

Maximising the impact of Blue Gold Program Extension Methodologies Strategic Action Plan

1 Background

This strategic action plan has been prepared by a cross-disciplinary group of the TA team, a number of whom had been closely involved with the joint led by Agro-Insight and which resulted in the publication of Agro-Insight's report "Communication interventions and extension methods: a study of sharing information with farmers" (March 2018). This action plan has been prepared by a team that is familiar with the Blue Gold area and what extension methodologies have worked successfully, and who also benefited from a joint analysis of these extension methodologies alongside the Agro-Insight extension specialists. This report contains their recommended strategic action plan.

2 Interactive Popular Theatre (IPT/Natok)

BGP has earlier commissioned folk drama/interactive popular theatre (*natok*) to introduce the concept of participatory water management to communities, especially when entering a new polder. *Natoks* are often used to spark community initiative about a complex topic (e.g. water is managed only for the benefit of few) and are powerful in engaging large audiences.

The target audience for future BGP TA-financed *natoks* consists of present and potential community leaders and of the citizens that potentially would support them to improve local water management conditions. Leadership includes local government, informal leaders and leadership of existing water management groups.

The generic objective for the use of *natoks* is to enable communities to take initiatives (aided or unaided) to tackle a major water management issue. For BGP, the issue of maintenance – with the associated problems of how to mobilise resources, how to ensure continuity and how to distribute responsibilities – is a very relevant larger issue, on which local initiative could benefit from the use of *natoks*. Messages on increasing agricultural production, marketing and collective actions are also added in *natoks*, but should not deviate attention from the key issue.

2.1 **Actions**

- (a) **Actions Script concept** – We propose to announce an internal competition for the best script idea for a folk drama about operation and maintenance of water infrastructure. For the evaluation, a jury will be formed combining BGP seniors and senior artists. A modest prize to be given to the best idea(s);
- (b) **Script development** – Based on ideas from the combining good ideas from various entries a story concept will be developed around the issue of maintenance and operation along with a list of key messages that will need to emerge from the drama.
- (c) **Prepare and conduct drama** – The script will be finalised with folk drama companies, who will adapt the messages to a dramatic setting. Contracts will be such that the engagement can be discontinued if the results are poor. The drama will be shown at several locations in each of the 22 polders;

3 Video preparation and screening

BGP prepared several videos and has a modest library of videos related to water management and crop production. The two relevant types are:

- Inspirational videos that emphasise the impact of novel actions prepare the target audience for further discussion about taking collective actions. Such video testimonials prepare the ground for follow-up meetings of a more technical nature. They inspire, rather than explain!
- Technical instruction videos (on proper operation of sluice gate, oiling/greasing, tightening of nuts and bolts, production and preservation of seeds) are to provide guidance, for example, to maintain water management infrastructure or to produce quality seeds for local sale.

Inspirational videos are aimed to encourage existing and potential WMG members and community leaders to invest time and resources in new activities (e.g. CAWM, collective marketing, etc.). Technical instructional videos provide sluice gate operators, sluice catchment O&M committee members, FFS members/advanced farmers with technical guidance for better results. Typical instruction videos could be used to complement FFS or O&M training sessions. Videos are by themselves less effective than direct contact between peers (horizontal learning) or with instructors (FFS) or engineers (O&M training). Mobile phone version of these typical instruction videos might guide relevant target group members at site even after long time.

3.1 Actions

- (a) Selection of topics** – Water Management and Agriculture Professionals will propose the topics for video preparation with steps and process.
- (b) Script development** – Based on the proposed topics and the type of video required (inspirational / instructive) a systematic step by step description (Script) will be prepared following the requirement.
- (c) Preparation and Screening of videos** - The script will be finalized with respective professionals, prepare videos and screens at relevant sites. Prepare Mobile phone version and provide to the CDFs, FTs, gate operators, RFs, RPs to use it as practical handbook/home tutor in absence of trainer.
- (d) Timing** - Video productions will be concentrated in the period up to end 2018, to ensure that videos are available for at least a one-and-a-half year period. A modest number will be produced: 5 inspirational and 2 instructional. Based on the performance of WMG and BGP's interest the number of video productions can be increase.

