Blue Gold Program

2017 Annual Review Mission November/December 2017

Final Aide Memoire

Final Draft Aide Memoire Blue Gold Programme Annual Review Mission 2017 February 2018

1. Introduction

This is the report of the Annual Review Mission (ARM) to the Blue Gold Program (BGP) that took place from 25 November to 4 December 2017¹. The terms of reference of the ARM are included as annex 1. The Mission wants to express its heartfelt thanks to the excellent organization of the visit and the many insightful and often very inspiring interactions. The main text summarizes the main findings of the reviews and the recommendations. This mission report also addresses the specific questions asked in the Terms of Reference as well as in the Position Paper prepared for the ARM in annex 2 and 3, whereas an update on the ARM 2016 is presented in Annex 4.

2. Short assessment of progress and impact

The overall impression of the ARM 2017 is that there is considerable economic change in the polders – driven by a large move to multiple cropping that is related to the popularity of short duration high yielding T. Aman varieties (in particular BRRI dhan-49 and 52) and improved water management promoted under BGP. This is resulting in significant income increases – see the indicative numbers in the table below, compiled during the field visits and to be further investigated. In some areas the same can be observed from the construction of brick houses and the rapid increase in number of motorbikes and savings for education. The short duration aman varieties appeared to have led to a doubling of yield and have freed up land in time for dry season cultivation. Different new crop rotations are coming in place in the different polders. These combine the new aman paddy varieties (or fisheries) in the kharif seasons with one or two crops in the dry season: boro paddy, mung bean, mustard, vegetables, sesame or watermelon. These different new crop combinations depend on the level of land, the availability of fresh water storage and soil conditions. As an indication of the positive changes: interviews amongst farmers during the fieldtrips of the ARM in Paikgacha Upazila (Polder 22) revealed an increase of 33% of area cropped and an increase of 163% in farm income since the start of the project.

More data are available from the Monitoring, Learning and Reflection unit. Where local water management is practiced under the CAWM programs evidence was that there was considerable less crops damage occurred due to water logging — the difference in six areas in different polders assessed at 30-60% of the total command area². The MLR activities under the BGP are now trimmed down and 'lean and mean'. The issuing of the Tracker Bulletins moreover ensures that there is much better understanding and sharing of progress and documentation of good practices. This is quite welcome. Recommendation 0.1: It is recommended that the project documents the changes based on the various data in BGP on the on-going transformation in farming systems and the contribution of improved in-

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¹The Annual Review Mission consisted of Frank van Steenbergen (mission leader), Jetze JHeun, Wais Kabir, Nowsher Sardar and Professor Abul Fazal M. Saleh. This final version of the Aide Memoire has been prepared based on comments on the draft version of the Aide Memoire by Embassy of the Kingdom of the Netherlands, BWDB, DAE and TA Team.

² See TrendWatcher 2

polder water management (at tertiary block and sluice command level) and improved water control infrastructure (khals and sluices) — including the collection of visual material.

This systematic and time bound documentation should also look at the impact on labour demand, labour wages and tenure arrangements (see section 3.5). This will support the understanding and upscaling of the improved practices as initiated under BGP. The TA team is requested to integrate the data and records compiled by the project to create a clear picture on the change in land use and multiple cropping.".

The Blue Gold Program has made considerable progress and in the last year since the ARM 2016, the program has gone through some significant changes, in particular:

- Accelerated speed of construction. This has removed and even reversed the discouraging 'sick project' labelling of last year
- Defining and implementing the Unified Approach which has resulted in (a) more efficient communication for (to?) farmers (b) time savings in programming implementation (c) higher job satisfaction and recognition of CDFs and (4) female CDFs acting as gender role models setting examples for women to speak out on farming and improved livelihood
- Undertaking Horizontal Learning which has accelerated uptake of good practices and is creating linkages between WMGs
- Emphasis on WMG/WMA functionality and action rather than formality of elections, registration and audits this is manifest in larger initiative, more collective action and more attention of water management)
- Improved coordination between all project partners including hands-on engagement of the Embassy of the Kingdom of the Netherlands.

3. Main observation and recommendations

The observations and recommendation of the ARM 2017 are organized in six blocks that are discussed in more detail next

- (1) Consolidate WMA and WMG performance
- (2) Upscale water management at in-polder level
- (3) Safeguard construction progress
- (4) Ensure DAE engagement
- (5) Do not loose poverty focus
- (6) Give due attention to policy and innovative value of BGP.

3.1 Consolidate WMA and WMG Performance

The development of a network of WMAs and WMGs has been at the core of the BGP. These organizations - set up within the parameters of the PWMR 2014 - are the main convenors of better water management and secured operation and maintenance of the polder infrastructure. They are also CBOs in their own right as the organisation and operation of water management mobilizes the communities and leads to collective actions furthering the benefits of improved water management and agricultural development.

By June 2017 356 WMGs were formed and activities were in hand in 14 out of 22 polders. Participatory monitoring (self-assessment) of WMG is undertaken every 6 months since November 2016. The WMGs assess their performance against 17 outcome challenges grouped under three themes: (1) agricultural and economic development, (2) water management (O&M of infrastructure), and (3) water management group and water management partnership. The results from the April 2017 monitoring are given in the table

below. The majority of the WMGs ranked themselves as medium performing. The scores have gradually improved from the earlier date (November 2016).

	No. and percentage o	d percentage of WMGs belonging to performance groups				
Performance levels	Self-assessment by WMGs		Assessment by Polder Teams			
	No.	%	No.	%		
High	5	1.4%	19	5.4%		
Upper Medium	82	23.4%	91	25.9%		
Medium	145	41.3%	160	45.6%		
Upper Low	71	20.2%	62	17.7%		
Low	48	13.7%	19	5.4%		

Whereas in the previous years much emphasis was on the (formal) organizational requirements of the WMGs and WMAs, in the last year a change in approach was made with emphasis on collective action, water management, market orientation, interlinking between WMGs and interlinking with other organizations especially the UP. This appears to have created a more action oriented and self confident/ entrepreneurial spirit in the WMGs with many activities taken up and a strong orientation to farming as a business.

In the current planning, engagement with the first eight polders is de-intensified from June 2018 onwards, and two more from June 2019 onwards. At the same time WMG/WMA formation has started in 12 new polders. In the new polders the time frame however is shorter, with BGP activities scheduled to be winding down from June 2020.

With the relatively late implementation of the infrastructure component there is concern that the O&M arrangements may not be adequately secured in the phase out polders, as there is no complete clarity and understanding on O&M arrangements, partly hampered by the fact that construction is only now speeding up. Also in 8 polders activities have to start still.

Recommendation 1.1: The roles in O&M at polder and sluice catchment level (including inpolder water management) should be agreed and communicated. Roles to be agreed by BWDB, WMOs (WMA, WMG, Sluice Committees) and LG. The sample O&M agreement has not yet been applied and tested in any polder and it is questioned whether the different parties are aware of the consequences. See also recommendation 1.2 (sustained capacity WMA/WMG) and recommendation 6.1 (water management policies). Here it is proposed (for discussion) that WMAs and WMGs take care of the surveillance and minor repairs of embankments, the operations of sluices and the cleaning of khals. The BWDB is responsible for the periodic maintenance and rehabilitation. The WMA is in charge of water management at polder level, coordination with the UP, ensuring (self) assessment of WMGs continues under support of WMA-UP and networking of WMGs within the polder including the organization for instance of annual conventions and competitions. Sluice committees of WMGs ensure operation of sluices and water management at sub catchment level. The OCWM provides regulatory and supervisory support to the WMOs, monitors whether WMG are functioning, interfacing in particular with the WMAs and the UPs. DAE supports the WMOs in agricultural development and (sub) catchment water management.

Recommendation 1.2: Efforts should be focussed on sustained WMA/WMG capacity using the principle of self-sustaining organizations and giving explicit attention to O&M plans. In particular this would mean that:

- WMA are supported to have the lead role in in-polder water management and O&M as described above.

- Constant peer networking will be developed among WMG within a polder area through horizontal learning, conventions and competitions in order to come to self sustaining organizations – this should cover agricultural improvement, marketing and water management
- In each polder support will be given to the preparation and implementation of O&M plans
- The capacity of the WMA/WMG will be strengthened, especially in the maintenance of khals through work planning, measuring and reporting silt levels: khal cleaning being the weak spot in O&M
- Given the leading role of the WMAs the CDFs will work directly with/ under WMAs in the phase out polders under management of the TA Team and in close cooperation with the OCWM.
- To further support WMAs and WMGs, Water Management Federations may be created in Khulna and Patuakhali

Recommendation 1.3: A plan and schedule for the CDF support in the light of the above will be completed and shared. A first draft of this has been made. The schedule will precisely assess CDF capacity required in the phase out and phase in polders, based on the steps described in the PWM field manual. Annex 5 of this ARM report is prepared as a contribution. An 'reality check' assessment and update of CDF requirements will be done in the third quarter of 2018 – to see whether the current budgeted resources are adequate.

Recommendation 1.4: Regulatory and supervisory arrangements by OCWM will be strengthened. The engagement of the OCWM to the BGP has been very positive yet has been affected by resource constraints. The deployment of Assistant Extension Officers in Khulna and Pathuakali is essential to perform the minimum regulatory and supervisory. On the longer term, the functioning of participatory water management and its community-based organisations (WMA, WMG) is the concern of the OCWM, DAE and LG. The requirements and operational practices for this may still be part of the policy debate (see recommendation 6.1). On the short term the OCWM will not be capable to fulfil its role, even with the proposed extra AEOs. For the project this means (1) maintain an active partnership and support the OCWM where possible, (2) organise the fostering of PWM for the remaining project period, (3) invest in developing a practical sense of custodianship for the WMOs with the OCWM, DAE and LG, where the OCWM focuses on (1) the primary role and strength of BWDB: primary water management and needs for related O&M and (2) monitoring the basic functioning of WMOs, rather than made feeling responsible for the whole myriad of potential activities of the WMO. The need for and depth of auditing is still to be explored.

Recommendation 1.5: Following also the recommendation of the ARM 2016 a review of the 2014 Regulation for Participatory Water Management is to be undertaken, reviewing audit requirements and the deregistration of WMG in case of fraudulent behaviour (for instance with LCS), better defining some of the functionalities and roles (e.g. water management functions describe "irrigation" rather than FCD conditions; role of LG and role of BWDB in locations where there is no development project, but WMG do exist; review of definitions; reference to O&M Manual; etc.) . Besides that the PWMR focuses much on fund collection as a panacea for sustained maintenance by the WMG; there is no evidence that this suffices. Such a review is to be undertaken with all engaged projects and programs — so as to also come to a shared approach. This could take the shape of good experience sharing workshop mandate to identify the possible improvements.

3.2 Upscale water management at in-polder level

In the last two to three years the BGP has promoted water management within the polders. Remarkably this has been a novel thing even though – together with the creation of functional sluices and khals – it holds the key to spectacular improvement in agricultural production. The entry point to improved in-polder water management in BGP has been the improvement in water management at the sub catchment level under Community Agricultural Water Management (CAWM). The uptake in combination with the introduction of new varieties as discussed earlier has been very rapid. In Patuakhali the replication rate has been particularly high. From just 138 ha of BGP supported CAWM areas in 2016, in the respective polders farmers were subsequently up taking HYV Amon without support of BGP to coverage of 3472 ha in 2017. This later increased to 4200 ha in Patuakhali.

In addition this year the BGP also introduced improved water management at sluice command level in two pilot areas. This was done through a two day long meeting in which all preferred options for better water control were discussed to come in the end to a do-able package of measures. In the pilot areas in Polder 30 the improvement covered 15-20% of the entire sluice command area. The improvement identified by the WMGS in the sluice command were: creating more storage, synchronized planting, planting of rice varieties in line with the elevation of the plan, improved and controlled drainage by improved pipes and road culverts. Most of these measures (apart from the construction of new culverts) were taken up and generated an estimated immediate benefit of Tk 4,500,000.

The plan is to introduce this sluice command water management throughout the phase out BGP polders by engaging local resource persons in the command area of each phase out polders. This would be done under WMA and would link to water management for the entire polder.

Recommendation 2.1: Continue and further strengthen in-polder water management through the special sluice command workshops, year-long FFS of DAE and horizontal learning events and to upscale sluice catchment water management in all polders, engaging the WMAs in the latter and connecting with the UP and other programs for small infrastructure.

Recommendation 2.2. It is also recommended to further develop the repertoire of measures in catchment and polder-level water management by the identification of opportunities to retain fresh water for dry season use within the polder, the management and reuse of water hyacinth, the management of sediment and its reuse for land improvement, local road construction or the development of flood levees, to systematically connect with flood relief and protection and to make a strong connection with other infrastructure development in the polders, especially roads.

At present there is in many polders a strong interest from the UP — with small contributions made from the discretionary fund of the UP — particular for culverts and pipes. The size of these discretionary funds is however small (Tk 500,000). Recommendation 2.3. It is recommended that the unutilized funds for the construction of WMG offices³, amounting to Euro 500,000 approximately, are reallocated to small in-polder water management investment, to cover investments that are beyond immediate farmers investment, particularly at catchment and polder level. This would need to be a fast track program with the engagement of the UP and WMA in planning and recommending specific investment activities (together with DAE, BWDB and TA). Funds will be released by the TA for such activities. It is recommended that the fast track procedures are developed by February

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³At best retaining a small provision of WMA offices where these do not exist nor can be arranged from existing provision.

2018, including minimum and maximum amounts, criteria, standard measures and approval procedures. The measures should follow WMG preferences, and should not need special design efforts. Other sources too — such as the BADC, different road programs under LGED and the component dedicated for pipes under the RDPP may be approached to support the relatively small and low design options. The works identified and developed may be developed locally not through heavily engineered solutions. By placing such funds close to the UP and WMA a model maybe created to spread in-polder water management beyond the BGP.

Recommendation 2.4: It is also recommended that the different management experiences, measures and impacts are properly documented — to better understand the range of opportunities, to support horizontal learning and internal understanding but also to develop the possibility of a future in-polder water management program that can be out-scaled.

3.3 Safeguard the progress of construction

It is understood that the revised DPP is completed now and awaits final approval by the ECNEC and no (additional) delays are expected. The recommendation in this review report are based on the understanding that the RDPP will be issued not later than the first half of January in order to get the work portfolio for the present construction season going. It is understood that the RDPP is prepared in large details as to the scope and location of works. The ARM emphasizes that works of the nature of the BGP may need a degree of flexibility in implementation, given the dynamic nature of water management in the coastal polders and the process of setting priorities with local stakeholders.

Under the Emergency Program resources have been freed up from the TA budget to provide extra capacity for design and field survey. There is a manageable backlog in dry season survey and the expectation is that all or at least a very large proportion of the designs are completed by February 2017. This would make it possible to catch up with the on-going construction season and have contracts issued in time. Recommendation 3.1: All efforts to be made to have the RDPP cleared not later than January 2018 and the design work completed by February 2018 in order to make use of the 2018 pre-monsoon construction period.

The ARM foresees that with the current staffing in the BWDB District Offices and the larger volume of work additional resources will be required in construction supervision. Actually, deployment of additional staff at the field level by way of crash program was already agreed based on ARM 2016. One junior mechanical engineer is already. **Recommendation 3.2** is to deploy from the Crash Program provision two additional construction supervisors and one mechanical engineer, the latter in view of the larger number of gated sluices and regulators that will be constructed. The three staff may come under TA management so that they can operate across BWDB field divisional boundaries.

At the same time, the large amount of unfulfilled staff positions in the O&M divisions covering the BGP area is again noted with concern. Earlier it was recommended that these vacant positions especially at field level are fulfilled and also that key staff of BWDB would not be transferred. This point, raised by the previous ARM, regrettably was not systematically followed up. Recommendation 3.3; the BWDB is requested to undertake formally not to transfer senior staff involved in BGP implementation and to fill the unoccupied staff positions.

It is also understood that in the past year the Bangladesh schedule of rate has been adjusted. This may require an upward adjustment in projected costs, which has not been done so far. Recommendation 3.4 is to identify and introduce cost efficient designs as much as possible in all the planned work, in particular the use of geotextile bags for embankment protection. The use of geotextile bags on the difficult embankment in Polder 29 was reviewed and is considered as an important improvement.

