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# 30 Evolution of TA Organisational Arrangements

From Blue Gold Program Wiki

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After providing the scope of the technical assistance (TA) team as conceived in the Program

Document and describing early arrangements for the TA organisation, this chapter sets out the reasons behind the organisational changes to the Technical Assistance (TA) team over the eight year life of the Blue Gold Program. In the final section, it explains how the practical exposure to developing and building water management organisations helped to identify the key elements for sustainable participatory water management.

□

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## Scope of Technical Assistance in the Program Document [[edit](#) | [edit source](#)]

*"The set objectives are indeed very challenging and require a capable and effective TA consultant, but also more consultants than under the previous EKN funded programs. The number of international experts is relatively high but is proposed as to ensure the highest quality of outputs and the outcomes for the longer-term perspective."*

The [Program Document](#) (quoted above) established a sizeable Technical Assistance (TA) team under a direct contract with the Embassy of the Kingdom of The Netherlands (EKN), and considerably larger than other recent and current EKN-funded programs such as the Integrated Planning for Sustainable Water Management (IPSWAM) and the ongoing Char Development and Settlement Project (CDSP).

The allocation for Technical Assistance amounted to 66% of EKN's contribution to the program<sup>[Notes 1]</sup> and 57%<sup>[Notes 2]</sup> of the overall projected expenditure. Roughly half of this was allocated to staff costs and the other half to equipment, training, operations, contracted services and an Innovation Fund. In addition to the Blue Gold TA team, EKN also contracted BRAC and Max Foundation for a separate WASH program and engaged Solidaridad to implement an agricultural value chain program, all in the south-western coastal region but not necessarily in the polders eventually selected by Blue Gold. Good contact was established and maintained between the various projects, but actual cooperation was limited because of the different focus of the projects and because the different teams were not always working in the same polders.

The Blue Gold Program had a large TA team responsible for a substantial share of the project

activities including community mobilisation (with resources for the Department of Cooperatives - DoC), engineering supervision, agricultural development and homestead production (with resources for DLS and DoF), marketing and business development, as well as managing an innovation fund, training and capacity building, together with contracting services and program management. In addition, the TA team advised EKN on requests by BWDB for infrastructure funds. In part because of the changing operational modalities over time, and a sharpened focus on water management and agriculture, some of the original services included in the Program Document were dropped in later stages of the project. For example, in 2017 EKN decided to discontinue the vocational training program which evolved from the concept of the Program Document - as a platform for the Underprivileged Children's Education Programs (UCEP) - to using entrepreneur-technocrats or *ustads* to train mobile mechanics, an adaptation of the approach used in a parallel EKN-funded project, Profitable Opportunities for Food Security (PROOFS) managed by ICCO Cooperation (refer to [Section G Chapter 31 Vocational Training](#)).

## Early Arrangements for the TA Organisation[[edit](#) | [edit source](#)]

The [Inception Report](#) of the TA team (approved in March 2014) summarised the work plan and budget for the TA team, as well as the team organisation, tasks to be implemented and their overall timeline, and forms the basis of the 2014 and 2015 Annual Work Plans (based on calendar years at the time) and then the 2015/16 Annual Work Plan (when the planning period was changed to suit the July to June cycle used by GoB) and their corresponding budgets.

From late 2015, concerns were noted about the slow rate of implementation of Blue Gold infrastructure and the higher investment costs. As a result, the [2016 Annual Review Mission](#) proposed to enhance funding to BWDB and to extend the timeframe of the Blue Gold Program by two years from end-December 2018 to end-December 2020. In addition to the major infrastructure activities addressed by the proposed changes, a number of other critical activities were to be included in the revised scope: (a) in-polder water management by WMGs and WMAs<sup>[Notes 3]</sup>; (b) strengthened coordination between WMGs and Union Parishads as a priority, and also with Upazila and District levels; and (c) integrating capacity building activities for WMGs<sup>[Notes 4]</sup>. During late-2015 and early-2016, it became clear that further revisions to the scope of TA support were required, and the following exercises were completed:

