11. ANNEX

11.1 LOGICAL FRAMEWORK

Blue Gold Program Description	Indicators and targets (March 2019)	Means of Verification	Assumptions
Program Goal Reduce poverty by creating a healthy living environment and a sustainable socio-economic development for 150,000 households living in 160,000 ha polder area	1. Households with 5 months or more of food shortage reduced to less than 10% 2. 30% increase in households assets 3. Average household expenditure on housing and education increased by at least 20% (*These targets apply to male and to female headed households*)	1. Baseline and impact surveys 2. Baseline and impact surveys 3. Baseline and impact surveys	
Program Purpose 1. To protect the communities and their land located in polders against floods from river and sea (climate change adaptation) and to optimize the use of water resources for their productive sectors. 2. To organize the communities in cooperatives which will have to become the driving force for the natural resources based development (agriculture, fisheries and livestock), whereby environment, gender and good governance are effectively addressed. 3. To increase the household income derived from the productive sectors 4. To strengthen the institutional framework for sustained water resources development and related development services in the SW/SC zones.	1. 160,000 ha has increased protection against floods, including by fine-tuning works, contributing to stability for food security 2. 846 WMGs (existing and new) of which 30% (250) perform production and economic activities 3. (a) Average annual household incomes in Blue Gold polders have increased with Tk15,000; (b) At least 2250 LCS women (30% of 7500 LCS women) are engaged in production / income earning 4. Increased institutional capacity of BWDB, DAE and DoC at Zonal levels to provide effective development services	1. Records on polders with Blue Gold water management interventions 2. DoC register / monitoring data / functionality assessments 3. (a) Baseline and impact surveys; (b) survey among LCS women 4. Institutional capacity study (to be programmed) / Training evaluation forms	

Component 1: Community mobilisation and institutional strengthening			
Component objective: Form/strengthen WMGs and WMAs to participate in water management aspects effectively and perform production and business functions, establish effective partnerships between WMOs and government institutions and other service providers and stimulate professionalization of WMOs.			
Component Results	**Indicators**	**Means of verification**	**Assumptions**
1. New WMGs and WMAs are formed and registered 2. WMGs and WMAs in IPSWAM polders are strengthened 3. Women are represented in WMG and WMA executive committees 4. WMGs and WMAs perform routine O&M activities efficiently based on O&M agreement with BWDB 5. WMGs and WMAs are performing production and business functions **6.** WMOs coordinate on their own with government institutions and other service providers	1. 600 new WMGs are established and operational with WMG members representing at least 50% of all households by the end of the project 2. At least 40% of all WMG members are female (IPSWAM and new) 3. At least 30% of the executive committees' membership of WMGs and WMAs are women 4. 80% of WMGs and WMAs perform O&M activities satisfactorily based on functionality assessment 5. 30% of WMGs perform production and economic activities 6. 70% of WMAs independently communicate with government institutions and other service providers	1. DoC register / Monitoring data / functionality assessments 2. Functionality assessments 3. Functionality Assessments 4. Agreement between WMA and BWDB on O&M arrangement and Functionality Assessments 5. Functionality Assessments 6. Functionality Assessments	1. Experience from other projects and successful cooperatives can be applied 2. Political support for a cooperative movement 3. A supportive enabling environment in particular on (good) governance 4. Periodic assessment integrated in the project M&E system **5.** Relevant government departments/ institutions/NGOs /private organizations are supportive
Component 2: Water Resources Management			
Component objective: Protect the communities and their land located in polders against water logging and floods from river and sea and to optimize the use of water resources for their productive sectors			
Component Results	**Indicators**	**Means of verification**	**Assumptions**
1.Water management in 9 IPSWAM polders and 12 other already rehabilitated polders fine tuned 2.Adequate flood protection and improved water management in 5 polders rehabilitated. 3. Landless people earn income from construction activities 4.Proper O&M of water management infrastructure assured 5.BWDB applies participatory approach in the South West and South Central zonal offices, including BWDB national level staff trained and aware of participatory approach	1. In 135,000 ha of polders the water management infrastructure fine-tuned for optimal use 2. 25,000 ha of polders rehabilitated 3. At least 50% of all earthwork is by LCS, of which at least 40% are female; at least 7500 women earning from LCS) 4. (a) MoU for O&M signed between all WMAs and BWDB; (b) Water logging in Blue Gold polders reduced by at least 50% 5. 75% of BWDB staff of relevant zonal offices and concerned national staff trained in participatory approach, including in gender aspects, and knowledge increased.	1. Records on polders with fine-tuning interventions 2. Records on rehabilitated polders 3. Monitoring by component 2 4. (a) List of WMAs established and MoUs signed (b) Inspection reports by TA and BWDB staff 5. Training records, including training evaluation forms	1. ADP has sufficient provisions for the proposed works 2. No major calamities occur 3. BWDB disburses fund to it's district offices in time 4. Mechanical Engineering (ME) supplies and installs gates for water structures in time