All videos (inspirational and technical instructional) can be loaded onto smart projectors, which are compact and easy to take to the field and also can include a version in 3gp format, which can be loaded onto the mobile phones of local people. This will be a permanent resource, left in the community, which WMO members can watch again and share with others.

4 **Horizontal Learning (HL)**

Horizontal Learning is a result based peer to peer learning process towards scaling up of good practices, innovative activities, new technologies towards capacity and confidence building of the peers. In Blue Gold initiated by BGP TA led by WMOs and supported by BWDB, DAE, DoF, DLS, LGIs and others. It created a win-win situation and a sense of positive competition among the participating WMOs and UPs. BGP Horizontal Learning Process may be defined as “outcome-based structured/adaptive learning process that assists WMOs to identify, learn and replicate good practices from their peers to meet their needs considering their own ability, resources and situation with technical assistance BWDB, DAE, DoF, DLS, LGIs, peers and BGP”. Horizontal Learning is also a powerful motivational tool.

Target audiences of Horizontal learning are the WMO members and farmers. Field staff of BWDB, DAE, CDF, UP, FT, RF, CRP who are motivating and supporting the WMOs for their capacity building and scaling-up of good practices may benefit indirectly from their involvement. The objective of Horizontal Learning is to scale-up good practices, innovations, achievements, results emerged through BGP interventions in the polders as well as capacity and confidence building of the WMO members and farmers towards sustainability of participatory water management, agriculture production and market development.

4.1 **Actions**

- (a) **Identification of good practices** – Polder team jointly with WMGs will identify good practices, innovative activities, success, achievements, results and new technologies emerged through BGP interventions in the polders to share with other WMGs. We aim to record more than a hundred good practices before June 2019.
- (b) **Preparation of Fact sheets** – Polder and Zonal team will develop Fact Sheets on the identified good practices, innovative activities, success, achievements, results, new technologies with short description of context, facts, initiators, indicators, strength, challenges and contact mobile number of the respective WMG representatives and individual (in case of individual initiative) as a visible documentation of the results and to inspire the WMGs, farmers and others. Around 100 Fact Sheets may be developed and published in two phases (October 2018 and June 2019). BGP central team will support for editing, compilation and publication of Fact Sheets and zonal and polder team will facilitate and support for sharing the Fact sheets among the WMG members/farmers to inspire them towards replication of good practices to meet their needs.
- (c) **Organize experience-sharing visits** – BGP (Zone and Polder team) including BWDB, DAE will support WMGs to organize experience-sharing visits for the interested/inspired WMG members and farmers to the place of good practices to learn from the host WMG members and farmers through direct interaction and practical field observation to facilitate replication of their selected good practices to meet their needs according and ability in their own areas. Motivated and committed WMG members, farmers will prepare a draft replication plan as part of the experience sharing visit. Polder team will also facilitate WMGs to organize informal experience sharing visits, which are fully managed by WMGs and without project support.

- (d) **Follow-up and provide technical support for replication** – Polder team will maintain contact with the committed WMG members and farmers, make follow-up and facilitate technical support towards replication of selected good practices.
- (e) **Experience-sharing workshop** – BGP will support experience-sharing workshops to exchange innovations/ new technologies/results/successes among WMOs, private sectors, projects, development partners etc. Such workshops may be organized at least 2 each at Khulna and Patuakhali and 1 at Satkhira each year.
- (f) **Networking workshop** – BGP will support to organize network workshop/meeting among the WMOs, LGI, service providers and private sectors towards establishing direct connection among them and reduce dependency on project or any particular stakeholder. Such workshops may be organized at least 2 each at Khulna and Patuakhali and 1 at Satkhira each year.