- Recommendations for engaging Local Government Institutions (LGIs) in water management, which *inter alia* reemphasized the involvement of LGIs from the beginning of activities in any polders, in order to forge a 'water management partnership' between WMOs and Union Parishads<sup>[1]</sup>;
- Prompted by the [2015 Annual Review Mission](#) (ARM), an Exit Strategy was prepared to:
  - set out an explicit, time-bound and staggered action plan for each polder;
  - formulate a unified approach (single work process) to integrate the BGP components and thus provide greater coherence between agricultural activities, business development and internal polder water management activities;
  - focus on the promotion of collective actions by WMGs;
  - bring renewed attention to the national enabling environment for participatory water management; and
  - to reorganise the TA team<sup>[2]</sup> accordingly.
- In a parallel exercise which engaged all project partners, the Theory of Change (ToC) was examined and re-framed to reinforce cross-linkages between water management, agricultural technology and marketing support for greater productivity and profitability, and thereby to

improve the livelihoods of polder communities. The lessons learnt from this process were then used in decentralising the TA team and integrating its field activities.<sup>[3]</sup>

The changes arising from these exercises were first formalised in the [2016/17 Annual Work Plan](#) and associated budget.

## Evolution of TA Organisation[[edit](#) | [edit source](#)]

This section describes the TA team organisational set-up in 2013 and its development with a view to drawing lessons for the design of future programs.

### Timeline[[edit](#) | [edit source](#)]

Formal project documents, as listed in [Section A Chapter 4](#), set out the definition and scope of the Blue Gold Program. Underpinning this formal definition is the more philosophical notion of what and how the program sets out to achieve, termed the 'project concept'. This concept is captured by the tagline 'Water Management for Development' and has, while retaining the spirit of the tagline, developed over time. Table 30.1 shows the timeline for this process.

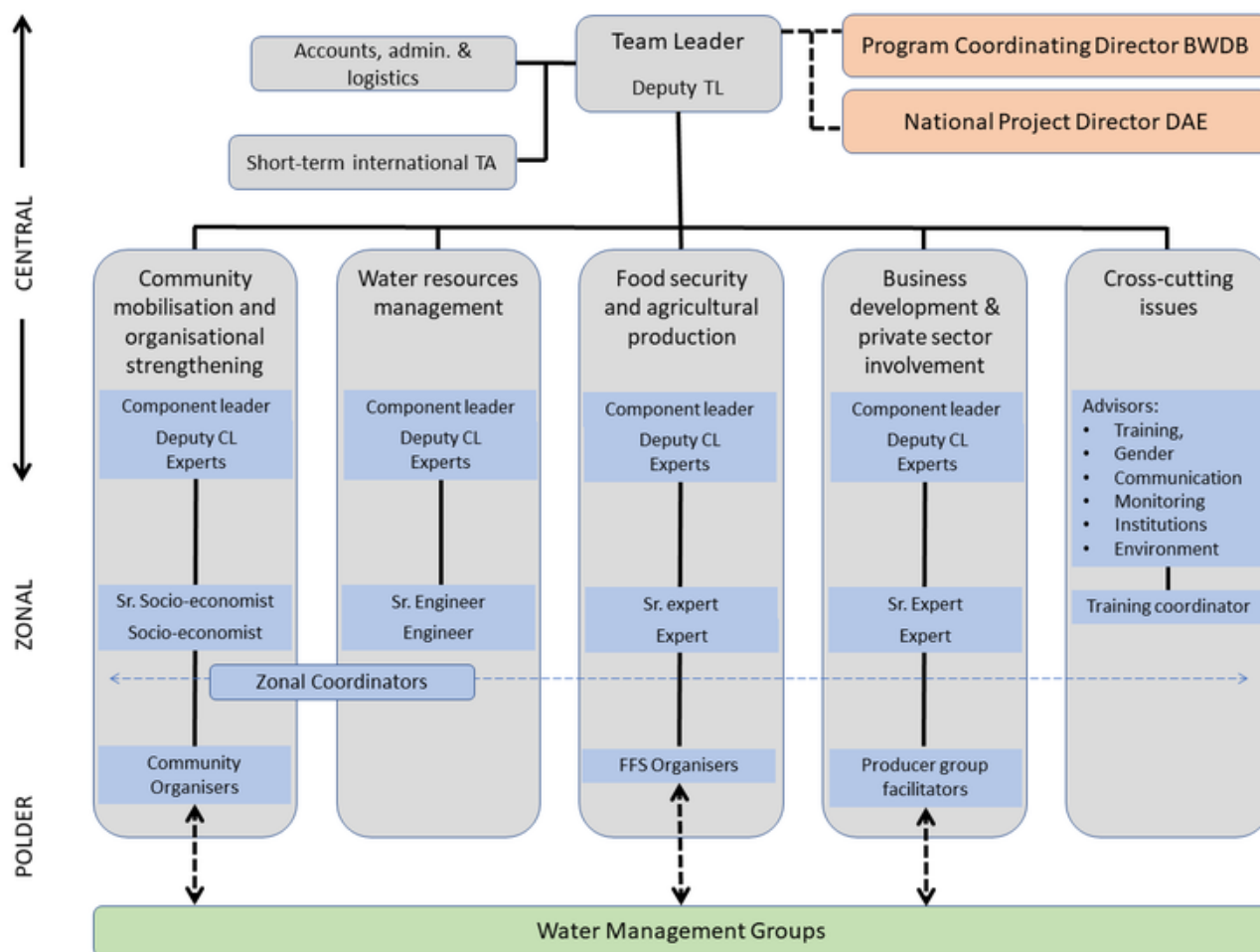
Table 30.1 Phases in the Development of Blue Gold Concept