Component 3 Food Security and Agricultural Production			
Component Objective: Productive sectors (crops, aquaculture and livestock) performance will be higher for the benefit of male and female producers, contributing to increased income and food security			
Component Result	**Indicators**	**Means of verification**	**Assumptions**
1. New and improved agricultural production technologies are studied and adopted by male and female farmers 2. Increased and more diversified agricultural production and farm household income 3. Male and female farmers are supported by more efficient and effective agricultural research and extension services	1. FFS implemented and improved agricultural practices technologies adopted: 1.1 (a) 1400 FFS implemented and effectively completed; male : female FFS participant ratio is 50:50 1.2 New and improved FFS curricula developed and used, including on nutrition modules 1.3 80% of FFS trained female and male farmers adopted at least 3 FFS-promoted farm practices 1.4 Innovative technology introduced and applied for land preparation, irrigation, harvesting, storage and /or processing, also in view of adaptations to climate change 2. Productivity of FFS participants increased: 2.1. Rice 8% (in ton/ha) 2.2. High value crops 15% (ton/ha) 2.3. Eggs 50% (per household) 2.4. Fish 10% (in kg/ha) 2.5. Homestead vegetables and fruits 15% (in kg/household) 2.6 At 2 years after rehabilitation the production intensity in new Blue Gold polders is increased by 20% 2.7 Male and female famers are more market oriented by selling a larger proportion of their production 3.1 50 Departmental trainers and 150 Farmer Trainers trained to conduct FFS 3.2 Advanced FFS perform Participatory Action Research	1.1 Records on FFS implemented 1.2 List of training modules newly developed or improved 1.3 Participatory monitoring 1.4 Records on innovative technologies successfully introduced / Technical reports 2.1 – 2.6 Baseline and impact surveys, and other monitoring (by gender), technical reports and/or production statistics 2.7 Baseline and impact surveys, FGDs 3.1 Training records 3.2 Monitoring / Technical Reports	1. Producers will be able to settle their difference on water use 2. Timely availability of quality inputs (including credit) 3. DAE is supportive of Blue Gold objectives and flexible in implementing TOTs and FFSs 4. DLS and DOF provide support to training courses 5. Financial consequences for innovations can be catered for 6. No major natural calamities occurred