These actions are not limited to any particular type of activities – which could include water management, OM, agriculture production and market development (CII, CLF), CAWM, gender, linkage and partnership development, collective actions, IGA etc.

5 Printed Materials, Signboards, Notice Boards, Information Boards

Signboards can prove to be the best tools to communicate to the people information about BGP activities - what the program is about with information on what is to be expected. The target audience is polder communities both WMG members and non-members, with the aim of improving our visibility and to provide our target community with essential information about BGP activities.

Good signboard can help us in a number of different ways, including:

- **Branding and visibility.** Prominent, eye-catching signage exposes our activities to people who over time may become WMG members and helps us build a strong brand.
- **Differentiation.** In the polder community many other program or organization are implementing their activities. Our signage can help to differentiate us from the other organization. The more distinctive our signage, the more our program will stand out in the eyes of our potential stakeholders and as long as our signage reinforces our unique point of difference, it can act as a virtual representative 24 hours a day, seven days a week.
- **Functionality:** As well as having a promotional purpose, our signage also has a functional role to play in helping direct people to our activities. This can help us raise awareness of our different activities and improve our target people experience.
- **Signage is a cheap communication strategy:** While there may be an initial outlay, once our signage has been created there are no further costs unlike many other forms of communicating that require on-going maintenance and updating. When we consider the number of people our signage will reach compared with other types of communicating tools.
- **How about signs at sluices, stipulating proper usage.** That's a very 'functionality-oriented' sign and very useful. Same for signboards at LCS sites that disclose the contract conditions. These two must come back in our mix – although they should not bear our logo!

5.1 Actions

- (a) **Concept of development:** Based on the activities the information for signage will come from sector specialist of BGP. They will select core message, target audience and place.
- (b) **Shape and size:** All signage on different purpose will in same direction like the shape, size, colour, position of logo, writing font etc. for BGP area.
- (c) **Materials:** Considering durable the signage can be prepared by metal sheet and metal angle/bar. But we can use PVC with wooden frame.
- (d) **Placement:** Placement is an important consideration for setting up the signboard, opinion of polder coordinators will be preferred regarding this.

6 Demonstrations

Demonstration is one of the most effective weapons to disseminate different agricultural technologies to the neighbouring farmers. There are two types of demonstrations; one is method and the other is result demonstration.

Result demonstrations show what happens as a result of using a particular technology in the field or homestead. Examples include growing transplanted Aman rice using balanced dose of fertilizer, using Integrated Pest Management in rice during a season, or demonstrating a new cropping pattern. Result demonstrations can be conducted over a single season, two seasons or a whole year. Although some result demonstrations conducted with groups. Those which are conducted with individuals are only really effective when combined with group extension events at the demonstration sites.

BGP encourages the use of a range of different types of result demonstrations, depending on local conditions, local farmer problems, and the technologies which have been identified in response to farmer needs. The different types of result demonstrations, BG follows, include: single season demonstrations (e.g. mung bean, sunflower), single intervention demonstrations (varietal demonstration, fertilizer demonstrations), cropping pattern demonstrations (e.g. CII), block demonstrations (CAWM), package demonstrations (e.g. Water melon initiative digging mini ponds), etc. Method demonstrations are group extension events conducted over one to two hours to demonstrate and practice a specific skill, step by step. Method demonstrations are low cost and relatively efficient as they involve one extension worker and several farmers. They are participatory and enable farmers to learn (e.g. grafting method for tree multiplication)

First, the demonstration must produce results that are visible and significant enough to convince farmers to try the new practice themselves. If the practice is, for instance, not fully tested before hand under local conditions, the demonstration runs a high risk of failure. Second, the innovation has to satisfy the farmer's own criteria in terms of the other risks associated with it. That is, it must promise an immediate return, fall within the farmer's financial means, and suit prevailing cultural patterns. Third, the demonstration should not be implemented by an extension agent i.e. SAAO/CDFs. Farmers would be more impressed by results obtained by their peers than done by an extension agent/expert. Fourth, the farmer on whose land a result demonstration is conducted cannot be extremely wealthy or progressive; nor should the plots receive an undue amount of attention and care. The idea of the demonstration is to show a group of farmers (WVG members) what results can be obtained by normal farmers under

normal conditions. Hence, the choice of demonstration farmer needs to be made with care, the site should be typical of surrounding lands and the crop itself must be managed at a realistic level. Any other arrangement will undermine the demonstration's effectiveness.