Phase	Main thrust	Documents
2011 to 2012 <b>Formulation</b>	WMG to be developed as cooperatives acting as main driver for economic development	<a href="#">Program Document</a>
2013 to 2015 <b>'IPSWAM plus'</b>	Start of the implementation period, in which infrastructural works and the formal establishment of WMGs (and their re-establishment under PWMR 2014) were undertaken along the lines of the precursor <a href="#">IPSWAM project</a> ; in parallel to implementation of novel project components for agricultural development and business development.	<ul style="list-style-type: none"> <li>• <a href="#">Inception Report</a></li> <li>• <a href="#">PWMR 2014</a></li> </ul>
2015 to 2017 <b>Transformation</b>	<p>A reconsideration of the approach, enhancing the synergy between water management organisation, agricultural development and business development:</p> <ul style="list-style-type: none"> <li>• From developing organisations to developing institutional networks</li> <li>• From parallel components to an integrated approach</li> <li>• From central control to decentral initiative</li> <li>• From multi-purpose cooperatives to functional WMOs supporting multiple initiatives for economic development</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">LGI Sourcebook</a></li> <li>• <a href="#">Theory of Change 2016</a></li> <li>• <a href="#">Exit Strategy</a></li> <li>• Unified Approach (<a href="#">Bangla/English</a>)</li> <li>• ARM Aide Memoires <a href="#">2015</a>, <a href="#">2016</a>, <a href="#">2017</a></li> </ul>