The ARM also notes with satisfaction that in the past year the speed of construction implementation has accelerated. The work undertaken took place within the scope of the original DPP. There is still a considerable challenge to complete the entire construction works portfolio in the three construction seasons up to June 2020. An estimate is that approximately 47% of the construction in the first batch of 10 polders is completed, where as the work in the new batch of 12 polders still has to start. The likelihood of completing the infrastructure component of the current BGP program depends very much on a number of factors: (1) the approval of the RDPP by early January 2018; (2) the completion of the design by February 2018, (3) the impact of the 2018 elections and related disturbance on the construction program (4) unforeseen natural calamities. The current projection by the office of the PCD is that all planned works may be completed by 2020 but it is also acknowledged that this requires a further acceleration of the rate of construction. Recommendation 3.5: it is recommended that by July 2018 stock is taken of the actual progress and that an assessment is made of a realistic scenario at that time for works completion and the implications be discussed.

3.4 Ensure continued DAE engagement

The contribution of the Department of Agricultural Extension (DAE) to the Blue Gold Program has been substantial and essential to success. DAE has implemented a large number of FFS that been a main factor in the agricultural changes in the polder area, especially the recent introduction of new salt and submergence tolerant high yielding aman rice varieties under year-long FFS. The short duration of these new varieties has catalysed the move to multiple cropping in many of the BGP polders and the higher yields combined with high rice prices this year created an economic upsurge. The active attitude of the DAE team in BGP has helped to combine agricultural development with on-farm water management improvement. The crux in multi-cropping with high yielding varieties is the ability to remove water from the field early to make land available for second and third crops. Land to retain it at other times. The current DPP of DAE run till the end of 2018 and it is important for the agricultural development in the BGP polders and the emerging connection between agriculture and water management that the DAE remains a full partner in the BGP. There are two options: (1) extend the DAE DPP till December 2020 or (2) conceptualize a Phase 2 of the DAE program. Recommendation 4.1: It is recommended that the DAE DPP is extended till December 2020, as it is probably a more practical option. It is recommended that a discussion is initiated between the Secretaries of the Ministry of Agriculture and Ministry of Water and that the requisite invitations are made by the BWDB. To safeguard continuity the process of discussing and agreeing on the extended engagement of DAE should start soon, i.e. in December 2017.

The longer engagement of DAE in the BGP would also make it possible to continue with the year-round FFS, the Agricultural Intensification Initiative and the distribution of rice seeds. The small group fund in DAE can be used to pay for some small works in support of the subcatchment water management or CAWM. Recommendation 4.2: It is also recommended that as part of the continued engagement more effort is dedicated to develop capacity and mainstream good experiences from the BGP into the regular program of the DAE, following the integration of water management and marketing in the FFS as started under BG this year; consider the incorporation of additional economic activities (gher, diversified

crops); and with DLS the development of short duration FFS on poultry and livestock geared to landless people and the connection with different forms of horizontal learning.

3.5. Do not lose the poverty focus

It is important to maintain the poverty focus of the BGP. The objective of BGM is to 'reduce poverty for 199,326 households⁴, living on 119,124 ha of selected coastal polders by creating a healthy living environment and a sustainable socio-economic development'

As BGP promotes water management for development, there is a risk of concentrating on those that own land and have access to water. Yet 56% of the population in the BGP polders are landless – having less than 0.5 acre of land. Within this category the most deprived ones are destitute women those without any land not even for a homestead, living often on government embankment land. This includes those that lost their land in river erosion.

The specific poverty targeting in Blue Gold concerns the deployment of Labour Contracting Societies and the organization of Farmer Field Schools targeted at landless (homestead gardening, poultry and livestock). The LCS activities in principle help to bring money directly to the hands of the poor especially women and to capitalize the rural economy. The earnings are often used to create assets as the table below - based on interviews with female LCS members in three polders during the ARM - shows. LCSs invested their money in variety of purposes like crop and fish culture under gher, purchasing cattle (38%), or business. The capital injection of the LCS in principle is creating assets in the hands of the most needy.

Table: Utilization pattern of earnings by LCS members in visited areas of Patuakhali and Khulna

		Percent LCS member utilized earning by enterprise							
Location	Cattle	Goat	Poultry/ Duck	Chicken	Education	Business	Family income	Land lease	Gher
Polder 43/2D	60	40	60	60	20	40	50		
Polder 43/2B	25					25	25	63	
Polder 22 (1)			14			29			43
Polder 22 (2)	38					13	13		50

The target of the work allocated to the LCS in Blue Gold is 50% of all earthworks. In the past season this target has not been reached — which is regrettable. Recommendation 5.1: It is strongly recommended that the figure of 50% of earthworks undertaken under BGP to be carried out by LCS's is maintained and that all efforts are made by all parties involved in this component (BWDB and TA) to attain this.⁵ This may require better planning together with the concerned WMG — for instance allocating the most practical earthwork activities to female LCS (embankment works, cleaning of smaller khals).

⁴Figures adjusted with new BGP targets.

⁵The ARM is aware that the 2014 Participatory Rule for Water Management specifies a benchmark of at least 25% but is of the opinion that the earlier project target of 50% should be strived for.

There are reports that with the increased wage rates interest in LCS has reduced but during the ARM field visit there was continuous keen interest in the income opportunities under LCS. What was observed though was that the targeting of landless was not always observed and that instead members from land owning families were involved. There were also examples of WMG engaging LCS members as a labourer instead of employing the LCS as a contracting society. In one case there was misuse of funds and upon them making queries the female workers in the LCS were ousted. Recommendation 5.2: it is strongly recommended that measures are taken to ensure the rules and good practices for LCS activities are followed with respect to (1) targeting landless women and men (2) adequate pre- and post-work measurement (3) announcing the works in the open (4) not engaging machinery or outside labour and (5) timely and reliable payment (6) identify activities to be engaged with such as turfing (7) early release of the final security payment obligation, as this is often forgotten and (8) revisiting the practicalities of contracting through WMGs.

As mentioned, in the previous season the target of 50% of the earthwork was not reached. A study on the bottlenecks in the LCS system was recommended in the ARM 2016 but could not be implemented, as the contracted party was unable to deliver an acceptable product. Recommendation 5.3: It is recommended that this time the TA Team with a senior BWDB employee undertake a fact finding in possible bottlenecks in the LCS component in the past year with a view to resolving these. This may involve the deregistration of WMG involved in malpractice.

Another important program that targeted landless were the FFS on poultry, homestead gardens and livestock. Recommendation 5.4: It is recommended that the specific FFS on poultry and livestock is continued and implemented systematically in all polders — even in shortened versions — and where possible are updated with new elements, such as cage — and pen culture fishery, as developed under the Innovation Fund. These FFS activities should be complemented by Horizontal Learning engaging landless people too.

A third element in BGP that is possibly relevant for alleviation of poverty of the most poor is the use of the WMG fund for micro lending. The amount amassed in the combined WMG funds by June 2017 was TK 4,6470,000 or an average per WMG: Tk. 130,500. This amount is still increasing steadily. Of this amount 60% is used to give loans to members, primarily for small business investments, agriculture, fish culture and poultry rearing. In all WMGs combined 4389 persons received a small loans. Reportedly the interest charge by the WMGs is 10%, which is significantly lower than what is charge under micro-credit by local NGOs. It is not known how the micro-credit has involved the poorest community members. Recommendation 5.5: it is proposed that the TA team with the OCWM undertakes a sample survey of the small lending operations of 10 WMGs to have better understanding the credit activities and the relevance for poor and landless community members and identify possible recommended good practices that can be shared and widely promoted through the network of WMGs.

Finally the rapid proliferation of multiple cropping is of immediate benefit to those that own land. Yet anecdotal evidence gathered during the ARM suggest that in particular the increased labour opportunities have improved sharecropping arrangements as well as opportunities to access land through tenancy. It has also caused a rise in daily wages. This suggests that the benefit of the rapid agricultural transformation serves non-land owning families too. To better understand this it is recommended that the TA team undertakes an assessment to describe and quantify the impacts of the agricultural intensification in five WMGs. This may be combined with recommendation 0.1. This should also look at the extent to which the increased labour demand results in (1) labour shortages and (2) the deployment of outside labour or mechanized farm equipment. The TA is to propose selection criteria for these WMGs in order to make the findings representative and relevant.

3.6 Give due attention to policy and innovative value of BGP

By its nature BGP has the capacity to go beyond its borders and contribute to policy in action and to bring in new approaches and innovations. BGP is endowed with a systematic MRL section, a well-resourced community engagement component and it includes an Innovation Fund. With many of the operational challenges of BGP effectively addressed, it is import to give due attention to policy and innovative value of BGP. There are two areas in particular: the policy discussion on participatory water management and the introduction of innovations.

The learning on the PWMR 2014 was also described in recommendation 1.5 and is also endorsed by the Ministry of Water Resources in the minutes of the ARM debriefing meeting of 3 December 2017. More in general, policy attention for polder-level water management needs to be fostered. In the last decade the number of development assisted projects furthering PWM in the larger polders has increased substantially (initially PWM was practiced mainly in the small-scale polders under guidance of LGED). On the other hand, projects are still "piloting" and PWM is limited to projects, rather than mainstreamed. Examples are IPSWAM, WAMIP, BGP, SWAIWRMP, CDSP next to the continuing SSWRSDPs. New project initiatives also refer to PWM. However, cross-fertilization of experiences and translation of lessons learned in good practices and new policies receives little attention.

The mission also notes that there is growing cooperation and appreciation between the Ministry of Water and the Ministry of Agriculture. The mission proposes to organize a National Policy Event with the engagement of Ministry of Water, Ministry of Agriculture and Ministry of Local Government to further cement cooperation. Recommendation 6.1: It is recommended to undertake a number of special activities to consolidate the polder-level water management activities at policy level. In particular:

- Finalizing polder water management Agreed Good Practices and preferably having them endorsed by both Ministries
- Assess the economic benefit of in-polder water management
- Organize a policy event meeting by Ministry of Water and Ministry of Agriculture (and possibly also Ministry of Local Government) with all donors and interested parties
- Engage with interested parties including development partners on the approaches
- Give international exposure by presentation on the program by directly those involved BWDB and DAE staff at an international event.

Policy events could for example pay attention to the following:

(1) sustainable O&M, financing, the contribution of the local population as members and non-members of the WMOs, commitments of GoB (BWDB, LG); (2) modify and adjust the 2014 PWMR to a document that includes of practical rules and incorporating the specific characteristics of FCD (as compared to service-oriented irrigation; (3) fostering participatory water management: the sustainable functioning of WMOs, custodianship exercised by GoB (e.g. BWDB-OCWM, DAE, LG) and organisational requirements (size, registration, auditing); (4) encouraging and facilitating the WMO's "maximizing" their potential; WMOs as a real feature in Bangladesh' water management

As a major project in PWM, having introduced new concepts, the TA BGP should play an active role in getting these type of policy discussions going. EKN has for more than two decades played an active constructive role in developing participatory water management in Bangladesh at all levels. EKN could play an important facilitating role in bringing Bangladeshi

institutes and development partners together to formulate lessons learnt and especially, to agree on common approaches and policies.

In addition, the Blue Gold Programme was set up with a substantial in-built Innovation Fund – consisting of two components, the Water Management Innovation Fund and Production Support). The Fund makes it possible to introduce innovations and experiment with new approaches and techniques as part of the large operations under BGP – covering a population of close to 1 Million people. The prime criteria for selection were the relevance of the innovations for the population in the Blue Gold area and/or the implementing organisations and providing opportunities for Dutch organizations. The size of the Fund (Euro 4.3) was almost a project in itself. By the time of the ARM 0.86 M was spent/allocated under the Fund and preparation had progressed for the spending of another Euro 0.8 M (under ICT solicited call and under bank protection). As part of the reshuffle of the activities and the budget of the TA component after the ARM 2016 the Innovation Fund was reduced in size. The Innovation Fund was also complemented with a separate program for the South West funded by EKN: Water Management and Innovation Program (WMKIP) implemented by Deltares and IWM with other BD and NL knowledge organisations. At the time of the ARM 2017, there is still an amount of Euro 0.75 M available in the BGP Innovation Fund. With the number of activities undertaken in the last year (introduction to Netherland business community, engagement with young Bangladesh graduates) plus the larger reputation of the IF and the follow up to the existing pipeline of project, it will be possible to spend the balance. Recommendation 6.2 to use the remaining resources in the Innovation Fund judiciously, it is proposed, to close the unsolicited calls from mid-2018 and develop another short gestation solicited call during 2018. Of the topics identified earlier marketing and post harvest management so far received relatively little attention and this may be considered as the theme for the solicited call, building on the important mainstreamed work in this in the BGP.

A main bottleneck is the management of the IF which is now done on part time basis by an international and a national expert (both part-time) yet the work load in processing applications, monitoring them and ensuring their integration in BGP and other activities is substantial. Recommendation 6.3: The management of the IF could well continue with the present team, but as an alternative it may be considered to have a full time national expert, correspondingly reducing the part-time international expert, who would have the following responsibility: processing the applications; looking after embedding in BGP and beyond; actively promoting them to other activities; packaging and interlinking innovations; managing the interface with WKMIP. Whether a suitable candidate could be found and become effectively operational in the given timeframe and budget remains to be seen.

4. Final observations

Significant agricultural and rural transformation is underway in the coastal polders of Bangladesh – with rapid spread of multiple cropping and accompanying improvements in local farm water management. This creates a strong economic basis to maintain the polder infrastructure and optimize operation and water management within the polder. The network of WMGs and WMAs created with support of BGP and the infusion of new farming knowledge is a prime asset and should be consolidated by developing strong peer linkages between the WMGs and WMAs.

The main challenge at the moment in BGP is that the program is somehow implemented in reverse order – with the bulk of construction to be undertaken in the latter part of the current project. All efforts would need to be made to keep the schedules now and synchronize the different components of the project.

Annexes

- 1: Terms of Reference Annual Review Mission 2017
- 2: Responses to specific question in Terms of Reference
- 3: Reponses to specific questions in Position Paper
- 4: Follow up to ARM 2016 recommendations
- 5: Preliminary assessment of CDF requirements

Annex 1: Terms of Reference Annual Review Mission 2017

1 Background

The Blue Gold Program (BGP) started in March 2013 and covers a $7\frac{1}{2}$ + year period, up to December 2020. Its operations concentrate on the polders of three districts in the Southwest of Bangladesh: Patuakhali, Khulna and Satkhira, as well as a small part in Barguna District. The Program covers 119,000 ha where an estimated 199,000 households will have direct benefits from the Program. BGP is being implemented by BWDB and DAE with technical and financial support under financing from the Government of the Netherlands (GoN).

The overall objective of the Blue Gold Program is:

"to reduce poverty for 150,000 households living on 160,000 ha of selected coastal polders by creating a healthy living environment and a sustainable socio-economic development".

The specific objectives of the Blue Gold Program are:

- 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.
- II. To organize the communities in water management organizations which will be the driving force for the natural resources based development (agriculture, fisheries and livestock), whereby environment, gender and good governance are effectively addressed.
- III. To increase the household income derived from the productive sectors.
- IV. To strengthen the institutional framework for sustained water resources development and related development services in the SW/SC coastal zones

The essence of Blue Gold Program is:

- to establish and empower community organizations/water management organizations (WMOs) to sustainably manage their water resources and to make these resources more productive;
- ii) The Program aims to create strong WMOs that will interact with public and private organizations that play a role in the development of the area;
- iii) Participatory water resources management is the entry point and the initial driver of the community organization process; and
- iv) The explicit objective of Blue Gold Program is to reduce poverty of the people in the coastal areas by enhanced productivity of crops, fisheries and livestock and increasing

incomes by improved processing and marketing of agricultural products on the basis of value chain development.

Further information on BGP objectives, strategy and planned activities is contained in the Program Document, inception report, aide memoire of the second annual review (1st to 14th October 2016) and a number of technical and (field) mission reports.