Component 4 Business Development:			
Component objective: Contribute to farm household income from agricultural production by expanding business activities and employment through market orientation and private sector development			
Component results	**Indicators** Note: *most targets are preliminary and will be reviewed and possibly reformulated per Value Chain after VC selection/analysis and baseline data collection.*	**Means of verification**	**Assumptions**
1. Value chains for selected commodities are strengthened 2. Private Sector actors are facilitated to improve value chain linkages 3. WMO cooperatives expanded their economic activities 4. Effective supporting services are available for value chain actors 5. Private sector generated non-farm employment	1.1 8 value chains analysed, including at least 4 in which women actors are significantly involved 1.2 Participating businesses in selected value chains increased income levels by 20% 1.3 Value of new investments in post-harvest equipment and infrastructure in value chains 2. 1 Number of businesses in the polders has increased with 10% 2.2 Producers groups established and operational, which includes female groups or female members 2.3 20% Income increase of producer group participants attributable to value adding and sales volumes. 3.1 30% of WMGs perform production and economic activities 3.2 Curriculum for Farmer Business Schools (FBS) developed 3.3 At least 60 FBS implemented and effectively completed 4. Increase in service customer satisfaction amongst the producer actors 5. Employment by household members	1.1 Reports / Lists of analysed value chains 1.2 Surveys among business before and after interventions 1.3 Monitoring 2.1 Statistics and/or data collection at start and end of program 2.2 Monitoring 2.3 Surveys among producer group members 3.1 Functionality Assessments 3.2 New curriculum documented 3.3 Records on FBS implemented 4. Surveys on service customer satisfaction	1. Component 3 assumptions are underlying component 4 2. Rural finance supportive of productive sector development 3. Cohesion remains amongst WMO members to avoid capturing. 4. Dept. of Agricultural Extension and Dept. of cooperatives is supportive 5. Private sector actors will allow insight in their business management information 6. Selected VCs offer opportunities / employment opportunities for women; cultural barriers for women to take up employment outside homestead or community can be lifted

	increased by 10% following implementation of value chains (Target: 30% of them are female)	5. Baseline and impact surveys	

Component 5: Cross-cutting Issues

Component objectives:

1. Good governance: Promote integrity in the water sector
2. Gender: enable men and women to benefit more equally from Blue Gold interventions; increase socio-economic status of women in the polders; and improve Blue Gold's performance and the likelihood of sustainability.
3. Environment: To avoid or mitigate any damaging environmental impact of Blue Gold interventions and promote environmental improvements
4. Disaster Risk Reduction (including Climate Change Adaptations): reduce vulnerability and increase resilience of community to natural hazards including climate change, thereby creating a more stable environment for increasing food security, agricultural production and business development.
5. Innovations: Acceleration of the development process by application of innovative solutions in (1) water management and (2) productive sectors, i.e. agricultural production and business development.

Component Result	Indicators	Means of verification	Assumptions
1. The Annotated Water Integrity Scan (AWIS) adopted and disseminated 2. Increased decision-making of female WMO members 3. Increased women's leadership 4. Women's mobility improved 5. Increase in no of women earning own cash income 6. Environmental conditions in Blue Gold polders improved 7. Community people and local institutions (LGI and WMOs) are better equipped to cope with natural hazards and the effects of climate change. 8. Innovative technologies / solutions piloted in water management 9. Innovative solutions introduced and applied in agricultural production and selected value chains	1. Staff of BG and BWDB trained in adopted AWIS approach by WIN trainer 2. Participation of women in decision making increased (target: ≥40% of female WMG / WMA members actively participate in discussions and decision-making within WMG) 3. Women leadership increased (40% of EC members in important positions are women) 4. Mobility of women increased (target: ≥25% of women moving outside their own village on their own) 5. ≥30% of the able and adult women derive own cash income from the sales of surplus production, other IGA and/or employment. 6. 26 Sustainable Environmental Management Plans updated (in IPSWAM polders) or formulated by male and female WMO members, and evidence of their (partial) implementation 7. Community Risk Assessments for all polders (by Blue Gold, unless already done by CDMP); Community Based Disaster Risk management (CBDR) strategies for each polder developed; and evidence of their (partial) implementation. 8. 2 pilots executed on innovative solutions (e.g. building with nature) for polder protection and land reclamation 9. Number of improved technologies or other innovative solutions introduced in agricultural production and in value chain development (no target)	1. Training report / Adopted AWIS approach 2. Functionality assessments of WMOs 3. Functionality assessments of WMOs 4. Baseline and impact surveys 5. Impact survey 6. Monitoring and functionality assessment 7. Monitoring and functionality assessment 8. Record keeping on innovations in WM / Technical reports 9. Record keeping on innovations in component 3 and 4 / Technical Reports	