2017 to 2019 <b>Maturity</b>	Rapid emergence and consolidation of new approaches for in-polder water management, for agricultural development, for extension and dissemination, for targeting, for capacity building, and for the increased prominence given to gender issues.	<ul style="list-style-type: none"> <li>• <a href="#">Internal strategy documents on Catchment planning</a></li> <li>• <a href="#">TR20</a> and <a href="#">TR24</a> on Community Agricultural Water Management</li> <li>• <a href="#">Internal concept notes on horizontal learning, extension methodologies and targeting</a>;</li> <li>• BGP's 'Lessons Learnt' repository</li> </ul>
2019 to 2020 <b>Handing-over</b>	Establishment and activation of WMAs and support to their functionality. WMAs in the driver seat for activities aimed at individual WMGs. Lessons learnt formulated with the aim to inspire improvement of national water governance environment and to support formulation of future programs and projects.	<ul style="list-style-type: none"> <li>• Catchment Plans</li> <li>• WMA work plans</li> <li>• O&amp;M agreements</li> <li>• National PWM Conference</li> </ul>

### **Original TA Organisational Structure**[\[edit | edit source\]](#)

The TA team was led by an international team leader and a national deputy team leader supported by professional, administrative and support staff. In line with the original concept (in the [Program Document](#), Section 28.3), the organisation for the project implementation (Figure 30.1) was initially concentrated into four parallel components for community mobilisation and institutional strengthening; water resources management; food security and agricultural production; business development with the fifth relating to cross-cutting issues.



**Fig 30.1** Original organisation chart of the BGP TA team (only solid black lines imply hierarchical relations)

Each of the components, barring the cross-cutting issues, was led by a component leader, assisted by a deputy component leader both of whom were Dhaka-based. In each of the two (later three) zonal offices national technical experts were based who reported directly to their respective component leaders. For three of the components (community development, agriculture and business), field workers were posted to live and work in Blue Gold polders. These were known as the Community Organisers (COs), Farmer Field School Organisers (FOs) and Producer Group Facilitators (PFs), respectively. These polder staff provided vital and direct connections with the polder communities - recognised by the large allocation over Blue Gold's lifetime of some 22% of overall TA staff time, equivalent to around 100 staff during the main implementation period (2014-2019). Initially, some 50% of the polder staff were female, a percentage which reduced to around 35% with natural turnover and the greater proportion of males amongst applicants for the replacement positions. In due course, the senior zonal socio-economists in Khulna and Patuakhali Zonal Offices were assigned as Zonal Coordinators, with additional responsibilities for logistic coordination and administrative processes.

This structure emphasised vertical reporting while mechanisms for horizontal coordination were minimum. Unintentionally, the set-up in components resulted in 'organisational silos' that were poorly connected. The effects of these 'organisational silos' were:

- Community Organisers (COs) were confronted by WMG members about problems observed in infrastructure works, and especially the contractual arrangements with LCSs. Because the COs were neither involved in works planning, nor aware of the payments made to the LCSs,

they were unable to help. The engineering team in the water resources management component (and the BWDB engineers) - who were responsible for planning of infrastructure contracts and works completion - preferred to leave community interactions to the COs, but without sharing information with them.