2 Review Mission 2017

The present document provides the terms of reference (ToR) for the annual review mission 2017.

This mission is aimed to review progress achieved with recommendations from the ARM 2016, and to ensure that the reformulated official project documents (DPP) of the Blue Gold Program by BWDB and DAE will enable the project to deliver the benefits to all 22 polders and particularly in the 10 new polders before end-June 2020. This is to be accompanied by a reallocation of budgetary and human resources within the framework of the project towards a set of redefined project outputs and activities.

3 Objectives of the mission.

The overall objective of the 2017 ARM is therefore to assess whether the project will be able realize its core objectives within the proposed extended time and budgetary framework. The 2017 ARM is to focus on the operational dimensions of the project, with particular attention to the following issues:

- (a) **Status of 2016 ARM Recommendations:** To what degree has BGP implemented the recommendations of the ARM 2016?
- (b) Unified Approach: To what extent has the project organisation and modus operandi adjusted to accord with the recommendations made by the 2016 ARM.
 - Has a suitable unified work process been defined (and agreed by all project partners), and has adequate staff been appointed for key project activities?
 - To what extent is bottom-up planning and implementation incorporated into the contact between WMGs and Blue Gold staff?
 - Have these adjustments resulted in tangible improvements to the project delivery?
 - What critical elements of the project need to be further strengthened and/or adjusted to achieve the specific project objectives?
 - Which elements of the project can be considered as less critical for realisation of the project objectives?
 - Taking into account: (i) the team composition at polder level including TA, BWDB, DA; (ii) existing deployment of staff on the basis of ARM 2016 recommendations; and (iii) logistics etc, comment on the arrangements in place to ensure: + that the "phasing in" activities in the 10 new polders are being well planned and implemented [in accordance with the May 2017 Field Manual]? + that the project can "phase out" from the 9 former IPSWAM polders from June 2018 leaving one full-time OCWM CDF supported by a part-time TA CDF? [Note: a concept paper for "phasing out" is in preparation by OCWM/TA and will be available by the time the mission is fielded.]

- (c) Infrastructure: Are arrangements in place to ensure the additional GoN/GoB budget available for infrastructure contracts can be awarded, implemented and completed in the three remaining full or partial construction seasons ie 2017/18, 2018/19 and 2019/2020:
 - What arrangements have been put in place as a result of the Emergency Support made available to BWDB by 2016 ARM. What is the status of BWDB staffing and survey and design data collection (SDDC) funded through this mechanism, and what has been the impact on the overall infrastructure program?
 - What measures should be taken to make optimal use of the 2017/18 season?
 - For infrastructure implementation and quality control what actions and/or conditionalities can be taken up byGoB and GoN?
- (d) WMG Capacity Building: Has the refocus on WMG functionality (agricultural and economic development; operation and maintenance; and WMG and partnerships) been effective:
 - A report prepared by the Community Mobilisation Specialist (Dr CM Wijayaratna) on 28th August 2017 was reviewed, and the TA then prepared a note on follow-up actions (issued to EKN/BWDB/DAE on 11th October). Comment on the alignment between the follow-up actions and the CMS' recommendations.
 - Horizontal (farmer-to-farmer) learning activities were recommended by ARM 2016.
 Comment on how these have been integrated into the capacity building of WMGs, and their impact on farmer uptake of BGP activities.
 - Participatory monitoring encourages water management groups (WMGs) to be aware of the potential targets for their development and to evaluate their progress (or shortcomings) towards achieving their full potential. Review and comment on the procedure used for participatory monitoring (as reported in Working Paper 8, October 2017)
 - Are the conditions in place to ensure effective application at scale and in field conditions as well as for a long-term sustenance of the Participatory Water Management approach: remaining gaps in the PWM Regulation 2014, adequate staffing of BWDB at central and zonal level etc.
 - Do the collective actions (community-led agricultural water management, annual cropping planning, cropping intensification initiative and community-led fisheries etc) respond to WMG priorities and deliver benefits to WMGs?
 - Is the existing approach sufficient to develop WMOs into self-motivated organisations with the capacity and interest to operate water management infrastructure, and expand collective actions etc?
 - Are there any corrective measures to be taken by the project and its partners (GoB, consultants, GoN) in order for the project to attain its key objectives on a sustainable basis?

(e) Agriculture:

- The revised development project proforma (RDPP) for DAE's transfer of technology for agricultural production (TTAP) under the Blue Gold Program was approved by an Administrative Order on 15th June 2017. This extends the strategic partnership between BWDB and DAE to 31st December 2018. Unless a further RDPP can extend the duration of the TTAP to 31st December 2020, an alternative modality (perhaps an MoU) will be required. Investigate the advantages and disadvantages of possible different modalities, and recommend the most effective.

- DAE takes a leading role with the community-led agricultural water management (CAWM) demonstrations which bring together water management, annual cropping system planning and market awareness. Investigate DAE's assessment of the value of the CAWM demonstrations and their perception of the value of wider replication.
- Assess DAE's response to horizontal learning methods and the response of SAAOs to new training methodologies.

4 Scope

The scope of the ARM covers the whole of planned and implemented project activities in all of the project areas.

4.1 Key Areas to be addressed

The ARM is to review and assess progress achieved and challenges encountered, and provide concrete recommendations for adjustments to:

- Implementation strategy including pragmatic/workable action plan for WMO formation and its functioning;
- Institutional arrangements, project organization;
- Objectives, outcomes and outputs;
- Critical assumptions and risks;
- Planned activities;
- Inputs (including budget adjustment and/or reallocation of manpower inputs and/or composition of BWDB/DAE/TA Team);

While carrying out the ARM, the mission members are expected to identify, assess and take into account any issues or developments, be it internal or external to the project, that may be relevant for and/or may impact on the project design. Those issues and developments will include but may not necessarily be limited to the following topics:

- The work arrangements and relations between the implementing agencies, and between them and the TA.
- Poor progress has been made with the rehabilitation/replacement of polder infrastructure, with consequent adverse impact on polder safety/security and delays to introducing improved internal water management.
- Effectiveness of the organisation structure for program delivery and coordination;
- The description of the development process implemented / to be implemented in the polders
- Issues related to the revision of the DPPs;
- Steps taken to enhance the effectiveness of the programme intervention and the sustainability of its outcomes (status of implementation of ARM 2016 recommendations);
- Arrangements for the continuation of DAE's involvement beyond end-December 2018 (the end-date of the present DAE RDPP)
- The relevance and likely effectiveness of the programme contributing to the further improvement of Bangladesh's enabling environment for PWM (policies, legislation,

regulation, work processes, human and financial resources, central and regional mandates, synergies between agency mandates).

4.2 Outputs

In terms of outputs the ARM 2017 will be accountable to MoWR/BWDB and EKN. Towards the end of the Mission's country presence, it will submit a draft Aide Memoire on the main findings on programme performance and listing its recommendations to MoWR, EKN and the implementing agencies BWDB and DAE. This draft Aide Memoire will be presented at a wrap-up meeting. The mission will submit a draft final report within one month of the end of the mission. A final report will be prepared after incorporation of all the comments on the draft final report made by the relevant agencies/stakeholders within four weeks of receiving the comments.

4.3 Execution of the ARM

The third annual review mission will take place from 24th November to 4th December 2017. A proposed mission schedule is attached herewith. With regard to the execution of the ARM 2017, the team is itself expected to propose the methodology and approach to be followed. Activities to be carried out by the ARM are expected to include but not necessarily be limited to the following:

- A review of existing documents;
- A briefing meeting with EKN on the program and approach on the first day of the mission;
- Briefing meetings in Dhaka with the implementing agencies BWDB and DAE;
- Field visits to establish the modality of working with water management groups (WMGs)
- The mission will submit a draft Aide Memoire with its main findings, conclusions and recommendations to EKN, MoWR and the main implementing agencies BWDB and DAE.
- A debriefing meeting with EKN, BWDB and DAE, at which the draft Aide Memoire will be presented and reviewed;
- A formal wrap-up meeting at MoWR in which the draft Aide Memoire will be discussed and agreed between GoB and GoN representatives.

Despite the number of fixed commitments for the mission, specifically the meetings arranged with the key stakeholders at the beginning and end of the mission, the mission leader and other members are free to arrange the locations and venues for field visits and any other visits or meetings with other projects or associated organisations.

4.4 Composition

The mission comprises the following personnel:

Mission Frank van Steenbergen Leader

> Jetze Heun Wais Kabir Prof Saleh

Nowsher Ali Sarder

4.5 Budget

The mission will be financed from the Blue Gold TA budget. Logistic support (incl. transportation, accommodation and office space) will be provided by the TA Team of the Blue Gold Program. The Mission is advised to present its proposals to the BGP TA office manager as soon as possible to ensure that logistics (internal flights, etc) can be arranged to suit.

4.6 Available Documents

The following documents will be available to the mission

- Blue Gold Program Document, 30 August 2012
- Inception Report, November 2013
- Half Yearly Progress Report, January to June 2017
- Annual work plans 2015/2016, 2016/2017 and 2017/18
- Aide Memoire of ARM 2016 and the latest status of Joint Action Plan on implementation of ARM recommendations
- All available Progress and Financial Reports
- All Technical Reports and Working Papers prepared by the TA Team
- All other relevant documents, such as the PWMR 2014 (English and Bangla)
- Revised DPPs for BWDB and DAE.

Annex 2: Responses to specific question in Terms of Reference

Re: Unified App	proach
Has a suitable unified work process been defined (and agreed by all project partners), and has adequate staff been appointed for key project activities?	The Unified Approach is in place and well understood and adequately managed. Implementing the Unified Approach has resulted in (a) more efficient communication to farmers (b) time savings in programming implementation (c) higher job satisfaction and recognition of CDFs and (4) female 'all-round' CDFs acting as gender role models – setting examples for women to speak out on farming and improved livelihood
To what extent is bottom-up planning and implementation incorporated into the contact between WMGs and Blue Gold staff?	In the new Unified Approach, there is much more emphasis on collective action from the beginning. According to the WMG tracker 13200 WMG members (= 14% of all) up to June 2017 were involved in collective action activities of economic nature, with the purchase of agricultural inputs most common place. In the same period 5807 WMG members were involved in collective action in O&M – mainly canal cleaning and embankment repair. This could be witnessed in the phase in polders. There is also in the new polders more emphasis on engaging LGIs from the beginning. Interviews were held with CDFs in all three project areas. According to the assessment of the CDFs the new Unified Approach and the larger emphasis on action and WMG functionality the time it takes for a WMG to be self-standing under the new approach is 2.5 years whereas earlier it would be 4 years. The focus on planning for joint activities gives larger confidence and initiative and there is less handholding: this is the observation based on the impressions from subsequent ARM Missions.
What critical elements of the project need to be further strengthened and/or adjusted to achieve the specific project objectives?	The area of largest concern in the project is the construction of infrastructure. The pace of implementation has speeded up in the last year and the backlog in design has been addressed – yet there remains still a huge workload ahead with work in the new phase-in polders to be started, while the work in the phase-out polder is to be done too. There are several factors that affect the progress of work: (a) some of the works to be done will realistically stretch over more than one year for instance where land should be acquired or only a short construction interval is available (b) most of the work concerns small works implemented by local contractors and (c) the achievements in the 2018/9 construction seasoned may be much jeopardized by the turmoil that goes with elections. There is no way to further strengthen or speed up the progress here apart from the recommendations that are in the ARM 2017 and that were also in ARM 2016: less unfulfilled vacancies at BWD; no staff transfer and deployment of additional emergency staff. Methods to facilitate speedier implementation were suggested in ARM 2016 and reviewed. They were not found implementable in several cases related to the realities of local politics. The area of most attention in the development of WMGs is the operation and maintenance, including the in-polder water management that has gone off to a promising start.
Which elements of the project can be considered as less critical for realisation of the project objectives?	The project has been trimmed down considerably and many activities that were non-core have been either dropped (vocational training) or have been integrated in the operations (DRR, marketing). There are now no project elements that can be considered less essential.

Considering: (i) the team composition at polder level including TA, BWDB, DA; (ii) existing deployment of staff on the basis of ARM 2016 recommendation s; and (iii) logistics etc., comment on the arrangements in place to ensure: + that the "phasing in" activities in the 10 new polders are being well planned and implemented [in accordance with the May 2017 Field Manual]? + that the project can "phase out" from the 9 former **IPSWAM** polders from June 2018 leaving one fulltime OCWM CDF supported by a part-time

This is a question that is highly relevant. The BGP is at a critical conjuncture with activities phasing out in the first eight polders by mid-2018, two more in mid-2019 and at the same time work in 4 out of 12 new polders started. A staff deployment schedule has been made, considering not only the physical size of the polder but also the complexities. The staff deployment schedule is assuming a larger size of the WMGs in the new polders (488-805 HH against 270-299) — see below

	Area (hectare)	No. of HHs of local stakeholder s	No. of WMAs	No. of WMGs	HHs per WMG	HHs per WMA
old - IPSWAM	42.164	64.740	21	240	270	3.083
old - no history	20.144	36.287	6	91	399	6.048
new	43.375	74.160	9	152	488	8.240
new old	13.441	24.139	3	30	805	8.046
all	119.124	199.326	39	513	389	5.111

It is useful for planning purposes to make a more detailed assessment in mid-2018:

- calculating the time requirements for each of the steps in Field Manual to be finetuned with the Regional Coordinators. This has provisionally been done for new phase polders in Annex 5 of the Aide Memoire. It was noted that not all steps in the WMG process were included (registration, conventions)
- an efficiency factor is assumed on the number of agenda items achieved in one visit; the number of average CDFs in one visit and the number of effective field days per CDFs. This is used to assess the required CDF FTE per polder = 3.5 FTE (Annex 5 to be verified by BG team). This may be compared with the approximate 160 FTEs for the new polders currently budgeted per 12 new polders. This suggest that FTE resources assigned now are sufficient
- assessing the synchronization with the physical works component
- identifying possible time-saving measures for instance by relying more on the self-organizing strength of WMGs/

A quick assessment of time requirements was made in Annex 5. This shows that resources may be tight, if all steps are followed. As the polder teams are now just started with the new Unified Approach it is not recommended by ARM 2017 to make reconsiderations at this stage, but to wait till mid-2018 to make the balance on the resourcing of CDFs and other field staff to the different polders.

In other part of the AM the positioning on one CDG under OCWM has been discussed and the Achilles heel of having no OCWM staff in position in the project area. Alternative arrangements have been proposed respecting the strength and capacities of the OCWM.

Re: Infrastructure

TA CDF?

