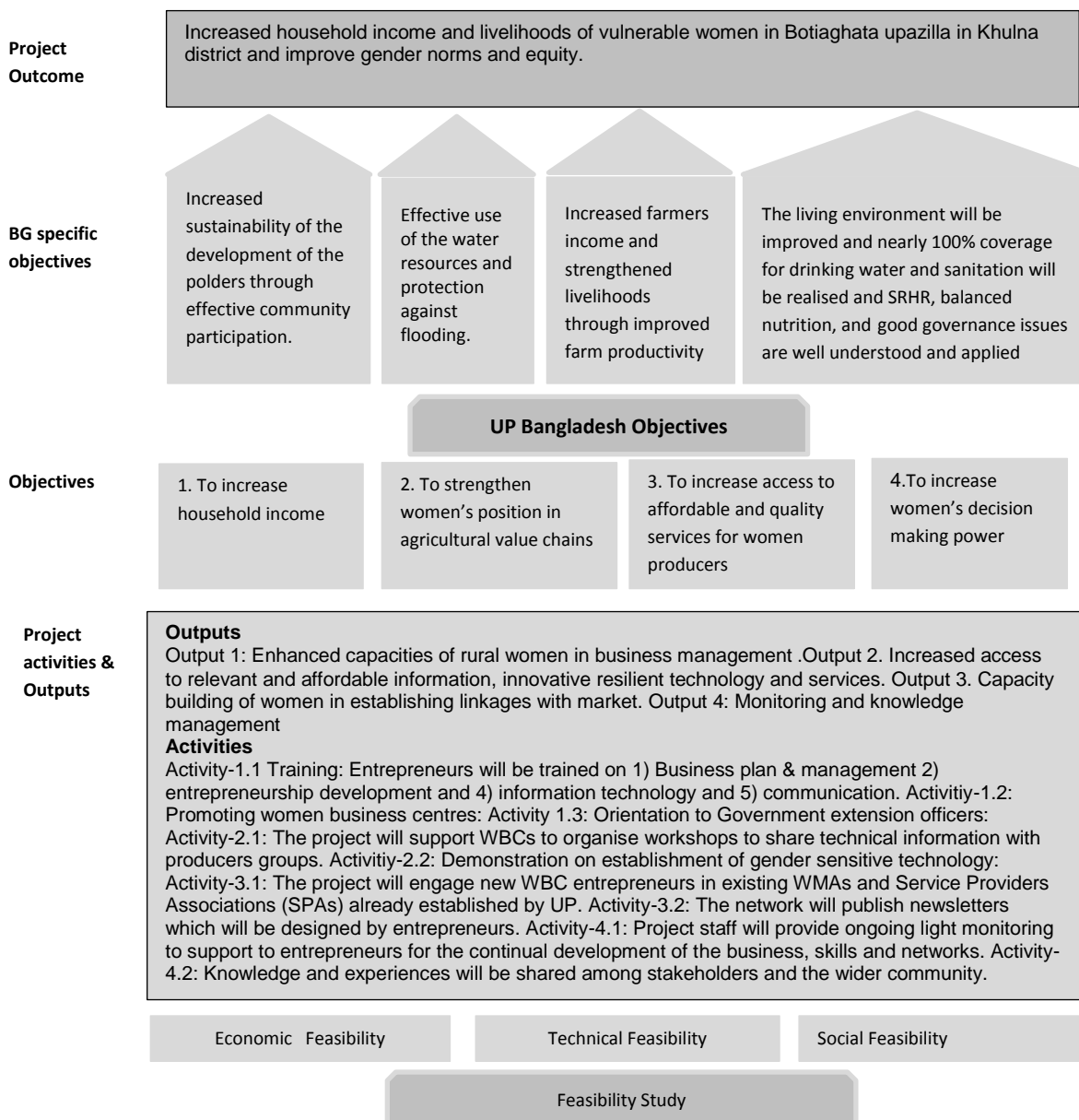
M&E will be the responsibility of the Project Manager. Backstopping for the improvement of the M&E system, as well as the knowledge management system, its operation and data analysis, will be provided by United Purpose Country Office. There will be an annual joint assessment involving UP and BG stakeholders to determine the progress and adjustments that are required to be made. The monitoring results achieved by the project will be shared amongst participants, public institutions and relevant stakeholders.