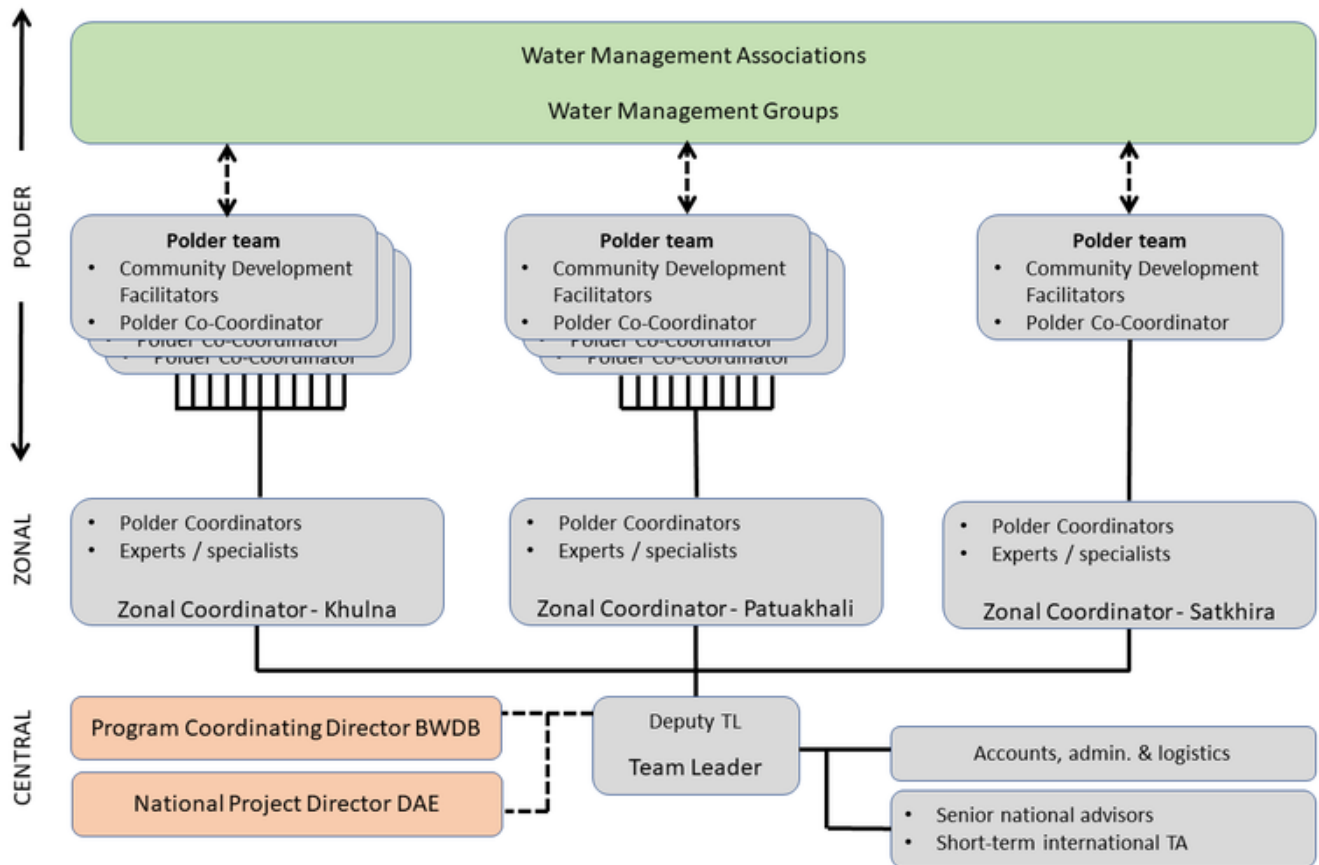
- The formation and registration of WMGs was initiated by COs and zonal-level Socio-Economists. But the capacity building arrangements through field crop FFSs, homestead FFSs and market-oriented FFSs were - at least initially - not coordinated with WMGs or, for that matter, with the COs because this training was organised by the two components concerned with food security and business development.
- Water management - as the founding principle for Blue Gold - presupposes cooperation between agriculturalists, engineers and communities. Given the rigid structure of BGP, in-polder water management activities (ie other than the development of the main infrastructure) were initially neglected. To some extent, the lack of clarity of the respective roles of BWDB and DAE in in-polder water management, was reinforced by the TA organisation, where water management was not owned by any one TA component whilst straddling all.

The lacking horizontal coordination mechanism was also reflected in the Polder Development Plans (see for example, [P25 PDP](#)), where activities for specific components failed to address the real need - which was to develop cropping systems suitable for local environments around the opportunities offered by the major water management infrastructure. In-polder water management was a blind spot, and the reason it was overlooked can be explained - in part at least - by the way Blue Gold was originally organised and managed.