In setting up a result demo with a cooperating farmer, it is important to establish who is responsible for the labor involved in maintaining plots and who will provide necessary inputs. In order to make the demo credible, the farmer must do most of the actual work. Inputs are a stickier problem; ideally, the demonstration farmer should provide inputs from his/her own. But there are some instances where BGP needs to provide small amount inputs as a courtesy for a farmer's cooperation and learning to practice. Before deciding on that two questions need to be addressed; will a gift of inputs have a negative effect on the BGP-farmer relationship? How will other farmers perceive such a gift? Whatever the choice, arrangements must be made explicit at the outset.

Target audience of demonstration is FFS members and relevant farmers of the community.

Objective of demonstration is dissemination of methods and results of relevant technologies

6.1 Actions

- (a) **Actions Selection of demonstrable Issue/technology:** Blue Gold Program is working for the livelihood improvement i.e. economic development of the polder dwellers. So, the demo issue should be a new crop having yield potentiality with feasibility to grow in the local condition or be a Collective Action (CA) to improve intra-catchment water management for improve agriculture or be on method of cultivation like line sowing of mung bean etc. However, issue of demonstration should be selected first.
- (b) **Location & layout of demonstration plot:** The next set of practical considerations in setting up a demonstration focus on the plot are; its location, layout and size. A conspicuous or readily noticeable site is crucial in attracting maximum attention. Locations near roads or footpaths or on the immediate outskirts of a village are ideal. Visibility is the key factor in plot layout. When viewing from the most prominent vantage point, from a road, for example, the traditional and improved plots should be side by side rather than front and back. Signboards can be erected to attract further attention and provide explanations of the demonstration. (Note that signboards need to meet the visual literacy levels of a majority of the farmers observing the demonstration).
- (c) **Size of demo plot:** The size of the plot may be influenced by several factors; the labor constraints of the demo farmer and the amount of land he/she has available, the size of the group that will eventually observe the formal presentation of results, the type of crop, and the overall impression the demonstration is intended to create. In general, the plot should be large enough to be impressive without being too large to take in both parts of the demonstration with a single glance. Rough estimates suggest that two hundred square meters would be enough for an effective demo of field crops, with less area required for demonstrations with vegetables and for homestead activities. And if the demo issue is water management related, then it would be the entire Beel/similar crop fields. (Note: WMG leaders/management committee will be involved in the plots and farmers selection process)

- (d) **Setting demonstration:** Before setting demo i.e. planting/sowing crops, we must have a check list on activities to be performed during whole cropping season including fertilizers, weeding, pesticides, water management and other intercultural operations. Standard procedure must be followed in the demo plots to have the maximum results and all activities should be performed by farmers themselves with the presence of SAAO/CDFs/facilitators.
- (e) **Organize field day:** Fix a date and time 2 to 3 days prior to harvesting the crop for organizing a Field Day to show the results and impact of that particular crop yield as well as total cropping system. Invite adjacent potential & influential farmers, farmer leaders and local elites including officials from DAE/related organizations. Advantages of Field Day before harvesting are a) Participants will have scope to observe performance of standing crop, b) They will have scope to attend crop-cutting event & ultimately can be observed the yield performance. Only the participatory farmers will talk on process and result from his experience on the demo. Other than crop, the field day should be organized at a time when neighbouring farmers can see/find maximum benefit of the demonstration e.g. field day on beef fattening before taking that to market.