Entrepreneurs will maintain records of clients, sales and activities they undertake as part of their role as entrepreneurs. This will include producer group lists, training delivered, collective selling, inputs sold, producers yield and income. Using purpose designed dairies notes will be kept to a minimum to reduce the burden of entrepreneurs and facilitate uniformity and data consolidation. Project staff will conduct spot checks to verify M&E information and assist WBCs to collate and analyse information. Data-base formats and data collection instruments will be used that were developed by UP.

Financial reports will be provided on a quarterly basis to the UP Country Office and the Head Office. Financial audit will be commissioned on a yearly basis in line with NGO Affairs Bureau requirements. Moreover, the Country Office of United Purpose will maintain a system of financial monitoring (internal audit) concerning the financial statements and budget.

Theory of change: The project seeks to contribute to the reduction of poverty by improving economic empowerment of women in waterlogging areas of SW Bangladesh (impact). The key intended outcome of the project is increased household income and livelihoods of vulnerable women in Botiaghata upazilla in Khulna district and improve gender norms and equity (outcome). This will be achieved through i) Improving capacities of rural women in business management for establishing functional linkages to market actors, other private sector actors and public experts [output1]; ii) Increasing access to relevant and affordable information, innovative resilient technology(poultry, livestock, fish and fruits and vegetables) and services [output2]; iii) Capacity building of women in establishing linkages with market and private and public sector organisations [output 3]; iv) Increased awareness on women business centre and

their services amongst local and division governments through monitoring and knowledge management [Output 4]; provided that the assumptions of the project hold true.



Logical frame work

Objectives	Indicator	Baseline	Target	Source of information	Assumption
Outcome-1: Increased household income and livelihoods of	Increased monthly income of producers derived from productive sectors	Average monthly income of male producers is BDT 1,950 and female producers is	15%	Yearly sample surveys conducted by LSP coach and	

vulnerable women in Botiaghata upazilla in Khulna district and improve gender norms and equity.		BDT 800		project staff using tools; Focus group discussions	
	Increased yield of producers	Producers' annual fish yield (per farmer) is 144kg for fish, 178kg for vegetables, 427 litres for milk, 29kg for poultry.	40%	Yearly sample surveys conducted by LSP coach and project staff using tools; Focus group discussions	
	More female producers have control over the money they make from agricultural value chains	X	X + 15%	Yearly sample surveys conducted by LSP coach and project staff using tools; Focus group discussions	
	Increase the frequency that female producers leave the homestead to engage in marketing either at the WBC or at the local market	X	X + 20% increased frequency	Yearly sample surveys conducted by LSP coach and project staff using tools; Focus group discussions	
	More female producers make decisions independently or with their spouse about which agricultural techniques to follow	X	X + 15% increase in female producers who either independently or jointly make decisions about production	Yearly sample surveys conducted by LSP coach and project staff using tools; Focus group discussions	
	Output-1;Improving capacities of rural women in business management for establishing functional linkages to market actors, other private sector actors and public experts	Number of Women Business Centres set up with a) an established committee and b) with a developed business plan.	0(0%)	4 (100%)	WBC
	Number and percentage of Women Business Centres committee	Female (a) 0(0%) (b) 0(0%)	Female (a) 20(50%) (b) 10(50%)	WBC register, annual survey	