## **Revised TA Organisational Structure (2016)**[\[edit](#) | [edit source](#)]

One of the recommendations of the [2015 Annual Review Mission](#) was to update the Theory of Change (ToC) - a process which brought participatory water management to its intended central position within the project, and which is explored in more detail later in this section. The process involved workshops and key informant interviews in Dhaka, Khulna and Patuakhali during February and March 2016, and led to the [ToC's](#) publication in May 2016. From early-2016 onwards, the TA organisation was re-shaped to address the priorities established from the ToC which resulted *inter alia* in the integration of different disciplines into teams, the empowerment of staff based in the polders, and the devolution of management responsibilities closer to the point of service delivery (see Figure 30.2).





**Fig 30.2** Revised organisation chart of the BGP TA team (only solid black lines imply hierarchical relations)

A unified approach to management was set-up across three levels from the TA team office in Dhaka and via zonal offices to the polders. In practice, this meant that cross-disciplinary teams were formed at all three levels, integrated and given wider-reaching mandates for equitable water management and strengthened value chains - and this is expanded upon below in the section concerning participatory water management.

At polder level, the three previous categories of polder level staff each with a specific technical role (community organisation, farmer field schools or business development), were given the responsibility of coordinating all community interactions and delivering all activities on behalf of Blue Gold, and were renamed Community Development Facilitators (CDFs). In each polder, a senior CDF was made 'Polder co-Coordinator', with the position of Polder Coordinator entrusted to the erstwhile subject matter specialists at Zonal level. The Zonal Coordinators - in each of Khulna, Patuakhali and Satkhira, respectively - were mandated to lead BGP's TA teams in the zones and at polder level.

The single most important outcome from the revised ToC was the recognition of the crucial role that CDFs fulfil in empowering polder communities to take and act on decisions which prioritise the requirements of the wider community. This important distinction from the previous organisational arrangement is represented in Figure 30.2 by placing the WMGs and WMAs at the head of the organisational chart - placing their needs as primary stakeholders at the top of the hierarchy, and identifying the CDFs as the main point of contact between the WMGs/WMAs and the Blue Gold team. For the CDFs, this required a radical change from their primary role of routine administration of



meetings, elections and audits; facilitating training modules (FFSs), and conveying project-level information to WMGs. Many of the CDFs were challenged by the changed expectation. Although many of them are university or college graduates, they had been used as functionaries in organisational development and training, managed by technical experts in Dhaka. It took time and effort to reorient the CDFs and their managers to their new role in empowering communities.

A fundamental re-structuring of an established organisation is difficult, in part because long-established concepts and roles and responsibilities are challenged, and - with that - the impact on personal authority of individuals resulting from changes in line-management relationships. A number of measures helped to initiate the integration and decentralisation processes:

- To translate the ToC into practice, new organisational arrangements with associated revised Terms of Reference - including decentralisation, and the development of multi-disciplinary polder teams - were implemented, and a number of staff were made redundant or reassigned.
- A PWM Field Manual (in [Bangla](#) and [English](#)) was published in February 2017 to provide practical guidelines for participatory water management at polder level and to thus 'create a larger critical mass, to make field activities more efficient and create a stronger interface with local government and others working in the polders'. The manual provided guidelines for field staff on the work processes: preparations, activation at entry, planning for action, WMG activation, and learning and networking. The distribution of the manual was followed by training and coaching of polder and zonal staff.
- A continuing process - reinforced at project-level meetings - by which the entire project team from top to bottom recognised the complementarity of expertise within the polder teams, and the combined strength provided by CDFs from different educational background, skills and experiences - in agriculture, community mobilisation, training, water management and market orientation. The aim was that CDFs would be equally regarded - irrespective of their technical background - and deployed in cross-disciplinary teams used in the capacity building of WMGs. Initially, zonal staff were appointed as 'Polder Coordinators' - to manage the polder teams and to encourage the CDFs to form cross-disciplinary sub-teams for each different activity, and to ensure that project-level messages were communicated quickly and accurately to polder level. Over time, with the growing understanding by CDFs of their roles, and with improved communications between project and polder level teams, selected CDFs were appointed as co-ordinators to manage polder-level activities.
- The role of CDFs was to empower WMGs to take over the full range of activities involved in participatory water management, using complementary technical and financial resources available within the wider community and at union and upazila level. A long and iterative process was required to build sufficiently confident and assertive WMGs - using the WMG's knowledge of the local economy, constraints to successful water management within the catchment of their sluice/regulator, and their suggestions for activities to stimulate economic development through agriculture. When this local knowledge is assembled, the WMG can collectively decide on appropriate interventions, their relative priority, and seek technical and financial assistance is available from local public and private partners (UPs, UZPs, BWDB, DAE, input suppliers, *fariahs* etc).
- Awarding and recognising exemplary performance by specific CDFs and, at a later stage, exemplary team-work by specific polder teams.
- Establishing zonal-level monthly coordination meetings with all zonal and polder staff to facilitate informed decision-making with senior staff attending from the central team.
- Establishing project-level management team meetings with senior central and zonal-level staff to provide coordination and to ensure that both positive and negative lessons learnt were carried across the project area.