7 Farmers Field Schools (FFS)

Farmer Field Schools (FFSs) are a group-based learning process that has been used by government, NGOs and international agencies to promote Agricultural Production Technologies. FFS approach led to a deeper understanding of the problem and its causes. It was recognized that sustainable agricultural development required more than just the acquisition of ecological knowledge by individual farmers. It also required the development of a capability for generating, adapting and extending this knowledge within farming communities. The weakness of this capability in most farming communities is itself an important problem; one which has often been exacerbated by earlier agricultural development programs that fostered a dependency on external sources of expertise. In Blue Gold Program, we have been using this extension tool for extending and transferring different production technologies to the community people (WMGs) involving local farmers called FTs. Around 300 FFS may be organized in the coming two years. Modified FFS will be helpful to increase coverage of more farmers than the previous form of FFS.

Modified FFS Cycle 11-

- From cycle 11, FFS will be demand driven, targeted to poor people. Polder teams are placing demand.
- Unlike earlier where FFS schools were implemented either on 'Homestead production-Poultry-Nutrition module' or 'Fish-Beef Fattening-Nutrition module', now on it will be on specific Commodity module FFS, e.g. Poultry FFS, Fish FFS, Beef Fattening FFS, Vegetable FFS, Fruit FFS, etc..
- In the new format, number of session per FFS has been reduced (e.g. earlier one cycle used to be 20 sessions now it will be around 8 sessions).
- Earlier CDFs used to run FFS. From this cycle FTs will be running FFS and CDFs and polder team will play supervising role. FT involvement is a step towards sustainability as they are local people.
- As a result, number of FFS increased per cycle and there will be more direct beneficiaries under FFS.

Target audience for FFSs is members and farmers of the community, and the objective is transfer of technology to the farmers for increased production and profitability.

7.1 Actions

- (a) **Actions Farmers & technology selection:** As working principle of BGP is WMG based, WMG is asked for selecting farmers of its area who are interested to learn about a particular production technology. A final list of FFS participants from 25 households on a particular technology is prepared through a process with the active involvement of WMG.
- (b) **FFS member finalization:** CDFs visit each of the enlisted farmer's household to check whether it has been done as per FFS farmer selection criteria or not. If some farmers are not listed properly, CDFs will inform WMG to make-up the gaps (to change farmer as per selection criteria) and after finalization, WMG will provide the final list of FFS farmers to the CDF (BGP) by having a meeting with resolution. DAE is also encouraged to follow the same procedure.
- (c) **Materials & logistic collection:** For implementing FFS different types of materials and logistics are required; it is CDFs/SAAOs responsibilities to collect all materials & logistics including module, curriculum, FFS registers & FFS note book from zonal office/UAO office prior starting the FFS sessions.
- (d) **Implementing FFS sessions:** FTs will run FFS sessions with close cooperation from CDFs/SAAOs. A FFS session schedule will be supplied to all CDFs/SAAOs from the concern expert. DAE also run FFS by the departmental trainers.

8 FFS Field Days (FFDs)

FFDs are events organized by the successful farmers to showcase their successes and share about effective processes, steps, challenges, mitigation options with other farmers and community for replication. Objectives of the FFS field day are multidimensional. We organize/establish Farmer Field Schools in a particular WMG area. A WMG might have about 200 to 350 households. But we can include members from only 25 households as FFS participants, which are really a very small portion of the total community. Target audience of FFD is farmers and wider community. So, extension of improved technology and results to the wider community through horizontal learning is one of the main objectives of the Field Day. Other objectives of the Field Day are given below:

- To exhibit confidence of the FFS participants cultivating field crops, vegetables, fruits, fishes, rearing poultry & livestock by using improved agricultural technologies
- To aware other farmers on optimum usages of homestead area and crop field
- To inform other farmers on activities of FFS performed
- To close FFS activities formally with certificate distribution among the FFS members.
- To arrange formal hand over of FFS activities to concern WMG along with a completion report