	members a) trained in business management skills and b) who are able to recall 3 out of the 5 main concepts shared during these training				
	Income generated by WBC entrepreneurs	Current average monthly income of the potential selected WBC entrepreneurs is BDT 1,100	30%	WBC income statement	
Output-2:Increasing access to relevant and affordable information, innovative resilient technology(poultry, livestock, fish and fruits and vegetables) and services	Increased access to IT services	X % of female producer group members and Y% of male producers have access to IT services	X + 20% Y + 20%		1) Women feel comfortable to provide services , business and make decisions 2) Staff turnover (including women entrepreneurs)
	Reduced amount spent on agricultural inputs as a result of accessing quality and reasonable inputs through centres	Male producers spend approximately X BDT per month on inputs and female producers spend X BDT per month	X - 15%		
Output-3:Capacity building of women in establishing linkages with market and private and public sector organisations	All WBCs are linked to multiple value chain actors	0	5	MoUs established by each centre with various market actors	1) No cultural barriers with regard to women's participation to provide services, do business and make decisions 2) No staff turnover (including the turnover of women entrepreneurs)
	Producer groups are collectively selling produce through WBC at market price	0	80%	Of producers are collectively selling through WBC	
	Increased farm-gate prices for producers	Current prices for female milk producers is BDT 35 per Ltr, poultry producers is BDT 300 per Kg, vegetable producers is BDT 25 Per Kg and fish producers is BDT 110 per Kg.	15%	Increase in farm gate prices for female producers	
Output-4: Increased awareness on women business centre and their services amongst local and division governments through monitoring and knowledge management.	-Developing number of profile -Developing number of documentary		1 1	-Documentary -WBC profile	

7. Feasibility

Using the findings from the six month study, the project team has analysed the feasibility of the WBC approach and the sustainability of the proposed approach.

Evaluation criteria	Strength	Weakness	Opportunity	Threat
i) Evaluation of Technical feasibility	<ul style="list-style-type: none"> -Experienced business women are available in the WMG groups and communities -Women members are ready for the partial investment in the WBC initiatives - The selected locations are suitable for poultry, cow, fish and vegetable production. -The Homesteads are free from waterlogging. -Availability of a number private sector organizations (IT services, technical services, financial services etc) 	<ul style="list-style-type: none"> -Some parts of the selected areas are waterlogged 	<ul style="list-style-type: none"> - Homestead based WISH pond technology is an available proven technology can be used for fish production by women. All the materials (jute sac, polythene etc) are also locally available. -Homestead based poultry shed are available in the project area which can be made with locally available materials -Homestead based milk processing technologies are suitable for preparing and storing dairy products -Technology and materials are available for homestead based seedlings production 	<ul style="list-style-type: none"> - Climate change effect
1) Evaluation of economic feasibility	<ul style="list-style-type: none"> -Women are involved with production of fish, poultry, milk and vegetables -Women already started investment for the establishment of WBC during the selection process -Beyond the selected main 4 value chains; there are some other potential products are available in the locality which have market demand such as medicinal plants, honey (eg; Acme pvt ltd) -In addition to the technical knowledge, Public sector 	<ul style="list-style-type: none"> -Women are dependent on their husband for financial investment - Profit margins are not enough for women -Women members are less organized in groups -Mortgage of assets for financial services for 	<ul style="list-style-type: none"> -Agent banking (through Bank Asia) is available in the selected location and willing to provide financial services to women entrepreneurs -Women are ready to implement business from diversified products -Private sectors are available in the locality (eg; Acme pvt ltd) -Due to the long list of available products, the 	<ul style="list-style-type: none"> -less time to follow up support the WBCs for dealing with huge number of products and private sector organisations

	organisations are readily interested to share market information at group levels. -Availability of existing groups (eg; FFS, MFS etc)	women.	operational cost of producers and women members will be minimum	
iii) Evaluation social feasibility	-Male members of WMG group showed interest to involve female WMG members and community members in WBC -WMG members showed interest to provide financial services for the WBC business initiatives -WMG members selected the locations for WBC which are remote considering marketing of produces.	-Women are interested to participate in marketing their products but have limited mobility	- IT service and WBC centres are appreciated by the women and men for reducing travel time - Inclusion of health/ nutrition services can increase the acceptability of WBCs -Most of the selected area are remote	-Supporting a limited number of WBCs