Are arrangements in place to ensure the additional GoN/GoB budget for infrastructure can be awarded, and completed in the 3 remaining construction

The progress made so far during the last three years on infrastructural development of the 8 Phase-out polders is roughly 47%. Considering the huge backlog (especially for the re-excavation of khals and repair and construction of sluices and inlets) and further infrastructural development in the 10 new Phase-in polders, the task in hand is mammoth and the timely completion is daunting. Moreover, the completion of the project by 2020 is also dependent upon a number of externalities:

- 1. Approval of the RDPP at the latest by January 2018 so that work orders may be given to utilize the remainder of the 2017-18 working season.
- 2. Uncertainties associated with the political disturbances during the upcoming parliamentary election of 2018-19 working season.

seasons to	
2020?	TI
What	The emergency support has been very helpful in SDDC and also for the actual design
arrangements	of infrastructure. All the field offices of BWDB expressed their satisfaction regarding
have been put in	the timely exchanges of design data and actual design from the BWDB design
place as a result	offices. Apparently, there is not much backlog in SDDC because of the assistance
of the	from the Emergency Support but a backlog still exists in the design offices because of
Emergency	pre-occupation of the BWDB mid-level design engineers (there is adequate support
Support made	at junior level from emergency fund).
available by	
2016 ARM.	
What is the status of BWDB	
staffing and	
survey and	
design data	
collection	
(SDDC). What	
has been the	
impact on	
infrastructure	
program?	
What measures	After receiving the design from the design offices, the time required by the field
should be taken	offices for estimating, vetting, tendering, evaluating and issuing work order for
to make optimal	construction, varies between 3 to 4 months (depends also upon number of proposals
use of the	received). As such, for the implementation of infrastructure during 2017-18 working
2017/18	season the cutoff time is end of February 2018. Hence, optimal use of the 2017-18
season?	working season is contingent upon the completion of the pending designs and also the
	approval of RDPP by January 2018.
For	There is a yearly escalation of rate of construction and as such the construction
infrastructure	budget increases with the passage of time. Moreover, there would be a budget
implementation	shortfall due to the recent government decision to trifold the market price of land
and quality	acquisition. The GoB can expedite the infrastructural development by beefing-up its
control what	contribution to take care of these inadvertent increase in expenditure. Moreover, GoB
actions and/or	can instruct the relevant government offices for expediting the process of land
conditionalities	acquisition for timely infrastructural development.
can be taken up	As the second of the decrease of the decrease of the decrease of the DNA/DD Code of Code of the Code
by GoB and	As there is an acute shortage of technical staff in the BWDB field offices, the GoN
GoN?	can re-allocate the TA budget by increasing the TA field staff to beef-up the BWDB
	field offices. There is a need for at least 1 QC engineer in each of the two regional
	offices (Khulna and Patuakhali) and 1 mechanical diploma engineer to oversee the huge infrastructural development created due to the backlog from phase-out polders
	and also the upcoming developments in the phase-in polders.
Re: WMG Capac	
A report	Generally, the TA has responded adequately to the Suggestions of the CMS report.
prepared by the	An overview is presented below.
Community	CMS Suggestions:
Mobilisation	(1) Integrated approach focusing on WMO-managed Collective Action –
Specialist (Dr	Multifunctional WMOs, (2) Promoting a variety of water and non-water Collective
CM	Action for strengthening Multi-Functional WMOs, (3) WMO as a link between Service
Wijayaratna) on	Providers and farmers, (4) Increasing year-round-land use intensity: improving
28th August	agriculture strategy, integrating with fishery, livestock etc. (5) Strengthen WMOs for
2017 was	improving internal water management infrastructure (6) Augmenting water supply: e.g.
reviewed, and	extending the period of water retention after wet season, (7) Instead of allocating a
the TA then	"common" set of Project Inputs for all the WMOs, different "sets" of project inputs
prepared a note	including O&M tools, WMO-strengthening infrastructure / equipment / machinery can
on follow-up actions (issued to	be allocated, (8) Participatory Performance Assessment and Target Setting (PPATS).
	Follow-up BGP and ARM comments:

EKN/BWDB/DA E on 11th October). Comment on the alignment between the follow-up actions and the CMS' Suggestions these Suggestions are in fact confirming the new "unified approach" to WMO and water management development. In its response BGP also highlights how project activities itself have improved (e.g. content FFS etc.). The ARM has concluded that in general sense this new approach is well implemented and successful as compared to project operations in the past.

Suggestion:

It is also acknowledged that much change has been made and that it is best to consolidate the current approach and make an internal assessment mid 2018 also to see how CDF deployment matches requirements.

CMS Suggestions:

(1) Expansion of Successful Interventions and new Collective Action, (2) Incremental inputs targeting incremental outputs.

Follow-up BGP and ARM comments:

The CMS strongly argues for a faster scaling-up. In its response BGP takes the suggestions of accelerating at heart, especially with respect to the different forms of Horizontal Learning, the introduction of CAWM (which are now better embedded in the polder teams) and the need to extent the involvement of DAE in the BGP after December 2018 when the (still under discussion). It should be noted that scaling-up and phasing-out is also depending on construction of infrastructure, which is well behind schedule. The ARM notes that the scaling-up

CMS Suggestions:

(1) Small core group of implementers to take the responsibility for outputs, (2) improving the efficiency of the core team at the Centre.

Follow-up BGP and WRM comments:

In its response BGP argues that after the project restructuring in 2015 and 2016 and the introduction of the "unified approach" most the TA is stationed in the polders. The ARM notices indeed a big shift though the transition is not 100 percent.

In its response to the CMS, the BGP also writes: QUOTE: the CMS report is based on the vision that WMGs and WMAs should develop into multifunctional business organisations, which - despite the report's assurances to the contrary - appears to be restricted by existing law. Instead, the current BGP approach aims to achieve higher production and better profits through improved local water management, be it for individual members or for smaller or larger groups engaging in a collective endeavour, a priority for demonstrating the benefits of WMOs. BGP hereby views WMOs as one potential actor for business activities within the broader market systems for agricultural development. UNQUOTE.

Suggestion:

In the original project designs the WMGs were to be business organizations. They were expected to generate money with this business and use this for O&M. In the ARM 2014, this model was reviewed. It was suggested that the WMGs would be useful platforms for local business – something that can be seen now with the Collective Action and Accelerated Intensification/ Marketing activities. However, to have WMGs as business entities was considered risky because (1) they are representative groups which maybe at loggerheads with the agility and acumen required in business and (2) failure in one business may 'taint' other functions of the WMGs. Instead what is seen now is that water management pays off significantly. What is required is to capitalize on this core function and for instance generate a much larger share of the crop for O&M – the current rates of 2-5 kg per bigha are very low.

Horizontal (farmer-tofarmer) learning activities were The first horizontal learning (HL) were taken up in April 2017 and since then an array of HL activities are more and more playing an important role in awareness raising and capacity development of WMGs at different stages of the development process. In many of the WMG visited by the ARM, a form of HL took place. The WMG and

recommended by ARM 2016.
Comment on how these have been integrated into the capacity building of WMGs, and their impact on farmer uptake of BGP activities.

the BGP-team and partners (LGIs, notably UP) consider HL an important part of capacity development. Understanding HL and partnerships is part of the more general training program for WMG.

The HL activities have not yet been systematically "mapped" by the BGP, hence the scale of activities is not known, but appear to be substantive. According to the WMG Tracker report (BGP, 2017) a total of 94,800 people took part in HL activities, but this for 90% concerns Farmer Field Days, which are useful but not necessarily the highest impact way of HL.

Participation in activities (including HL) related to modern technologies, is shown in the table below:

Activities for modern technology	No. of participants (up to June 2017)			
learning	Male	Female	Total	
Exchange visits to well- performing WMGs (WAP, O&M, CII, CA)	1 <i>77</i>	25	202	
Experience sharing visits to CAWM schemes	524	216	740	
Farmers' Field Day (TA)	33,437	50,398	83,835	
Farmers' Field Day (DAE)	4,325	3,624	7,949	
Cage culture demonstration/ sharing	51	63	114	
Exchange of FFS/MFS learning	628	1,335	1,963	

Some activities concern events with many WMG, but there are also occasions of a one-on-one HL activity between WMG. Many of the HL activities take place in the context of Community Agricultural Water Management. Examples of HL are:

- In Patuakhali and Khulna, 17 experience sharing visits for the neighbouring WMG members to the 12 CAWM pilots at Patuakhali and Khulna and 2 good practices (successful cultivation of summer tomato and poultry rearing) sites at Satkhira. Total more than 490 members from 109 WMGs, respective WMAs and BWDB, DAE and UP representatives participated. Participants ended up exchanging mobile phone numbers to communicate during replication of good practices.
- Identified good practices emerged from BGP by the Polder and Zonal team members through joint discussion and review with the WMG members (50 nos.);
- 300 farmers from 41 WMGs and representatives from Input providers, private company and DAE participated in a farmer gathering and experiences sharing meeting on cultivation of T-aman, mustard and mung bean cropping systems with the collaboration of DAE and BWDB and effective function of inputs seller, buyer and processor. (BGP, Patuakhali).
- Workshop with WMOs to promote collective actions, business planning and /or private company linkage where members from 198 WMGs of 12 polders (Khulna-86 and Patuakhali- 112) participated, shared and learned from each other's experiences.
- Farmers Field Day at Khulna where members from 6 WMGs participated shared and learned experiences;
- Experience sharing visit at Patuakhali to disseminate learning on mustard demonstration results where members from 58 WMGs of 3 polders gathered experiences;
- Organized meeting on linkage and network building meeting for the CAWM farmers/WMG representatives and Bangladesh Agriculture Development Corporation (BADC) senior staff (30 CAWM farmers, BADC senior staff).
- BGP published and distributed one "Compilation of Fact Sheets" developed on the identified good practices mainly for the use of the polder team members

to encourage WMGs to learn from each other's good practices.

Suggestion:

The feedback from the HL events is very positive and some practices (poultry, CAWM) are spreading fast. So far, the HL has focussed on agricultural and water management practices but less on WMO organizational development. It is proposed:

- (1) to continue with the current HL in a systematic way identifying priority practices and using it also to capture new practices through competitions
- (2) Use HL mechanism to strengthen through peer effects the WMO organizations even combining HL with the participatory monitoring

Participatory monitoring encourages water management groups (WMGs) to be aware of the potential targets for their development and to evaluate their progress (or shortcomings) towards achieving their full potential. Review and comment on the procedure used for participatory monitoring (as reported in Working Paper 8, October 2017)? Are the conditions in

place to ensure effective application at scale and in field conditions as well as for a long-term sustenance of the Participatory

Water

Management

remaining gaps

2014, adequate

BWDB at central

and zonal level

approach:

in the PWM

Regulation

staffing of

etc.

How will

Participatory monitoring (self-assessment) of WMG takes place every 6 months. WMG assess their performance with respect to 19 outcome challenges, under four themes: (1) establishment of water management group (WMG) and water management partnership, (2) agriculture and economic development, (3) community participation in planning, implementation and use of water management infrastructures, and (4) water management and operation and maintenance (O&M) of infrastructure. The performance is described on 4 scales, from 0=no progress to 3 = full achievement. Each of the four progress levels is provided with a clear definition, i.e. progress marker (in Bangla) so that WMGs can distinguish through internal discussion which level they have achieved with reasons.

A second round was conducted in April-May 2017. A total of 351 WMGs of 14 polders participated in the participatory monitoring exercise. 4 WMGs did not participate in the exercise this time while 1 additional WMG of Polder 43/2A participated in the monitoring exercise. CDFs were present in the participatory monitoring sessions of WMGs for in case the latter required any clarifications of monitoring format. BGP reports the results in a Working Paper. The scores are aggregated per WMG in a performance category: high, upper medium, medium, upper low and low categories. Afterwards CDF gave their expert opinion on the performance level as assessed by the WMG. Occasionally an adjustment of the performance level was proposed.

The results show that in general there has been an improvement in the performance of WMGs. In the 2nd round of participatory monitoring the overall average achievements of WMGs of all 14 polders are slightly higher than that of the 1st round participatory monitoring. A summary is provided in the table below:

Performance levels	Self-assessment by WMGs No. and % of WMGs belonging to performance		
		groups	
High	5	1.4%	
Upper Medium	82	23.4%	
Medium	145	41.3%	
Upper Low	71	20.2%	
Low	48	13.7%	

The adequacy of the performance indicators should be monitored on the hand of results received: not all indicators (e.g. is cropping synchronized) are immediately easily understood nor interpreted. It is noted that the performance indicators focus on the functionality of the WMG, rather than on quantitative performance for example such as agricultural benefits, level of funds available etc. This is good, as the indicators say something about the state of the WMG and the state of the water management system. But, the latter could be asked more explicitly with questions such as "is the water management system performing well" or "is the water management system performing better than the previous year". These questions could then be amplified with detailing which part of the infrastructure is (not) performing well, but it may be better to keep the form simple.

Participatory monitoring is considered a useful tool, which is currently implemented

participatory monitoring be institutionalised to strengthen the reflective and self-organising capacity of WMGs? What additional information or indicators would strengthen the WMG tracker?

fairly well, be it only in its initial stages. After the phasing-out of the BGP, the monitoring should be continued as a "health check" for the WMO's. At that stage monitoring as such is not sufficient: analysis and follow-up, especially for the weaker WMG, is essential.

The WMG Tracker report provides quantitative data on "WMG Performance". It provides a great number in considerable detail of (1) Funds (income and expenditure) of WMOs, (2) quantity and type of infrastructural interventions, (3) membership, (4) trainings received, (5) demonstration plots, (6) agricultural methodologies, (7) FFS etc.

The Tracker reports provide a mix of data relevant for project implementers and judging the actual performance of the WMOs and maybe the state of the water management infrastructure. It also accounts for project activities. However, the amount of data is such that it cannot be easily collected and maintained after the BGP, let alone analysed. Moreover, experience has learned that most of the data do not say much about the actual state of the water management infrastructure and the functionality of the WMOs (for example link between funds collected and O&M is not proven, while M is most often in the form of in-kind labour, while also non-members contribute. If the latter is important, then direct questions on the WMG's evaluation of the performance of infrastructure (and for example relation with BWDB, conflict resolution, networking) is recommended, as indicated above under the discussion on participatory water management above.

The current name of "WMG Tracker Report" would be better called "Project Performance Tracker Report".

Suggestions:

- Actively pursue and analyse the participatory monitoring of the WMOs, not only the WMG but also the WMA. Combine it with HL on organizational performance – for instance by sharing monitoring results at annual WMG conventions in each polder
- Record more direct information on the performance of the water management system, rather than indirect information such as production etc.
- Arrange for an institutional arrangement for participatory monitoring, analysis and follow-up after phasing-out of BGP; the WMA in combination with the OCWM and the LGI may organize it – this requires some additional input in planning and training.
- The current name of "WMG Tracker Report" would be better called "Project Performance Tracker Report".
- Continue the WMG Tracker Report after project closure, only in the form of occasional dedicated surveys, rather than vesting it in an institutional setup as a regular activity

Do the collective actions (community-led agricultural water management, annual cropping planning, cropping intensification initiative and community-led fisheries etc.) respond to WMG priorities

Yes, very much so. Many cases were observed. The collective actions seem to create benefits in three manners:

- They highlight the cooperation and the benefits that can be derived from it by WMG members
- · They are useful manageable interventions in their own right
- They create a spirit of action and jointly undertaking activities

and deliver benefits to WMGs?

Is the existing approach sufficient to develop WMOs into selfmotivated organisations with the capacity and interest to operate water management infrastructure, and expand collective actions etc.? Are there any corrective measures to be taken by the project and its partners (GoB, consultants, GoN) in order for the project to Suggestions: attain its key objectives on a sustainable basis?

The existing approach is fairly comprehensive and the scope and scale are such that WMOs may develop into self-motivated organisations with the interest to operate water management infrastructure and expand collective actions. There are indications that the BGP is addressing this in a more comprehensive and integral way than previous PWM development projects, and in a well-motivated way with good quality. However, experience with these previous projects has also shown that BGP is only the beginning: a project environment is distinctly different from the after-project environment. What needs much emphasis is the WMO to WMO support and development of self-evolving organizations – through annual polder conventions, more (non-project orchestrated) HL and exchange and peer effects and through the creation of WMGs at district level.

The actions towards sustainable O&M, and especially Maintenance, have hardly been carried out as yet, one reason being that the investments in water management infrastructure have not yet been completed. This most crucial issue of organising O&M should receive intensive attention in the time to come.

The BGP does not really allow for guiding of O&M after improvement of the (main) water infrastructure. The monitoring and guidance of O&M should receive due attention in the first years.

Corrective actions refer to the resources for O&M training and Guidance in the first years after implementation.

- Move from HL to organizational exchange and peer level support
- Remain monitoring the "health" of WMOs (as discussed above under participatory monitoring), initially by project based CDFs at polder level.
- Provide for specific monitoring and if necessary guidance of O&M in the first years after project implementation, so as to be able to respond in case of challenges, rather than revealed in a more general monitoring program.