8.1 Actions

- (a) **Planning & designing of FFD:** After completion of FFS sessions a FFD is planned in consultation with all FFS members. Date, time and venue of FFD are finalized in consultation meeting. How much booths would be prepared and what would be the role of FFS members during FFD are clarified during planning. Different activities and responsibilities related to FFD are distributed among the FFS leaders. Besides these, every FFS member invite his/her neighbouring 3 farmers to join the FFD event.
- (b) **Logistics & materials collection:** Before FFD event, all logistics and materials e.g. booth preparing materials, prizes, certificate and closing report should be collected and or prepared. It is mainly responsibility of CDFs/SAAOs.
- (c) **FFD Organization:** Beyond community farmers, invite WMG leaders, UP Chairman & members, community leaders, zonal experts and line department personnel (DAE/DLS/DoF). Assign a vocal & well informed FFS member at each of the booths to explain the visitors on important technologies practiced at their FFS. Arrange a place to sit and share experiences of FFS and non-FFS members.

9 **BGP Fair (*mela*)**

A fair (*mela*) can be an effective way to create awareness about improved technologies to a large number of people within a short time and to stimulate general motivation for agricultural and rural development in the area. It can also play a valuable role in strengthening relationships between extension partners. Farmers are able to see a range of technologies and ideas displayed by non-government organizations, other government agencies and input suppliers and discuss them in a lively and informal way. Using the concept of *mela*, Blue Gold Program organizes such exhibition called BGP *mela*. BGP *mela* is unique for its combination of technologies, presentations and showing WMG achievement & excellence. And through such fairs, the young generation as well as neighbouring farmers is getting opportunity to know about proper water management for agriculture, improve agriculture systems, market development & linkage development while the experienced WMG people (farmers) get the chance to show & share their achievements. DAE takes the lead to organize the *mela*. Target audience is farmers and community.

Objective of *mela* is demonstration of different improved technology, information and results towards extension of the results.

9.1 Actions

- (a) **Planning & designing of *mela*:** After having consent and budget from headquarter, DAE officials along with the Zonal TA Team jointly prepare a plan; deciding the physical layout of the venue, decoration of stalls, sending invitation, collection of exhibits, arrangements for demonstration of exhibits and technologies, publicity, opening and closing ceremonies and prizes. How much booth would be prepared, who would be invited to set a stall and what would be the role of particular expert members during *mela* event should be clear and responsibilities for different activities should also be distributed among the Experts based on their line of work. Media personnel are invited to cover the *mela* activities as well.

- (b) **Invitation to concern departments to join:** Concern department involved/linked with BGP are also invited to join the *mela* with their stalls. Different cultural programs are also organized at the *mela* venue to enhance *mela* amusements and learning.
- (c) **Logistics & materials collection:** Before *mela* event, all logistics and materials e.g. booth preparing materials, contract with Drama Team/cultural team, develop cultural program concept and contract with decorator for *mela* stall & cultural program stage preparation & decoration. It is mainly responsibility of Zonal Team/DAE depending on the budget line.
- (d) **Mela organization:** Beyond community farmers/WMG people, invite different govt. officials of Patuakhali/Khulna/Satkhira to expose the program/activities of Blue Gold. To disseminate information on *mela* event announcers move to the neighbouring areas and use loud speakers. To enhance the *mela* event, all concern of BGP including BWDB and EKN personnel will also be invited.

10 Cropping Intensity Increasing Initiative (CII)

Cropping Intensity Initiative (CII) is a way to improve crop production situation by effective use of water resources and community mobilization. Target audience of CII is the farmers and community. Objective of CII is increase in crop production and income growth through sharing experience, technology and results among the farmers in the community.