8.1 Technical feasibility

The participatory value chain assessment workshops identified the most prominent agricultural value chains in order to focus on the products and sectors where there is an active and established value chain and market demand. The project has identified 66465 (61%) female and 41669 (39%) male farmers within four unions that could benefit and be reached by WBCs. Female entrepreneurs were identified through Blue Gold Programme existing farmer field and market field schools drawing on the experience and training that these women have already received. Locations for WBC sites have been selected in consultation with the community and we have targeted areas where access to markets is limited but where production is wide spread. Locations were also verified by Blue Gold zonal staff drawing on their experience and knowledge of the working area. Tested locally available technology has been identified from government extension officers and through other NGOs working in the area which will be drawn on for demonstrations. Technology has been selected based on the requirement that materials are available at local level. The study has identified the issues that exist for technical development of the value chains and has refined the project approach. This approach has been shared through a series of workshops, FGDs and KIIs. Interest from producers, the Government and private sector has been recorded. Drawing on UP's knowledge and experience in the working area the indicators have been developed to monitor progress towards targets. Impacts will remain sustainable through a continuous, two-way, knowledge transfer from line agencies and the private sector to women entrepreneurs to women and male producers. The technical impacts of the action will go beyond the beneficiaries of the action, through continuous promotion of technology by public and private sector organisations, and through knowledge sharing.

8.2 Economic feasibility

The value chain assessments identified losses in value chains in terms of yield, wastage, and prices which can be reduced through the application of improved production techniques, access

to better inputs, access to markets and increased bargaining power. The diversification of production also reduces the financial risks for producers that are susceptible to weather, waterlogging and climate shocks. Collective selling in similar geographical contexts has shown that producers can generate better prices for their products. The multi-year experience of UP, the in-depth feasibility study and the commitment of the private and public sector suggests that the model will be economically sustainable beyond the funding received from the Blue gold Program.

Based on the study findings and the experience of UP in WBC projects elsewhere in Bangladesh the project anticipates an increase income of 15%, increased yields by 40% and 30% increased income of female entrepreneurs.

It is expected that the documentation and dissemination of the model and the acceptance and replication of the model by other actors at these levels, will generate financial support for the actors.

Entrepreneurs will be able to generate an income from input as well as output markets. The feasibility study identified a clear gap in timely access to quality and fairly priced inputs. The WBCs will draw on this demand and be able to stock inputs for sale on a commission basis which they will be able to directly market to producers through their producer groups. The WBCs are also designed to offer a range of services to reduce financial risk and increase the footfall in the centres. Working with producer groups of both male and female will also encourage men to utilise the centres.

Risks for women entrepreneurs in setting up a centre are reduced through the initial capital support of equipment for the WBCs by the project, and vice versa risks for the project are reduced through the partial investment by entrepreneurs in their centres. Training on entrepreneurship, business planning and financial management will be conducted to increase forward business planning reducing risks further.

8.3 Social feasibility

The study has consulted a wide range of stakeholders and the project concept has been widely accepted. Entrepreneurs have been selected as a result of their positive influence and acceptance in the community as leaders or effective farmers. Entrepreneurs have also been identified bearing in mind the initial financial investment required which is usually in the form of financial support from husbands or male family members. Experience elsewhere has shown that initially male family members can be hesitant about the centres but these attitudes change when the family members start seeing the increased income that women are generating. The centres also enable women to engage in income generating activities without venturing too far from the home which is more culturally acceptable. Female farmers are also more able to seek support and advice from female rather than male agricultural entrepreneurs.

The technology to be promoted that has already proven successful and accepted in the area has been identified. Successful gender sensitive technology will be promoted to increase participation of women in various stages of the value chain. Visits to other WBCs will also further encourage acceptance of the model by producers and entrepreneurs.

Through engaging men in producers groups, women will be increasingly seen and respected as business managers in their community which will have a wider impact on the attitudes of many in society. Women will also have more decision making power in WMGs, SPAs and in the community and this will positively impact on other women.