Re: Agriculture

The revised RDPP extends the strategic partnership between BWDB and DAE to 31st December 2018. Unless a further RDPP can extend the duration of the TTAP to 31st December 2020, an alternative modality (perhaps an MoU) will be required. Investigate the advantages and disadvantages of possible different modalities, and

By discussion with PD (BGP), immediate ex-DGs and other relevant senior officials of DAE, it has been observed that all of them are in favour of partnership development with BWDB and extension of RDPP till Dec 2020. The PD DAE pointed out about shortage of manpower in present RDPP, and reservation of MOA due to minimum resources so, the next revision is suggested to include some more facilities (as mentioned position paper) to ensure proper completion of designed interventions of DEA. During wrap up meeting on 3rd Dec 2017 the Ministry of Water Resources confirmed to hold discussion with MoA regarding the 2nd revision of DAE RDPP after revision of DPP of BWDB. Considering the opinion of all concerns including EKN, 2nd revision of RDPP of DAE with additional manpower and resources would be the best solution. The 1st alternative could be to initiate the 2nd phase of BGP at DAE by support from EKN, so that as large extension agency of GoB, DAE would continue to support enhancing crop production in BGP's polders-the ultimate goal of the water management programs. If the above two options don't move forward then the next alternative should be to sign an MoU with DAE to continue FFS and technology (crop) demonstrations/transfer till June 2020.

recommend the	
most effective.	
DAE takes a leading role with the community-led agricultural water management (CAWM). Investigate DAE's assessment of the value of the CAWM demonstrations and their perception of the value of wider	As observed in the field, farmers are shifting from local rice varieties to HYVs and introducing 2 nd or even 3 rd crops wherever possible. DAE introduced modified FFS on CAWM and given importance to community seedbed raising and planting of same variety of rice in one location (field) to facilitate planting of 2 nd or 3 rd crop. DAE sets 8 demonstrations on HYV mustard in current season at Patuakhali (43/2B) and Barguna. This community approach of cropping helped to extend water melon areas and other rabi crops in polder 22. Cultivation of water melon encouraged farmers to dig small water reservoir (rain water harvesting) in corner of cultivated fields. Community marketing specially purchasing of agricultural inputs have been seen among the WMG members that helped them to reduce the cost of production. It has been observed that CAWM training under FFS modality helped to initiate group marketing in the areas of polder 43/2B.
replication.	
Assess DAE's	Till Nov 2017 DAE arranged 50 field days in current cropping year on different
response to	successful demonstrated technologies; 03 agricultural faire have been organized and
horizontal	26 motivational tours completed in different successful technology adoptions sites. As
learning methods	informed numbers of famers from neighbouring villages are visiting the fields of
and the response	water melon and HYV plots of Aman rice in polders $43/2B$ and polder 22 where
of SAAOs to	adoption of BRRI dhan 52 and 49 found successful. As observed in polder 22
new training	(Pikegacha) and polder 2 (Satkhira) SAAOs are very much involved in extension
methodologies.	activities with the WMGs as it facilitated their functions as extension agents in grass root levels. In fact, works of SAAOs with WMGs matched with the DAE's current
	strategy of group extension approach. So, FFS as training methodologies helped SAAOs to pass extension messages to the group of crop producers.

Annex 3: Reponses to specific questions in Position Paper

Overtion	Amenican
Question Q3.2 Is the	Answer
decentralised	In all three areas visited (Patuakhali, Khulna, Satkhira), the TA polder teams showed a high level of engagement with the WMOs. The main organisations (BWDB, DAE, LG
organisation	(UP)) concerned showed active interest in the work of the TBGP and the TA polder
working?[sep]Are	team concerned with facilitating the formation and the activities of the WMOs. The TA
the XENs, UAOS,	polder teams maintain contact with these organisations fairly well. DAE through its FFS
SAAOs, TA polder	and CAWM directly engages with the WMOs. The role of XEN is modest. At this stage
teams engaged	XENs of BWDB are mainly concerned with construction of infrastructure, where in the
effectively with	supervision of construction, the WMA were found to actively take part in supervision.
WMOs?	Engagement may increase when O&M (especially M) becomes of importance in the
	years to come. Currently XEN are little involved in WMO formation.
Q3.3 Is WMG	For current practical (BGP project, implementation related) purposes the functions of
functionality well-	the WMO
defined,	are sufficiently well defined. The most formal document, the PWMR of 2014 lists a
understood and	total of 39 responsibilities and functions under 3 headings for WMG, WMA and WMF
clearly	respectively. These are worked out in different forms and notions in respective project
communicated at	guidelines (BGP Field Manual, O&M Agreement) for the activities carried out and
all levels?	there is a sufficient common understanding of these functions for all concerned.
	However, for some functions an improvement of definition is required for operational
	purposes. There is a discussion on the role WMOs should play with respect to the LCS,
	but the description in the PWMR is sufficiently clear. The challenges are more in the
	implementation in this regard.
	To a marin to a a firmation of the distance is had a high and a smaller into a stant and
	Two main type of functions may be distinguished, which are equally important and cannot be seen in isolation:
	Formal (management) functions and responsibilities with respect to water
	management and operation and management of water management
	infrastructure: these are described sufficiently in general terms, but there is a need to describe these much better for operational purposes; this will have to
	be tackled in the O&M Guideline and O&M Manual and be incorporated in the
	O&M Plans (all due in late 2017 – early 2018)
	Opportunity and service functions, which refer to the functions the WMG may
	take up, for example: initiate collective action, community based water
	management, organise FFS and explore other capacity development
	opportunities for members, connect with other service organisations (LGI, DAE,
	DoF), explore opportunities with NGOs, etc. etc. These functions are broadly
	mentioned in the PWMR, are not defined in detail. This is only logical as
	conditions and opportunities and need will differ from place to place. However,
	for the TA team and the WMOs it is sufficiently clear what is meant and how
	these could be approached.
	It is to be noted that the WMOs are still evolving in the way they function, organise
	their responsibilities and establish their priorities. Also, WMOs cannot always be seen
	in isolation from other service organisations. It is probably counterproductive to define
	the WMO functions too strictly as long as the WMO fulfil their formal function with
	respect to the integrity of water management in the polder.
	There is a discussion on the level of a WMG at sluice catchment level or at sub-
	catchment level. The BWDB prefers a smaller number of organisations. From a
	(catchment) water management perspective this makes sense, but at the current stage
	of WMG development there are distinct advantages of having a comparatively small
	WMG, as this leads to much better cohesion in the group. The O&M issues with respect
	to the main sluice and khal can well be addressed through the Sluice Committee, which
	also would be the entry point for the WMA.

There is also a discussion on the number of WMA in a polder. The BWDB would prefer 1 per polder. The same considerations as for the number of WMG (see above) apply. Currently, the BGP has managed to come to agreement with BWDB on the number of WMAs in specific polders, where there may be more than 1. BGP also follows a policy of having "small" WMGs, be it that in the "second phase polders", the WMGs are larger than in the first phase polders, in which WMG were established at the time of the IPSWAM project on a village (mouza) basis. A practical approach is followed based on the local conditions, rather than a strict catchment-based approach. The ARM supports the approach of having smaller WMG and WMA.

Lastly it is noted that in the larger policy picture of water management in Bangladesh, that the functionality of WMOs is described in quite general terms and that much is based on voluntary contributions and social responsibility, while WMO activities solely take place in development projects, rather than being mainstreamed in Bangladesh. Also, the important aspect of financing water management is not really addressed. From the National Water Policy (1999), which confirmed participatory water management to be a national policy, there emerges a vision of much stronger WMOs. This vision on the functioning of WMOs and their role in sustainable water management will require further evolution of policy, probably most importantly on issues such as "financing water management" and "professionalization of WMA".

Suggestions on WMG functionality:

- Define better the operational aspects of WMO functioning in O&M before phasing out from polders.
- Conduct if needed consultations with the broader PWM community (BWDB, DAE, Development Projects) to resolve issues around the number of WMG and WMA in a polder, giving preference to considerations on WMO functional quality. This means that at the current stage of WMO development, smaller entities are recommended. This can also be part of the discussion on updating the PWMR.
- Initiate a policy debate on the evolving role of PWM in Bangladesh.

Q3.5 Phasing-out of TA support: SEP is the strategy adequate? Is phasing out from the IPSWAM polders too soon? SEP Beyond Blue Gold, how can FTs, presently engaged through the TA, be more strongly linked with DAE, DoF and DLS?

The "phasing-out" requires further consideration and redefinition. In broad terms, it means that the Community Development Facilitators (CDF), who are currently permanently stationed in a Polder and are in close contact with the WMG as part of a Polder Team withdraw from the area. This as such is a necessary and timely step: after all the formation of the concerned WMGs has been completed and it is time to let "the child" go and find its way.

However, in most of the "phasing-out" Polders, the construction of infrastructure has not been completed and the important operation and maintenance in which WMOs play a role has only been discussed and subject to some training but not really been practiced. It is difficult to ascertain whether WMOs are ready for this task, but experience from similar PWM projects is not encouraging in this respect. As there is no obvious custodian of the WMOs after withdrawal of the BGP support, the following conditions for "phasing-out" should apply:

- BGP provides for supervision of construction
- O&M Plans are dully prepared and signed by all parties concerned
- BGP provides a back-up team for monitoring and where needed guidance to WMG and WMA for the conduct of the first year of O&M; if warranted follow-up training should be offered.

Suggestions on Phasing-out:

- BGP supervises construction
- O&M plans ready and signed
- BGP monitors and where needed guides first year of O&M by WMG and WMA by providing CDF support to WMA

Q3.6

The short term, OCWM:

How can OCWM be effectively engaged for fostering PWM during and beyond the programme period? What is the role of and resourcing plan for OCWM beyond June 2020 in the Blue Gold area? should OCWM share responsibilities with water management partners (e.g. DoC, DAE, LGIs, LGED, DoF, DLS, BWDB O&M Divisions, NGOs etc.) to implement PWMR beyond the end of Blue Gold. SEP. Can **OCWM** capacity be enhanced on the short-run to inter alia supervise OCWM CDFs, and to witness and advise on the phasing-out and phasing-in processes in Blue Gold? Does the **BWDB** Audit Department have the capacity to continue auditing WMGs beyond the end of Blue Gold?

It is unlikely that the OCWM can be effectively engaged for fostering PWM during the programme period, unless all required resources of staff (including training of this staff) and operational facilities are provided. The task of registration of BGP WMGs and WMAs is currently not at stake.

An example: the BWDB' Zonal office of OCWM is supposed to be staffed with 1 Deputy Chief Extension Officer (DCEO), 1 Extension Officer (EO), 2 Assistant Extension Officers (AEO) and 12 Extension Overseers (EOv). Currently only the first position of DCEO is staffed, the other positions are vacant. The situation in other zonal offices is only marginally different, in Patuakhali it is the same.

Note: the situation in SWAIWRMP is slightly different from the BGP, as the CDF are contractually engaged by the OCWM rather than by SWAIWRMP. As compared to BGP, this constitutes a different administrative arrangement, but not a different way of working in the field. Resourcing of OCWM remains fully project based. One could argue that for long-term capacity development of OCWM, the arrangement of SWAIWRMP has advantages. However

The total regular staff of OCWM consists of 90 persons, which is reported to increase to 156 in the coming years. However, it is not completely clear to which extent this concerns tenure staff or (development) project-based staff. The majority of the OCWM field-staff is engaged in the irrigation projects in the north-west of the country.

Suggestions on short-term engagement of OCWM:

- Maintain an active partnership with the OCWM as is currently the case and support the OCWM where possible
- Organise the fostering of PWM for the remaining project period

The long-term, OCWM and Dept. of Audits

Experience has learned that the WMO will require aftercare to increase the likelihood of sustainably functioning of WMO and water management after the project. The OCWM is a natural and mandated custodian of the functioning of WMO, but it is not the only one and it is not necessarily the best equipped organisation for this custodianship. The well-functioning of WMG is not only determined by the water management where it acts in relation to and in cooperation with the BWDB, but also by it functioning at different levels of in-polder water management, which is closer to the domain of DAE and LGI. Finally, WMG potentially play a more informal but important role for their members in agricultural development in a broad sense. For WMG, the latter role may equally determine their credibility and success.

Registration of WMO is considered important and regular auditing is required, as there is evidence that the amount of funds handled by the WMOs is increasing rapidly. For the BWDB Dept. of Audits this is a new task for which it was never established. However, for the short-term the Dept. of Audits fulfils its task for auditing the WMOs.

Currently, there is no well-defined establishment plan for the OCWM and the Dept. of Audits for their tasks towards WMOs. Under the aegis of the SWAIWRMP, a discussion is taking place on the development of capacity for the OCWM and Dept. of Audits. The BGP is not yet a party in these discussions.

Caution should be exercised: (1) there is no benefit in investing in new capacity where existing organisations already perform (e.g. audits could be carried out by a host of public and private organisations; extension officers of DAE already in the field, etc.), (2) vesting all aspects of functioning of a WMG in the custodianship of one organisation could lead to a large organisational setup, while actually a more organic setup of organisations could much better serve the continuity of the multi-facetted

	functions of a WMG.
	Suggestions on long-term OCWM and Dept. of Audits Development:
	 As BGP, partake in the discussions on the future of OCWM and Dept. of Audits with other development projects
	 Exercise caution in developing OCWM: focus on (1) its primary role and strengths of BWDB: primary water management and needs for related O&M and (2) monitoring of the basic functioning of WMOs; rather than OCWM made feeling responsible for the whole myriad of potential activities of the WMO.
	 Exercise caution in developing Dept. of Audits: (1) audits can be carried out in many different way, by different organisations, (2) the depth of audit is still little explored.
Q3.7 How can LGIs be effectively engaged in supporting participatory water management?	A noticeable change during the project visit was the active presence of members of the Union Parishad. The closer engagement was also noticeable from the small investments in water management infrastructure (often small bridges and box culverts) from the discretionary fund of the UP chairperson. This fund – though often used very efficiently it appears – is very modest at Tk 500,000. Another sign of the close engagement of LGIs in the WMGs is that are a large number of instances where WMG committee members also become UP committee members. Against these positive instances, there are also examples of UP chairmen manipulating the selection of WMG members.
	There is a strong case to consolidate the engagement of LGIs in participatory water management: the LGIs are the organizations closest to the WMOs. This should be taken on board in the policy initiatives as well.
	Suggestions:
	 In new phase-in polders discuss the joint opportunities for improved in-polder water management and operation and maintenance from the beginning – identifying opportunities for support from UP chairperson discretionary fund and the leveraging of other investments (from Upazila Parishad for instance) To have proposed expenditures for the budget for small water management investments that is rerouted from WMO offices to also vetted by UP: in particular, in case of additional culverts on roads permission is required from LGI
	To have O&M plans shared if not witnessed by UP
	To make disaster management and flood preparedness part of the WMO remit
	 To promote cooperation between WMA and UP – such as sharing of office Approach Upazila Parishad – with request for support
Q4.2 What is a realistic projection of infrastructure expenditure by June 2020?	It is difficult to make a projection of expenditure as it would depend upon a number of externalities and conditionalities (as discussed above). But, as the implementation of the cost intensive infrastructure (sluices and inlets) would increase in the upcoming years, the expenditure would definitely increase from the present level.
Q4.3a What further action is possible to accelerate survey and design data collection?	Because of acute shortage of technical personnel (Assistant Engineers and Sub-Divisional Engineers) at the field offices, the data collected by the field staff are not properly verified/scrutinized before sending to the design office. As a result, data sent are sometimes returned by the design offices for correction/verification. Monitoring of the data collection is necessary to accelerate the design process. The problem was discussed in the meetings with BWDB and MoWR and the mission was
	assured that they would try to fill up the sanctioned technical positions.
Q4.3b What is a realistic aggregate target value for awards	The target is dependent upon the availability of designs. The field offices opined that if the designs are available by the end of February 2018 then 50% of the target could be achieved. The target is also dependent on the approval of the RDPP, which is expected to be approved by January 2018.

of contracts by June 2018?	
Q4.4 Has the BWDB	Yes. Verification/scrutiny of the data by the field offices before sending to the design office would expedite the design process.
emergency fund/crash program effective	
in SDDC and design office?	
What more is needed in BWDB field offices?	

Q4.5 What actions are required to obtain better value from the LCSs? Extensively addressed in Section 3.5 of the main text of the Aide memoire.

Q4.6
What measures are required to ensure preemptive action against embankment failure from erosion?