10.1 Actions

- (a) **Arrange Initial visit and learn about agricultural practice of farmers/WMG:** Polder team members should sit together and primarily identify the proposed CII pilot area by mentioning the WMG name. In the initial stage, CDFs will arrange visit to WMG as their regular task and discuss in group or individual farmer and will try to know about major cropping systems, type of crops, farmers practices in crop production, and water infrastructure condition (water drain out & irrigation facilities) of the proposed pilot area. This step will make a sense about the necessity to set up cropping intensity improvement trial in the pilot areas. This way, each CDF will submit the primary list to polder team and they will recommend at least 3-5 WMG's name (depends on polder size) for CII activities after analytical discussion among the team members.
- (b) **Finalize criteria for select CII trial plot:** Polder team will select the potential WMG by properly following the bellow selection criteria and will submit report to zonal team. We must select single or double crops area but do not consider triple crops or high productive area.
 - ✓ We must identify at least 3 to 5 acre land in a same field (in a boundary), where 5 to 12 farmers are involved (since it is mostly demonstration avoid plot more than 8 to 10 acres).
 - ✓ We will select those areas where there is scope of improving drainage facilities by doing light maintenance (make small field channel-that can be done by farmers in their own initiative if needed).

- ✓ Must select those areas where farmers have been cultivating similar type of crops or are willing to adopt crop synchronization
 - ✓ Plot can be selected adjacent to canals so that there is scope of drainage and irrigation facilities when it is required.
 - ✓ *Gher* areas must be avoided where farmers practice rice-fish culture in the same field.
 - ✓ Pilot area should be selected considering one year, so that there is scope to set up CII trial for round the year.
 - ✓ BGP can only plan to setup 2-3 trials per polder but will not setup more than one trial in the same catchment area.
- (c) **Conduct FGD for identify adaptable cropping pattern:** Zonal expert (BDC, MT, Agricultural expert) will facilitate the FGD in those WMGs to assess the feasibility which will be finally selected by Polder team as CII pilot area. Through the FGD, expert team will try to understand existing crop production system and WRM related issues including: major production problems, usual cropping pattern (at least last 5 years), find out potential high value crops that can be promoted to as alternative cropping pattern, WRM related facilities, scope and conflict etc.
- (d) **Sharing with DAE and finalize the cropping pattern:** Zonal expert team will sit together with Upazila DAE experts as well as with other field researchers for final selection of high value crops. The expert team will find out and recommend at least 5 to 6 type of cropping pattern for the region, but in a same field shall limit to practice 1 or 2 cropping pattern (depends on field size and farmers interest).
- (e) **Budget preparations:** At this time, it is difficult to prepare estimated budget for CII pilot activities before setting the cropping pattern, because all kinds of seed money are not equal. After finalizing the cropping patterns as well as selection of crops, it will be easy to calculate the actual cost for each cycle of crop budget. But all should keep in mind that it is a low-cost intervention, BGP will only contribute the seed amount and in some cases light input, especially for chance crops (Chance crop is very challenging, so some light input support may be considered).

11 Community-Led Fisheries (CLF)

Community-Led Fisheries (CLF) is a concept where aquaculture is being conducted by the community people particularly the WMG members under Blue Gold Program. Last year BGP implemented this program at different canals and ponds. We will continue CLF with our last year experience. We will work only in canals. Target audience of CLF is WMG members those are interested in aquaculture. Objective of CLF is technology transfer to increase production of fish through community initiative.

11.1 **Actions**

- (a) **Planning & designing of CLF:** A guideline is prepared for taking the CLF initiative. After discussion with field, the TA expert makes a proposal and budget for the initiative approved by the Team Leader.

- (b) **Pre-implementation process:** First, Polder team will select the canals considering the interest of people living around the canal through discussion and site visit. Then Fisheries Expert/ Assistant Master Trainer (Fisheries) will observe the feasibility for aquaculture of the canal. If the canal is feasible socially and technically for aquaculture then a budget will be prepared by the WMG member according to Blue Gold guideline.
- (c) **WMG and farmers selection:** The terms and conditions to take CLF initiative are discussed with the preselected WMGs and finalize the list of WMG and their farmers involved in if the criteria are met.
- (d) **Materials & logistic collection:** Management / operational committee members will collect relevant materials for conducting the entire activities like remove the water hyacinth, fencing to control fish from escaping, sourcing quality fingerlings and other inputs with the assistance of polder team particularly responsible CDF. Assistant Master Trainer (Fisheries) and Fisheries Expert will guide time to time for quality input collection.
- (e) **Implementation of CLF:** Blue Gold will organize training program for Operational Committee Members for three days before starting field operation. Operational committee will also maintain record book properly to transparent the activities to other shareholding members. The responsible CDF will supervise and monitor the overall activities through consultation with Assistant Master Trainer (Fisheries) and Fisheries Expert. Local DoF and Zone Team members will also provide technical and social mobilization support when necessary.