The ensuing organisation was more agile and supportive of initiatives prioritised by the WMGs. The reorganisation enabled the TA team to focus as an integrated team on in-polder water management. Different polder teams made use of (local) opportunities to enhance the project impacts, eg initiatives for summer tomato, *boro* cultivation, and the expansion of improved poultry sheds and *hajols*.

## Lessons Learnt[[edit](#) | [edit source](#)]

Despite distinct progress and important successes, achieving a genuine decentralised mode of operation within the TA polder teams required careful monitoring and adjustment to management practices. Promoting and sustaining decentralisation for the implementation period of a typical project should take into account the following factors which were revealed and addressed in Blue Gold:

- While the reorganisation aimed to establish decentralised and integrated teams, the established hierarchical relations continued to exert influence over 'their staff' - in some cases, by after-hours coaching and mentoring - which continued for some time, slowing down the actual implementation of a true multi-disciplinary approach.
- The lack of soft or managerial multi-disciplinary skills within the team since most staff had been originally recruited as technical specialists - agriculturalists, engineers, social scientists, etc - and were reluctant to take on a role of managing staff from different disciplines in a cross-disciplinary activity that was on the edge of their experience.
- A genuine reluctance by staff from one discipline to be managed by a line manager from another discipline, and a concern that the management skills in their new role (eg as 'polder coordinator') would not be recognised by a future employer.
- There were relatively few team members who appreciated, for example, the contrast between traditional top-down lecture-style training and facilitation and participatory and experiential training - and how a modern approach aims to incentivise self-evolution ie 'taking control'.
- Annual performance assessments of CDFs were successfully introduced to encourage the CDFs to recognise the importance of complementarity, learning from peers (and WMG members), as well as a willingness to work outside their 'comfort zone'. The performance assessments were also used to allocate increments in recognition of those who had adopted the new approaches and who had taken on coordinating responsibilities. In addition, excellence in team-work was recognised with occasional awards.
- Regular meetings were held by the central management team with zonal and polder staff to reinforce the principles of decentralisation, integration, and coaching for WMG-led initiatives, and to assess the degree of adoption of the decentralised and integrated approach.
- In early stages of the decentralisation of responsibilities, zonal teams aimed at meeting the requirements of the central team but with a high degree of independence, exerting control over the upward flow of information (especially where negative), and being reluctant to host visits by experts from the central team - who had earlier led the development of new tools for WMG development, including CAWM, catchment planning, CII, etc.
- A series of WMG 'health checks' by combined teams of central and zonal experts used focus group discussions with WMG representatives to assess their level of maturity and autonomy, and to use the results in fine-tuning project interventions. As a by-product, these health checks also allowed central and zonal staff to jointly reflect on the complementarity of their differing perspectives and helped to heal the rift between central experts and zonal management.
- The ultimate aim of empowering WMGs to *inter alia* take over the role of CDFs created uncertainty amongst the CDFs about their job security - which needed to be addressed as part of the performance assessments of the CDFs.
- Success stories were often difficult to obtain for complex reasons - eg individual CDFs were

criticised by their line managers for self-promotion, or there was a reluctance for an individual to document a community experience in which many CDFs had played a role, etc. However, once it had been established that the success stories were used in planning horizontal learning exchange visits, the initial reluctance to provide these case studies was overcome.