The present measures taken to thwart the erosion are either temporary (dumping of sand or sand-cement bags, geotextile bags and CC blocks) or short term (retiring of embankments). Retiring not only requires land acquisition (with obvious social concerns) but has also become expensive due to high cost of land acquisition (three times the price of local prevailing rate). Bank protection through permeable groynes has been recommended for pilot study by BWDB but was not carried out due to high cost of construction. But, such a pilot study needs to be carried out to analyse the technical and economic feasibilities of groynes as a long-term solution. From field observations, sand filled geotextile bags seems to be a better short term protective measure than either synthetic sand bag dumping or CC blocks, considering both the cost and durability. Because of flexibility and unevenness of bags during placement, such bags are also effective in deposition of silt.

Q4.7a and Q3.4 on Horizontal Learning.
See Annex 2 - Answers to Questions in the TOR

Q4.7b1 What measures are required to expand CAWM/ IPWM initiatives? Non-interrupted operation of sluices and maintenance of main canals as it has been found in most of the visited polders has really enhanced the expansion and smooth operation of CAWM/IPWM by the WMGs. As farmers are getting early drainage in the polders of BGP, they have been started to shift from single/double cropping pattern to double/triple cropping patterns in Patuakhali (43/2B, 43/2F Polders). For

further expansion and sustainability question of CAWM, each of the WMGs may assess the need for on farm water management in their own catchment areas and suggest the action plan to implement. The budget provision against 'group support' in DAE's DPP may use for the identified CAWM works. The BWDB's DPP may allocate small budget for promoting CAWM activities for WMGs. If not resources may be found elsewhere such as the reallocated budget for WMO offices. Exchange visit of WMG



members from weaker CAWM polders to stronger ones would promote horizontal expansion. Strengthening of WMGs by involving SAAOs in all steps of development ensuring smooth operations of the organization, so the collaboration between BWDB and DAE to be made stronger during the period of BGP to ensure expansion of CAWM. SAAOs are the potential local technical staff who can also ensure collaboration of Union and Upazila Parishad towards WMGs. The activities (WM) of BGP ensuring production of second crops in single cropped areas, so if water shortage found due to siltation of tertiary canals or any other obstacles or conflicts in the crop fields, the farmers using the strength of WMG could solve it.

Suggestions:

 A need assessment to be done by WMG for their own catchment area regarding expansion of CAW/IPWM

The allocation in DPP of DAE for group support' to be used for promoting CAWM activities for WMGs Involvement of SAAOs in all aspects of WMG activities will create ownership of SAAOs to WMGs Exchange visit of weaker WMG members to stronger WMGs where CAWM is in good shape Q4.7b2 Replication and sustainability depends upon the success of the systems. The farmers of How to ensure polder 22 digging water reservoirs in their fields to use water to produce second replication and crops in dry season what they have said learned from other villagers. Sustainability sustainability? will depend upon the market price and profit margin from the crops growing, as long as the production system makes profit it will replicate rapidly by beneficiaries and would sustain. The uptake of rice varieties BRRI dhan 52 and 49 by farmers is best example of replication and sustainability of technology if it fits well with socioeconomic environment of beneficiaries. If one WMG are getting benefit of CAWM it would replicate in the nearby WMGs rapidly and extension would also be facilitated by WMA and WMO to the distant suitable locations. Constant interaction between WMGs are to be ensured by WMAa and WMOs. **Suggestions:** Financially profitable and environmentally suitable practices are to be replicated rapidly by beneficiaries helped by horizontal learning Constant interaction between WMGs to be promoted Q4.7b3 In some WMGs the members are paying Tk 40 as monthly deposit while in other WMGs depositing Tk 20. In general, these amounts are low compared to the added How to set up funding streams to benefit of improved production. In LGED polders under the Small Scale Water enable WMG Resources Improvement Project the amounts are at least ten times higher. initiatives? With stability of the organization the income of the WMGs will also increase by lending cash to the members with comparatively low interest rate. In Satkhira (polder 2) the interest rate fund as only 10%. With the improvement of livelihoods of WMG members, the demand of cash money for new farming enterprises (poultry/duck farming, fish farm etc.) would also increase, so they will use their own money as loan from the WMGs, which will increase the fund. The WMGs may also get cash or kind from UP or Upazila for maintaining secondary canals. Some WMGs have also found involved in fish farming in the locality. Once the WMGs will be strengthened, they will find numbers of ways to increase fund for the organization, they may run road side store etc. Suggestion: Collective investment of WMGs money to suitable local enterprises like fish farm, beef fattening, and credit operation into the members No. As the OCWM has very limited field staff/CDFs, further recruitment and training is Q4.8Do the BWDB necessary for the capacity development of the field staff. field offices have the knowledge and the skill to support WMG in O&M beyond the end of Blue Gold? Q5.4 Crop Intensity initiative is the key for increasing cropping Intensity (CI), in BGP target Does the cropping areas. It aims to introduce new cropping schedules (also in areas where no additional intensity initiative water management is required) and link growers to input suppliers and traders. It is (CII) helps to observed that CI is in many sites found in increasing trend (from 178% to 188%) under improved WM in polders of BGP (with few exceptions in some pockets). scale-up and disseminate Improved WM facilitated to grow 2nd crop after T. Aman rice in comparatively higher

elevated areas of polders, which helped to achieve higher Cl. Once farmers are

getting one more additional crop under CII programs it forced them to maintain

functional WMG

and water

management for development?

CAWM that assisted to achieve cohesiveness of WMG. In fact, with higher incomes from crop production, farmers started CAWM by digging water reservoirs in corners of their crop fields (617 in polder 22) for using water for crop production in dry season. Producing more crops with higher farm incomes influenced community to strengthen WMG under facilitation of CDFs and SAAOs in many places. It indicated that higher CI as a whole has direct influence on scaling up WMGs and its operation for long run. The farm income from crop production is related with better water management, so it triggered operation of functional WMG what has been found in different polders like at Patuakhali and Pikegacha. WMGs are basically farmers and SAAOs are root level local technical staff, so operations of FFS and attachment of SAAOs are important actions taken for sustainability of the WMGs.

Suggestion

The CII to be promoted in all suitable locations to increase farm income of WMGs

Q6.2 What are the relative merits of the proposed options for disbursing the balance of the Innovation Fund? The Blue Gold Programme was set up with a substantial in-built Innovation Fund — consisting of two components, the Water Management Innovation Fund (Euro 2.3 M) and Production Support (Euro 1.9 M). The Fund makes it possible to introduce innovations and experiment with new approaches and techniques. The prime criteria for selection were the relevance of the innovations for the population in the Blue Gold area and/or the implementing organisations. Other criteria are the broader relevance in Bangladesh, the opportunity for the Dutch private sector to showcase state-of-the art technology and the possibility that a sustainable support base is setup.

The size of the Fund was almost a project in itself. Hence on suggestion of the ARM 2014 an Innovation Fund Manager was deployed who could (1) initiate calls for ideas and proposals from parties in the project areas and elsewhere and liaise with potential Dutch suppliers (2) manage the innovation – i.e. making linkages with parties that could contribute to the upscaling (3) facilitate and manage the embedding of the innovation in the project area. With some regret, it is noted that the operationalization of the Innovation Fund took longer than desired, as much effort was put in developing the procedures and process for accessing the Fund in compliance with EU Procurement Rules. Yet even so by June Euro 0.86 M was spent/ allocated under the Fund.

In addition, at the time of the mission preparation had progressed for the spending of another Euro 0.8 M (under ICT solicited call and under bank protection).

The Innovation Fund was also restructured with the amount managed under the BGP to Euro 2.85~M (Euro 1.4~M for water management and Euro 1.05~M for productive sector development). In addition, a new fund IF (WMKIP) with a budget of Euro 1.4~M was created from a budget transfer to the EKN to be managed by Deltares, expected to become operational early 2018.

With this transfer, there is still an amount of Euro $0.75\,M$ available in the BGP Innovation Fund. With the number of activities undertaken in the last year (introduction to Netherland business community, engagement with young Bangladesh graduates) plus the larger reputation of the IF and the follow up to the existing pipeline of project, the concerns of underspending of the now reduced IF is no longer there. The outcomes are mixed as is the nature of innovations but generally quite positive. Some innovations like cage fishing and the use of geotextile bags for flood protection having had good impact already. In addition, a large pipeline of proposals is now in place. Part of the spending would be the follow up of current most promising innovations (13 plus 4x) so far and to make sure the proposal currently in the pipeline mature (4 plus 13) and get properly implemented and accommodate some new proposals.

The challenge is hence more in the management of IF – the processing of applications and their imbedding in the BGP areas.

The second challenge is the imminent project closure in the second half of 2020. For innovations to mature they would need to be introduced not much later than early 2019.

The position paper prepared, on the occasion of the ARM, tabled three options on managing the IF:

- (1) Leave current IF operations unchanged (with unsolicited calls); close new application mid-2018 and focus on limited number of high potential innovations seeing them through the entire process
- (2) Focus on solicited calls only and close the unsolicited call option from early 2018 onwards
- (3) Middle ground: close the unsolicited calls from mid-2018 and develop another short duration solicited call during 2018.

Suggestions:

- Underspending seems to be now less of a problem but with the closing date of BG effectively in mid-2020 judicious use of this precious facility is required. There is a large pipeline of projects that are pending and projects that have moved or are moving beyond feasibility. Option 3 is recommended hence. In earlier discussions, a number of topics for the solicited proposals were selected. Some of these may be part of the WMKIP project (small scale dredging/drainage/flood protection); other topics (ICT) have been handled. The final theme (marketing including post-harvest management and storage) maybe consider as the theme for the remaining solicited call.
- a main bottleneck is the management of the IF which is now done on part time basis by an international expert. It is proposed that from the IF budget resources are also freed up to engage a national expert for at least 18 months, who would have the following responsibility: processing the applications; looking after embedding in BGP snd beyond; actively promoting them to other activities; packaging and interlinking innovations; managing the interface with WKMIP.

Q7. How can the attention to gender translate more strongly into active participation of women in the benefits stream created by the programme? Are PWM structures and processes sufficiently conducive for female involvement in decision-making?

Gender is mainstreamed in the different components of the BGP, as the Position Paper shows. 43% of WMG members for instance are women – slightly above the target of 40% that the BGP set itself which is more than the mandatory 30% under the PWM Rules. BGP has also set targets 5% of female committee members.

The women members are on the other hand underrepresented in the training activities of the BGP – with women in the different training activities representing 25-35% of all participants – depending on the type of training. This may be rebalanced where relevant.

Overall the effort of BG to mainstream gender is solid however. Yet there is a risk that it will operate only on activity level: tick marking gender engagement in different project activities, such as for instance 'decision-making in PWM" but less clarity on how BGP with all its intense effort can contribute to the improved well-being of women.

Sugaestions:

With the engagement of a full time national gender expert it is proposed to set a clear objective of what BGP wants to achieve on gender, in particular on the well-being of women. It is proposed to:

- formulate ambitions not only in gender equality but also in terms of well-being of women (for instance reduced insecurity; relief from reduced danger of sexual harassment or domestic violence)
- identify the different activities of BGP such as FFS, WMG meetings, HL and All to highlight these issues
- Create positive role models several such already exists, as was clear from

the compilation of good practices: in this regard continue the positive role of the female CDFs as examples of empowered and knowledgeable

Q8.2 and Q8.3

What additional information or indicators would strengthen the WMG tracker?

How will participatory monitoring be institutionalised as a means to strengthen the reflective and selforganising capacity of WMGs?

See Annex 2 - Answers to Questions in the TOR

Q9.2
What actions are needed to continue DAE's involvement beyond end Dec 2018? Can DAE's RDPP can modified to strengthen their staffing

As reported the DPP of DAE has been revised up to Dec 2018 but the project period is up to Dec 2020. As observed in the field DAE's involvement is the key issue of sustainability of the WM systems being promoted by BGP, discontinuation may also cause reduction of project achievement in context of crop/food production. It would also restrict the harvesting of full benefits of water structures constructed by the project and moreover be threat for ensuring food security of beneficiaries in those polders. As seen in DAE PP no permanent staff has been provided, to be improved with adequate professional staffing, incentive package including overseas training and hands-on TA support.

Suggestions:

- The revision of DPP of DAE with extension till Dec 2020 through revising the fund allocation envisaged in the position paper to be under action.
- If project fails to convince MoA for revision of current DPP with time extension the other two options could be:
 - EKN may consider to start 2nd phase of Blue Gold Project for DAE starting from July 2018 to June 2022 assuming another 2-year extension of BWDB's DPP in 2nd revision
 - If the above option not possible only then the Blue Gold may consider for signing MoU with DAE for continue the activities for rest of project period

Annex 4: Follow up to ARM 2016 recommendations

In this annex the follow up of the recommendations of the ARM 2016 is described, based on the assessment by the project team and commented by the ARM 2017.

1.1	Emergency staff arrangement for water infrastructure in place	Design staff - Four junior design engineers were appointed in April 2017 to Design Circles 2 and 5 in BWDB's Green Road complex. And in October 2017, a junior mechanical engineer for ME Khulna was appointed. All staff were identified, selected and approved by the respective BWDB office (DP3, Design Circle, Mechanical Engineer Khulna, and then recruited through the TA team - but are placed under BWDB line managers and remain accountable to them Survey and design data collection (SDDC) - After appreciating the range of support likely to be required by BWDB if survey teams were recruited locally (ie recruitment of trained staff, provision of survey equipment, transport, field allowances etc, and the complexity of managing and obtaining transparent financing procedures), preference was given to contracting local survey firms to conduct survey and design data collection. Survey companies were selected and contracted by BWDB Field XENs with TA financing. Seven contract agreements were signed in August/September 2017, with their implementation managed by BWDB. Procurement and quality control staff - Additional staff have yet to be appointed in field offices for the preparation of estimates and tendering, and quality control. With respect to estimates and tendering, there is understandable reluctance within BWDB about providing confidential and sensitive information on prices and tendering procedures to part-time staff - for fear of collusion with contractors. Support staff have been provided to assist in PCD's Motijheel office. ARM: The availability of the additional design staff has been very useful as has been the engagement of the field survey staff - though the latter missed the 2016/7 dry season measurements. The engagement of procurement and quality control staff is essential. In summary: • Provision of SDDC has improved the data collection. But monitoring of the data collection and quality of data need to be verified/scrutinized by the field offices before sending to the Design offices. • The field offices
		technical post are filled up with new recruitmet then part-time staff would not be necessary. This may not happen though
q	Shared office space by PCD and TA (infrastructure staff) in use	After EKN gives conditional agreement to rent the fourth floor of a new building owned by BCIC in Motijheel almost directly across the road from PCD's Hasan Court office, discussions concerning co-location of staff of DP3 and OCWM, and continuing a presence in Gulshan were held. In early January 2017, a contract was signed with BCIC, and from 2 Feb, the TA infrastructure team occupies the new office and from 3 Apr, are joined by the TA training and gender teams. As a result of the move, meetings between PCD and TA teams are more regular, the meeting room in the BCIC building is frequently used for joint meetings, and there is more regular direct communication between BWDB and TA teams at all

		levels across a range of subjects. Technical staff of BWDB and the TA team work more closely together and carry out joint field visits.
		From 2 Aug, the EKN-funded CDSP-IV TA team becomes sub-tenant of BGP Gulshan office and contributes to BGP's operating costs.
		ARM: noted. The new arrangement is satisfacotry and both the parties opined that they now have more effective and better interaction.
1.3	RDPP draft shared for discussion by BGP partners	The draft RDDP was worked on by PCD/TA teams from 8 November to 31 December, in preparation for a review meeting in MoWR on 1 January 2017. After the MoWR meeting, ADG (Planning) took control of the formulation of the programming. The revised RDPP was then submitted via MoWR to the Planning Commission on 19 March.
		ARM: It is understood that there has been more than ordinary iteration with regards the RDDP and the entire process has been time consuming. Also it is understood that the final current version has too much detail which may be not helpful.
1.3	RDPP finalized and approved	To review the BWDB BGP RDPP, a Pre-ECNEC Committee (PEC) meeting was held in the Planning Commission on 2 Nov 2017, attended by DG BWDB and his senior officials. The meeting recommended that ECNEC approval was sought for the RDPP, with a proviso that a list of 25 points were addressed before the document was submitted to ECNEC. Since most of these 25 points were raised at the appraisal meeting on 18th September, and PCD/TA teams have made significant effort to address all issues in the revised RDPP in the lead up to the PEC (ie between 18 Sep and 2 Nov), there are only a few further points to address before the RDPP can be submitted to ECNEC. Since the revised RDPP will require BWDB and MoWR approval before it is submitted to ECNEC (in 65 copies), it is possible that the RDPP may only be tabled at an ECNEC meeting in January 2018, and that formal ECNEC approval may follow in another two to three weeks.
		The ARM notes that the process has taken very long in particular as it is a revision of the DPP and not an entirely new project being conceptualized. The progress of work during the 2017-18 working season hinges upon the approval of the RDPP by January, 2018.
1.4	New contractual arrangements worked out and in place for part of the envisaged work	Pre-announcement of contracts (tendering to be completed in all aspects with contract issuing conditional on RDPP approval): Despite specific directions from PCD, BWDB Field Offices were reluctant to invest in preparation of survey, design data collection, design, tendering in advance of RDPP approval for works that were not included in the original DPP.
		Multi-year contracts (for at least 20% of works): Multi-year contract for earthwork with specified yearly progress and quality facilitating natural consolidation compaction is not well defined in GOB/BWDB procurement rules. Therefore, field XENs normally do not feel encouraged to enforce such contracts to the contractors. But, there is an understanding that they will try it at least for some contracts after the approval of RDPP. However, though formal multi-year contracts are not yet in practice, most of the present earthwork contracts continue for more than one year passing an unintentional rainy season that helps some natural compaction. As per GOB procurement rules large contracts with several years O&M

responsibilities for Blue Gold type programs (in contrast to CEIP) are not possible. Moreover, BWDB Field XENs feel that because of socio-political reasons they need to satisfy as many local contractors as possible. Therefore, in their opinion, this idea is not practical.