12 Community-led Agriculture Water Management (CAWM)

A manner to establish resilient, productive and diverse cropping systems and to sustainably improve water governance and equity in water use' by providing an adaptive and horizontal learning approach to WMOs on technical and agronomic issues and promoting a participatory water management approach at catchment level.

Main ingredients of CAWM

- Sustainable Internal Polder Water Management (IPWM) by sluice catchment level water management
- Intensive technical and agronomic guidance to WMG members via DAE-led CAWM-FFS sessions.
- Coaching WMG members to initiate collective action, develop marketing strategies and linkages with LGIs and other relevant actors.
- Co-funding by relevant stakeholders of agri-inputs and small-scale water management infrastructure benefitting WMOs.

Target audience of CAWM are catchment farmers and WMG/WMA.

Objective of CAWM is to improve internal water management towards production and income through community initiative.

12.1 Actions

- (a) Selection of CAWM up-scaling areas based on the selection criteria by combined teams of Zonal BGP TA staff, BWDB and DAE field staff, WMAs, WMGs and LGI representatives.
- (b) BGP TA team and DAE will jointly organize SAAOs and FTs training for CAWM up-scaling areas, particularly for CAWM up-scaling new Polders to familiarize of CAWM concepts, objectives and activities.
- (c) BGP TA team with support of DAE/BWDB will organise Planning Workshop on CAWM Aman and Rabi crop and water management for WMG/CAWM catchment farmers.
- (d) Polder/Zonal Team support to DAE-led year-round CAWM FFSs, the FFSs will start in June 2018 aims to provide intensive technical and agronomic guidance on crop synchronisation, improved varieties management, new crop technologies and on-farm and catchment water management. The FFS integrates market orientation, aimed at farmer decision making, production and sales planning and strengthening group bargaining power, etc.
- (e) Polder Team and CAWM Drainage/Water Management Engineer will finalise planning, design and implementation of small-scale WM infrastructure for CAWM up-scaling areas,
- (f) Zonal-Polder team to be encouraging collective action among CAWM farmers/WMGs for create financial sustainability of WM infrastructure is actively promote through the establishment linkages with UPs, BWDB and DAE group support.
- (g) Zonal/ Polder Team will arrange UP orientation sessions for address IPWM and number of WMGs are manage to get co-funding for small-scale infra through their UP.
- (h) Polder Team will organize experience sharing/horizontal learning visits, farmer field days and crop cutting festivals on CAWM where attend nearby WMGs and polder to polder WMGs/farmers/UP members for replication of CAWM concept, objective and up-scaling process.
- (i) To be continuing monthly Zonal coordination meetings between SAAOs (DAE), SOs/XOs (BWDB) and TA team will facilitate for overcome problems (if any)/ monitor the progress of CAWM implementation in the catchments level.
- (j) Video demonstration on CAWM benefits will arrange in the polders level catchments for well recognize to replication of CAWM activities.
- (k) Networking/sharing workshops/meetings will be organized to disseminate achievements/successes and good practices and establishing partnership among WMGs, farmers, service providers, Government departments, private sectors, LGIs and development partners.

Approximately 100 more CAWM initiatives may be implemented with joint funding by the project and community during next two years. In addition, a good number of similar (CAWM) initiatives will be

implemented by the WMG and farmers without project support as replication of learning from CAWM through Horizontal Learning.

Signboards and Notice board will be installed at sites of CAWM catchment as part of information dissemination to the localities on CAWM.