Packaging of works in larger contracts (allowing mechanized operations by better equipped contractors): Because of local political pressures, and the preference to spread risk by having more contractors, BWDB Field Offices continue to rely on the existing contractors.

Bids below 10% of official estimate: A 2017 GoB circular disqualifies bids below 10% of the official estimate.

The ARM appreciates the effort made in finding contractual alternatives. In taking stock of progress following the early 2018 construction season some of the alternatives, in particular multiyear contracts may be considered still.

1.5 Fact finding visit on implementation of LCS work

A meeting chaired by the Senior Secretary, MoWR was held on 13 Oct 2016 to form a Committee led by CWM to review the arrangements provided in the PWMR 2014 for Labour Contracting Societies (LCSs), to identify practical bottlenecks in implementation, and to make clear recommendations for implementation. From 12-21 Nov DP3/TA staff - and CWM from 20-22 Nov - conducted site visits to assess LCSs. On 15 Dec 2016, PCD issued an office order setting out ToR and timeframe for review of PWMR 2014. On 2 Jan 2017, a meeting was held to discuss arrangements for national seminar/workshop concerning PWMR 2014. Minutes of the meeting were issued on 10 Jan 2017 stating the following decisions:

- PCD will issue a letter to Field XENs regarding LCS advances and other related issues, referring to PWMR Clause 44 Section 5.
- 2 Committee members will discuss with XEN Patuakhali and Khulna regarding their concerns about LCS problems.
- 3 Before issuing work orders, TA/BWDB Field Offices will discuss about the pre-work arrangements and advise WMG/LCS members about their respective roles and responsibilities;
- 4 LCS contracts should be allocated based on demand and availability of labour/WMG members.
- 5 Before LCS formation, more discussions should be held with WMGs/WMAs to explain respective roles and responsibilities.
- 6 Field XENs are to forward observations and comments to PCD within 15 days.

A follow-up meeting on 8^{th} November 2017 agreed that: (a) *ad hoc* committees will be eligible to organize LCSs for new polders where formal WMGs remain unregistered; (b) LCSs will be paid in three instalments, the first of which will be payable (in place of an advance) after a period of 7 to 10 days from mobilisation of the LCS when the BWDB Field Office can establish that the LCS is active.

ARM: LCSs have been effective in poverty alleviation and the system should continue as recommended by ARM. It is unfortunate that the planned review could not materialize — and hence it urgently recommended to expedite this. Reference is made to recommendation 5.2 — building on these activities it is necessary to come to a set of practical improvement to achieve the use of LCSs as instrument of poverty alleviation and work progress. The decision of 8 November are

		appreciated, in particular to work through ad hoc committees in the anticipatiom of full fledged WMGs.
1.6	Mouza maps indicating additional land requirements submitted to XENs	From 30 Dec 16, BWDB SDEs & SAEs, with TA zonal staff and CDFs, and WMOs jointly identified and marked preliminary layouts/alignments on mouza maps for a potential seventeen works that involve land acquisition and submit draft acquisition maps to the BWDB Field XEN. However, because of the delay with the RDPP the plan was not finalized; since the original DPP had no provision for land acquisition, the BWDB field offices were reluctant to create an expectation of payments for land acquisition that might create social problems amongst land owners. Note that the recent revision of the Land Acquisition Act 2017 (a revision of the Acquisition and Requisition of Immovable Property Ordinance 1982) has increased the rates for land acquisition which will impact the amount of land acquisition able to be funded through BGP. The issue of land acquisition was discussed at the PEC meeting on 2 Nov 2017 (see also recommendation 1.3 above) who suggested that an increased GoB fund allocation should be provided.
		ARM 2017: The issue of increased land values had been raised in the recommendation of the ARM: it would require an adjusted provision in the GoB financial cost contribution. As discussed with BWDB and MoWR, all efforts will be made by BWDB to expedite the process of land acquistion (including provison for additional fund
1.7	Release of funds by EKN set in motion and tracked	Funds for Jan-Jun 2017 16 Oct 2016: DAE submits budget forecasts to EKN x Nov 2016: BWDB submits budget forecasts to EKN x Nov: EKN submit budget forecasts to the Hague 23 Nov: PCD submits bank statement to EKN 8 Dec: Funds received in BWDB account in Agrani Bank 15 Dec: DAE identified difficulty with EKN fund transfer 3 Jan 2017: TA provide Tk 34 lakh loan to DAE 25 Jan: GoN funds received by DAE
		Funds for Jan-Jun 2018 29 Oct 2017: PCD submits forecast requirement to EKN 9 Nov: PD DAE submits first forecast of requirement to EKN Under the present DAE RDPP - which is effective to end-December 2018 - there is likely to be one further fund request from DAE to EKN, in March 2018. Unless the rate of disbursement increases before June 2018, there are likely to be significant amounts of unused funds remaining in EKN's allocation for DAE. ARM: noted and appreciated that there is no bottleneck here. No
		backlog in release of funds was reported
2.1	Phasing out plan for existing polders completed for review	ARM 2016 recommended withdrawal at end-December 2017 for existing 12 polders. Written instruction issued by PCD (25 Jul 2017) to withdraw from 10 polders by end-June 2018. During EKN/BWDB/DAE/TA coordination meeting on 17 Aug 2017, CWM/PD DAE advise against withdrawal from 12 polders by end-2017, and recommended that OCWM/TA draft a briefing note defining functions of backstopping support to be provided by OCWM/DAE to WMGs after withdrawal of full-time TA polder teams, and to draft an action plan – which takes account of the need to focus on forming and developing WMOs in the new polders - to extend the part-time

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		involvement of CDFs/FTs in ten polders. A report (28 Aug 2017) by the Community Mobilisation Specialist (CMS) questioned the readiness of WMGs and support agencies to meet withdrawal at end-June 2018.
		A joint meeting of OCWM/PCD/TA (see Position Paper Section 3.5) has agreed the program for a phased withdrawal of TA resources, including measures to strengthen WMO functionality in the period up to mid-2018, and to enhance on-the-ground capacity up to project completion. The key limitation is OCWM's lack of structural and/or project-based resources to enhance activities in either old or new polders. Because of OCWM's resource limitations, practical support to WMGs is restricted to basic registration services and very limited organizational activities. TA resources will be used (i) to enhance capacity in the polders (eg WMOs, catchment plans, O&M agreements, resource farmers) up to mid-2018; and (ii) to enhance OCWM capacity in old polders up to 2020 (10 CDFs). A later phase-out of the TA teams from old polders is not desirable as it reduces the resources, time and attention that can be given to new polders.
		ARM Mission: The limitations to the capacity of the OCWM are noted. At present there is no OCWM presence in the BG polders which would make supervision of CDFs difficult. It is recommended that OCWM is taking steps to at least provide the essential basic regulatory functions whereas the phase out CDF resources are provided to the WMAs (recommendation 1.2).
(4.2)	New version of Unified Approach prepared for review	The Field Manual of the Blue Gold Approach to Participatory Water Management was reviewed and approved by the stakeholders at a meeting chaired by ADG Planning on 19 Jan 2017, followed by an endorsement by the ARM on 10 Feb. A round of orientation trainings were completed within the first quarter of 2017, and printed versions of the Field Manual (in both Bangla and English) were distributed to all field staff in May 2017, and to BWDB and DAE staff.
		The new manual is complemented by new job descriptions and by the formation of polder teams (see also recommendation 4.3 below).
		ARM Mission: The Field Manual is a useful concise document. It may be useful to review the approach and the practical time required for each steps and set this against the resources in BG. This will also help to finetune the approach so that it can be shared with others for replication.
	Dash board tracking MIS system operational	The development of MIS/Dashboard has involved identifying data requirements, the use of ODK software to allow direct entry by CDFs, and the design of web-based reporting systems.
		Phase 1 of the dashboard development (WMG registration, WMG tracker and participatory monitoring) was presented to the officials of DP3 and CWM under the chair of PCD on 25 Oct 2017 – minutes of the meeting are available. This will now be followed by fine tuning the data analysis to meet BWDB requirements, operationalising the software, and capacity building of BWDB staff.
		Phase II will include baseline survey data, FFS/MFS survey data and impact survey results. The program for completion of this phase is end-Dec.
		ARM Mission: Considerable progress has been made. It may be good to

		while the same of the words of the BC and the
		publish some of the results on the BG website.
2.4	Agreement and clarity on arrangement for polder apex body	CWM's letter of 8 Nov 2016 to PCD requested officials and staff involved in WMO formation and development to take necessary steps to form one WMA in each polder. In Dec16/Jan17, DCEO Hafiz was successful in obtaining agreement in four old polders in Khulna (P22, 30, 31-part and 26). P29 in Khulna and P2 in Satkhira were both considered to have too large a population to be represented by a single polder-level WMA, so two polder-level WMAs were formed in P29 and four in P2. On 5/6 Feb 2017, DCEO Hafiz established that the multiple WMAs which had been formed in the eight Patuakhali polders, were reluctant to concede their role and responsibility. Follow-up meetings between CWM/CEO and the WMAs in August 2017 were again unsuccessful. However, a meeting in Patuakhali held by OCWM with WMA representatives on 15 Oct 2017 agreed that the existing WMAs would remain, and one polder level O&M agreement would be signed between the respective BWDB Executive Engineer, and two representatives from each of the existing WMAs. ARM Mission: there is now clarity on having one WMA per polder as preference and the ambiquity with regards WMA and WMF has been resolved.
2.5	Strengthen and give due attention and resources to polder water management	Re-excavation of primary canals and some major secondary canals in first and second batch polders has created scope for internal polder water management (IPWM) and community-led agricultural water management (CAWM) initiatives. The Blue Gold Program has strengthened and upscaled IPWM and O&M practices in 2017 through the following mechanisms: 1. Operational sluice catchment water management planning workshops with support of BWDB, DAE and LGIs have been piloted tested successfully. ToTs for PCs and orientations for CDFs have started to make sure this new planning approach can be introduced in at least one sluice catchment per polder. WMAs are expected to roll out the approach to other sluice catchments in the same polder with support of PCs, CDFs and BWDB/DAE field staff. 2. Existing O&M guidelines have been revised to include operational sluice catchment planning, an O&M framework and agreement. O&M training modules have been developed for use by BGP trainers, and WMA/WMG members and pilot tested successfully. 3. About 60 DAE-led CAWM FFS have been conducted to provide intensive technical and agronomic guidance on crop synchronisation, improved varieties management, new crop technologies and on farm and catchment water management, new crop technologies and on farm and catchment water management. A special CAWM FFS curriculum has officially been published by DAE and ToTs for SAAOs have started. 4. CAWM Aman and Rabi crop and water management planning workshops for WMG members have been organised with support of DAE/BWDB (OCWM) and the upcoming ones will be fully led by DAE. During the workshops, a CAWM challenge between WMGs was launched. 5. Horizontal learning visits, Farmer Field Days and crop cutting festivals on CAWM were attended by more than 760 participants from 125 WMGs in 2016/2017. Since June 2017, DAE is actively supporting another 20 enthusiastic WMGs to adopt CAWM. Recent adopters are already further promoting CAWM to other WMGs through horizontal learning.

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		 Collective action among WMA/WMGs to create financial sustainability of WRM infrastructure is actively promoted through the establishment linkages with UPs, BWDB and DAE group support. UP orientation sessions have addressed IPWM and number of WMGs have managed to get co-funding for small-scale infra through their UP. Under the Innovation Fund, the feasibility study for "Roads for Improved Water Management and Flood Protection" has been conducted by MetaMeta. Findings are promising and we are actively looking for ways to include the approach as a further means to strengthening IPWM.
		ARM Mission: See the recommendations 2.1 and 2.2: considerable progress has been made.
2.6	Plan for WMO Strengthening Infrastructure and Equipment completed	A draft concept note has been prepared based on a review of the experience of earlier programmes, exploratory discussions with selected WMG Executive Committees, and a preliminary discussion with CWM. The review suggests that the funds previously allocated for WMO offices should be used to fund small-scale water management infrastructure for about 150 WMGs keen to start CAWM practices (crop synchronisation, collective action, etc).
		ARM Mission: Agrees with this plan – the infrastructure fund also to be used at level of sluice committee commands- recommendation 2.3.
2.7	Remuneration arrangement for field staff adjusted	Based on an evaluation of the performance of TA polder staff by the zonal coordinators, the polder staff are now assigned to one of three tiers (Grades A, B or C). The salary payments have been backdated to 1 July 2016, and the polder lead or polder co-coordinators ("coco's") were provided with an additional allowance of Tk 1,000 per month in recognition of their additional responsibilities. A number of poorperforming polder staff were terminated. The new designation of all polder-level staff is as "Community Development Facilitator", with a ToR issued on 16 Apr 2017.
		ARM Mission: Interviews were held with a large number of CDFs as part the mission – the general impression was of high calibre team,s
2.8	Integrate the two extension program 'streams' under BGP	150 DAE Farmer Trainers (DAE-FTs) have been developed under Blue Gold by DAE trainers using DAE facilities at Daulatpur and Rahmatpur Horticultural Training Centres. The DAE-FTs are trained as FFS facilitators, with skills in improved production technology packages for rice, mungbean, sesame, sunflower and watermelon — with familiarisation with simple market economics. 78 DAE-FTs were trained and coached in 2015/16, and training in 2016/17 for a further 72 DAE-FTs was provided in three batches in March/April; April/May; and May/June 2017. Based on the curricula used for DAE-FTs and Departmental Trainers (SAAOs), DAE has prepared a manual/guide which provides an impressive resource. Teams of TA-financed Farmer Trainers (TA-FTs) in the new polders for
		fisheries and livestock FFSs have been developed with DoF and DLS (to replace the previous FOs, now CDFs). The candidates for training were selected with DoF/DLS advice (Nov-Dec 2016); the first round of training on fisheries, livestock, nutrition and market orientation was provided for 76 TA-FTs – 43 Khulna, 33 Patuakhali - in FFS homestead activities (Jan-Mar 2017); the second round training for 70 TA-FTs (reduction by six from first round training) was provided on poultry, homestead gardens

with market orientation (Jul-Nov 2017); twice monthly coaching and mentoring sessions during a season of "apprenticeship" by the TA-FTs to CDFs - former FOs (Apr 2017 – Mar 2018); TA-FTs entrusted directly with FFS homestead training in new polders from Cycle 11 (from April 2018) and provided with networking and continued backstopping support when they organize fish/livestock FFS (Apr 2018-March 2020); maintaining working relationships with these FTs beyond Blue Gold period.

With DAE agreement, it is expected that DAE FTs will be provided with training in fisheries, livestock and nutrition to augment their expertise in field crops. During this training, it is also planned to add in additional TA FT resources to fill in gaps eg in Satkhira Polder 2.

Furthermore, community animal health workers (CAHWs) will be developed under the umbrella of DLS in all new polders to coach and mentor livestock and poultry activities.

Despite improved DAE/TA cooperation, further integration is still required, including a phased transfer of bedding-in the TA-FTs to DAE/DLS/DOF.

The DPP manpower provisions for DAE is sub-critical, with no permanent project staff. To fulfil the target number of quality FFSs, a strengthened team is required of full-time professional staff.

ARM Mission: Agrees – see recommendation 4.2.

2.9 Pursue partnership building with closely related programs, such as National Technology Project (NATP)

Through NATP, a large number of new technologies are introduced that will be of relevance to the BGP areas. There are two further projects with which links could be usefully developed: (a) ADB/DAE Second Crop Diversification Project, with special programs on value chain component; and (b) FAO's Village Based Organizations (VBOs) in Mymensingh district where Community Revolving Fund (CRF) has been institutionalized through the VBOs. A separate briefing paper has been prepared, which suggests inter alia the following mechanisms for building closer relations:

- Both NATP-II and The Second Crop Diversification Project are specifically referred to in the PWM Field Manual (May 2017), for consultation in the process by the polder teams. NATP-trained community extension agents for livestock (CEAL) and local extension agent for fisheries (LEAF) are located within Blue Gold polders, and a number have been recruited as Blue Gold Farmer Trainers.
- 2. It is now a standard Blue Gold procedure to identify any other projects and programs which have or had an operational overlap with a polder as part of the 'Activation at Entry' and 'Planning for Action' stages. In these phases, polder teams explore lessons learned, revitalise relevant groups and establish contact for opportunities to cooperate if still ongoing.
- 3. There are continuously new contacts being made as polder teams identify projects and programs recent examples are the Making Markets Work for Women of ActionAid in a polder in Patuakhali and the specific cooperation with the CIMMYT Barisal Hub on mechanization, and the MAX WASH-II Program which has just started its field work in Blue Gold polders.
- 4. In addition, Blue Gold staff identify or get invited, and participate in workshops and platforms of other projects which are of relevance to our activities. Our staff share knowledge and experience, and learn and disseminate knowledge and information to other Blue Gold staff and WMGs.

		ARM Mission: In general a strategy of partnering seems stronger in BG which is commendable.
3.1	Shelve research and (institutional) studies and implement DRR, gender and environmental mitigation activities as part of the ongoing unified approach.	 During EKN/BWDB/DAE coordination meetings and discussions about TA budget revisions, the studies budget has been restricted to the following subjects (followed by a brief note on the current status): Updating the BWDB Gender Action Plan (GAP) – findings and suggestions were presented in workshop held in BWDB on 13th September 2017, with feedback from the workshop to be incorporated into a draft GAP expected to be finalized in early-2018. Evaluation of CAWM schemes – contract with outsourced firm was terminated in August 2017 inter alia because inception report and questionnaire were late and sub-standard. The intention is to continue the study led by an independent M&E specialist, drawing on assistance from Blue Gold with data collection and logistical support.
		- Impact of LCS Work on Poverty Reduction and Women's Empowerment — contract with outsourced firm was discontinued in July 2017, primarily because the inception report and research instruments (especially the survey questionnaire) were weak, and demonstrated insufficient understanding of the LCS concept. Now propose to continue the study focuses more on qualitative data collection and with BGP TA playing a coordinating role with data collection and logistical support. Discussions are ongoing with a potential candidate to lead the simplified study — Dr Sharmind Neelormi, a lecturer in economics who undertook a recent study for IFAD into the performance of LGED LCSs.
		- Gender-focused support to DAE - Although the FFS approaches by DAE and Blue Gold TA are both targeting (also) women farmers, the increasing role of women in agriculture (the so-called "feminization of agriculture") and their requirements for extension information has been identified as a priority activity. A first step has been to identify the policy or strategy of MoA/DAE. First ideas include the development of a gender training trajectory for SAAOs working in the Blue Gold area. Gender flip charts - to be developed by BGP - are foreseen as possible tools to be used by DAE SAAOs in their FFS and other extension work.
3.2	Calls on dredging and ICT under Innovation Fund issued	Improved Information for Agriculture: A call for proposals was launched on 10 Jun. 29 concept notes were received on or before 10 Aug, of which 27 met the criteria set out in the evaluation guideline. The evaluation committee came to a consensus on 27 Sep and recommended the shortlisting of 10 concept notes which are diverse in that: (a) the data they aim to generate/communicate (general crop data, livestock services, water quality data for aquaculture, weather data); (b) the methodologies proposed (mobile SMS services, TV broadcasts, horizontal learning through extension agents, etc.) and; (c) the type of organisations implementing (private sector, NGOs, governmental bodies). Evaluation of concept notes was finalized and notifications issued to all 10 shortlisted organizations on 5 Oct, for submission before 30 Nov.

		therefore not progressed.
		ARM Mission: The different improvements are noted with appreciation It is suggested that dredging is considered either as part of the IF created under EKN or in the IF that remains within BG TA. The presence of locally operated small dredgers in Polder 2 suggest that there is an economic base to reuse sludge for land development
3.2	Announcements on Innovation Funds among Dutch business sector made	Since the roll-out of the Innovation Fund in 2015, there has been a relatively low-level of participation by Netherlands-based enterprises. As the Innovation Fund is aimed at giving practical implementation to the 'Aid to Trade' policy of EKN in Bangladesh, a larger involvement of Dutch enterprises within the scope of the Innovation Fund is desirable in particular for the opportunities that this provides for collaboration between the Netherlands and Bangladesh. Two initiatives have been taken: One involved announcements about BGIF on 29 Nov 2016 published via EKN, NWP, TNO, WUR, RVO, Nijenrode University, Dutch Bangla Chamber of Commerce & Industry, BiD Network, Crosswiseworks, Global Tenders, MKB Service Desk.
		The second was a marketing campaign launched with DNG 'Ondernemen in Bangladesh', using email, social media (LinkedIn, Twitter), newsletters (e.g. MKB Service Desk, De Zaak, H20, NWP) and a website (www.oibd.nl) to target SMEs and entrepreneurs from the Netherlands. The campaign enabled Dutch SME to follow on online mini-course on entrepreneurship in Bangladesh and afterwards make an application for a feasibility study under BGIF. The marketing campaign was launched on 1 June 2017 and ran to mid-October. It resulted in 17 requests (as of 24 Oct) for feasibility studies by Dutch organisations.
		Further promotional activities are under development, to help Dutch sector SMEs to get a better understanding of the local context and possible interventions – these include videos of typical IF projects and a booklet summarising the achievements of ten IF projects.
		ARM Mission: considerable progress is made. It is noted that there is challenge to make Dutch SMEs relate to the realities of the BG polders and that extra efforts are required.
3.3	Pursue the vocational training component focused on training young persons from	14 Aug 2016: pre-bid meeting attended by six firms 4 Sep 2016: five firms submit bids (5 firms) 21 Nov: pre-contract negotiations finalised with service provider, Concern
	landless families – selected through WMOs – in skills that support the agricultural development in the	Universal 1 Feb 2017: Because of budget reductions and the need to refocus BBGP funds, EKN advised against continuation of vocational training, and recommended discontinuation of negotiations with the preferred service provider
	BGP area	ARM: In the light of focusing activities this appears a wise decision. An opportunity for more work in service provision to intensified farming may come up — read mechanization. This creates the need for vocational training especially for landless youth. BG should remain alerted to this.
4.1	New staffing plan for TA first version ready and shared	In Oct 2016, EKN requested TA to take account of ARM/EKN comments and prepare a staffing revision. TA submitted a report on 4 Nov setting out options staffing revision and reductions in TA contracted services, etc.

		With EKN agreement in principle, staff reductions were implemented in
		Jan/Feb 2017.
		The reductions have resulted in a reduction in LT foreign staff from five (GCJ, HB, VP, BS, NvdB) to one (GCJ); a number of national staff have been terminated; CDFs were evaluated and a number of poorperforming CDFs were terminated; Dhaka-based professional staff are now spending 50% time in field; and Gulshan-based staff in infrastructure, training, gender have been relocated to Motijheel.
		High-performing junior field staff have also been promoted – for
		example, one CDF has been promoted to the position of Junior Socio- Economist, and opportunities for further promotions are being sought.
		ARM: noted with appreciation.
4.2 (2.2)	Unified Approach methodology ready for review by ARM	See status of recommendation 2.2
4.3	Adjust the positions and job descriptions of the polder staff to work in a unified manner with a balance between generalists and subject matter specialists.	The closer integration of polder-level staff was given renewed emphasis over the latter part of 2016 through training and coaching. To coincide with the distribution of the first version of the PWM Field Manual in February 2017 (at which stage it was only available in an English language version), a new job description was issued (in both Bangla and English) on 8 Feb 2017 for all CDFs, polder coordinators and co-coordinators. This signalled the formalisation of integrated polder TA teams with a shared responsibility to work on all aspects of BGP implementation. Staff composition per polder has been rebalanced to provide the appropriate skill mix and staff coverage. With the structure, strategy and instructions for 'water management for development' in place, the decentralised initiative and integrated demand-driven work is gaining momentum: in addition to CAWM, cropping intensification initiative (CII), community-led fisheries (CLF), annual cropping systems are being introduced under the joint banner of BWDB and DAE. Polder staff encourage WMGs to assess their performance in terms of functionality: agriculture and economic development, water management, and WMG partnerships. Polder teams are assisted in rapid assessment of functionality and in demand-driven identification of priorities. ARM: considerable benefits were noted in job satisfaction and work
4.4	Quarterly monitoring bulletin issued	efficiency. Blue Gold Trend Watcher is a seasonal project bulletin aiming to summarise and share updates on project achievements. In 2017, two issues have been published — March 2017 (based on information available from December 2016) and June 2017 (finalized and issued in November 2017). And a third is in the final stages of review by PCD and PD DAE (in November 2017) to include results from the participatory monitoring and dashboard, and some early results from the baseline survey Phase II.
		ARM: noted with appreciation.
5.1	All project extension	[Refer also to status of recommendation 2.8]. Seventy TA Farmer Trainers
	(FFS) activities to come under the control of	(TA-FTs) based in the new polders have been developed with DoF and DLS to take over fisheries and livestock FFSs (thus replacing the previous TA-funded FOs, now CDFs). The incorporation of these assets under

	DAE/DoF/DLS by Mar 2018 with TA	DoF/DLS (as per the example of DAE's FTs) needs now to be addressed.
	role changing to advisory and capacity building.	ARM: this is contingent on recommendation 4.1 on the continued involvement of DAE in BG.
5.2	OWCM's role and responsibility is to support WMOs and to carry forward the support to polder level water management. This should be supported by the placement of XOs from 2017, and handing transfer of TA COs from 2018.	[Refer also to status of recommendation 2.1]. Autonomous WMOs are being coached to concentrate on core functional skills in agriculture and economic development, water management, and WMG partnerships. Ten CDFs were identified by OCWM in May 2017, recruited using TA funds, trained in participatory water management (alongside other new TA CDFs in May 2017) and placed under OCWM management to ensure a stronger OCWM field presence in the phasing-out polders up to BGP completion. Supervision of these OCWM CDFs is required, preferably by OCWM Assistant Extension Officers (AEOs) based in Patuakhali and Khulna. [Note: Two AEOs were previously posted to Blue Gold, but left within weeks to take up full-time government positions].
5.3	Support to a self- organizing network of WMOs is built-in to the field operation from the beginning — with WMOs taking control of their own establishment and the organization of activities to the largest extent possible using a range of horizontal expansion methods.	WMGs have been pro-actively demonstrating their good practices to other WMGs and encouraging their replication during horizontal learning events. A booklet entitled "Compilation of Fact Sheets" (in Bangla) presents 38 examples of good practices. This aims to introduce WMGs (particularly in new polders) to successful achievements by WMG communities – many through collective actions. After exchange visits led by the host WMG, follow-ups by the polder teams assist WMGs to tailor the experience to their own situation. The approach was tested and rolled out to about 760 participants from 125 WMGs in 2016/2017 and internally evaluated for the Community-led Agricultural Water Management (CAWM) activity. Presently a horizontal learning round for all good practices is on-going. Introductions to BGP for communities in the new polders are provided through open air dramas: 12 in the first phase, with a further 12 dramas so that each of the new unions are covered. ARM: much progress made on this front which is to be further pursued.
5.4	Continued partnership building for WMOs is at the heart of the field operations — first and foremost with the LGIs but also with other programs and parties operating in the polders	To date, BWDB, DAE and BGP TA have held orientation meetings for 49 Union Parishads throughout the Blue Gold polders — providing an introduction to around 1,000 union level officers. From July 2017 to date, orientation sessions have been held for representatives of seven Upazila Parishads. There is both anecdotal and structural evidence of stronger cooperation between WMGs and Union Parishads - see for example to case studies 21, 25, 30 and 37 contained in the 38 examples of good practices in the booklet "Compilation of Fact Sheets". BGP experience suggests that LGIs could play a more substantial role in the establishment and performance of WMOs. ARM: successful examples of this were noted.
5.5	Several critical bottlenecks exist within the operations of the BWDB are to be addressed through fact-finding and studies from	Areas for study: 1 LCS fact-finding report 2 Accelerating BWDB survey/design data collection, design, procurement and implementation processes with current under- resourced organization 3 Suggestions for revision to PWMR 2014 – including inter alia internal polder water management

end-2017.	 OCWM – role and responsibility and resources Workshop to exchange experiences with PWM in Bangladesh (with BWDB, DAE, LGED, IRRI, BRAC etc) Pre-emptive action to prevent failure of embankments under threat from erosion
	ARM: This is to be pursued and BG has to contribute to policy improvement on all these topics.

Annex 5:

In this annex by way of example an estimate is made of the CDF resources required in BGP by:

- taking all project activities as in the manual
- adding some seemingly forgotten activities
- estimating the time required for each activity
- assuming that activities are done by either one or two CDFs (on average 1.5)
- assuming down time of CDFs
- coming to CDF FT per average polder

	Visits per WMG	Avg no of WMGs per polder	Visit per WMA	Avg no of WMAs per polder
No of WMGs/ WMA per polder		16		1
Preperation				
Meet partner agency staff			2	2
Set up polder team			2	2
Conduct orientation workshop			2	2
Deploy polder team			1	1
Make polder plan			3	3
Activation at entry stage WMG				
Introduction	1			
Identify existing collective action	1			
Walkthrough and mapping				
Form core group	1			
Organize horizontal learning				
Planning for action stage				
Facilitate and expand Cas (incl FFS)	1			
Water and land use workshop	1			
Catchment-level workshop			12	12
Polder development plan			2	2
WMG activation stage				
Promote and implement new CA's and LCS's	1			
Support WMG action planning	2			
WMG formation from core group	1			
Election and registration	2			
Exchange visits	2			
Selected foundation courses for WMGs	2			
Learning and networking				
Exchange visits betwee Cas (HL)	2		42	4.2
Review and update catchment level water and O&M planA			12	12
Facilitate networking and partnership	1		1	1
WMG consolidation				
Support mature CA's and market linkages	2			
Evaluation and reflection on action plans	1			
Coach and review foundation skills	2	+		
Coden and review foundation skins				
WMA activation				
Support mature Cas and market linkages	2			
Catchment O&M plans			6	6
WMA formation			4	4
WMA exchange visits			2	2
WMG conventions			3	3
Participatory monitoring	3			
Total events nor WMC	20	-		
Total events per WMG Total events per WMA	28		52	
Total events per wina Total events per polder		448	52	52
Total events per poluel		448		52
L				
Combination factor (no of agenda's per visit)	2			
No of CDFs per average visit	1,5			
	,,,			
Total no of CDF visits per polder	375			
Average CDF field time/ FTE year	110			
Average CDF field time/ FTE year CDF FTE per polder	110			