- An unwanted result of stimulating the flow of success stories meant that there became an unexpected singular 'focus on the positive' and that case studies which investigated 'why things didn't work' were avoided by zonal and polder level staff. From this, we learnt that nuanced messages were difficult to transfer through the chain of command. Thus, a 'counter campaign' was required to explain that learning opportunities from failures of interventions were also a constructive part of the feedback process.
- In addition to their main purpose of empowering WMGs, polder teams became increasingly involved in data collection and preparatory works as well as other monitoring tasks for the project. There was a growing awareness that CDFs were not able to focus on their key activities, so a workload assessment for CDFs was carried out in June 2017 which revealed that - in addition to the project duties mentioned above - they were also fulfilling administrative responsibilities of the WMGs, such as preparing resolutions from meetings, organising elections and meetings, preparing for audits and AGMs etc. In order to return CDFs to their main purpose, the accumulated obligations of the TA team and WMGs were removed, in particular, WMGs were expected to carry out their own administration by themselves, and reporting responsibilities by the CDFs were streamlined.
- The decentralisation of the Blue Gold TA team took shape from 2016 (the fourth year of implementation). From 2017, there was a gradual transfer of staff from 'old' polders - where they had worked for the five year period of Blue Gold - into newly selected polders. In some new polders, where there had been no previous community mobilisation activity by earlier projects, CDFs working on the front-line observed that the new communities were much more willing to engage with them than those who 'knew what to expect' from previous experience with other projects and were more cynical.
- Staff reductions and transfers sometimes undermined the morale of the polder teams, and resulted in a loss of contextual information and networking knowledge from the institutional memory of the polder team. Whilst this loss of local knowledge from the TA polder team could interrupt the information flow within the TA team, it was of greater importance that this local knowledge was retained within the WMGs - and this should be the aim from the start of engagement with the WMG to the finish.
- Resistance to change in its many forms should be anticipated when a major reorganisation takes place. In any society, a change from a top-down to a bottom-up management system brings major upsets to many, especially those in a senior position with most to lose. While decentralisation aimed that WMGs take ownership of their activities at an early stage, often with only tacit support from CDFs and no involvement of senior TA staff, working with WMGs was likely to be scrutinised and possibly resisted by senior team members who were not included in the process. Recognising and rewarding these local initiatives was part of the process of encouraging others to 'let go of control', including recognising that not all local initiatives are successful or based on a representative collective view - experience had shown that local elites can capture decision making to serve their own specific interests. But this and other similar cases can also be used as a 'learning event' for the local WMG.

Whilst the length of this list of lessons learnt may appear disheartening, our aim is that future PWM projects will build on Blue Gold's experience with polder-based multi-disciplinary teams.

Independent reviewers, such as Dr Shamsul Alam of the Planning Commission has endorsed his confidence in the approach, observing that:

*'The Dutch funded Blue Gold Program of Water Development Board is playing a role model for integrated water*

*management in the coastal areas of Bangladesh. It is necessary to continue this as a role model even after the implementation period of Blue Gold Program. For this, government and private cooperation and effective participation of local people must be ensured.'* Dr Shamsul Alam, General Economics Division as published in 'Bonik Barta', 3rd February 2020 (See also full article in [Bangla](#) and [English](#))

For polder teams to provide situation-specific and tailor-made support, they need to be given a clear mandate and authority and a suitable degree of freedom in their actions. This must be done from the onset of the project, rather than as an afterthought.

## **Theory of Change: the emergence of a practical approach to PWM**[\[edit | edit source\]](#)

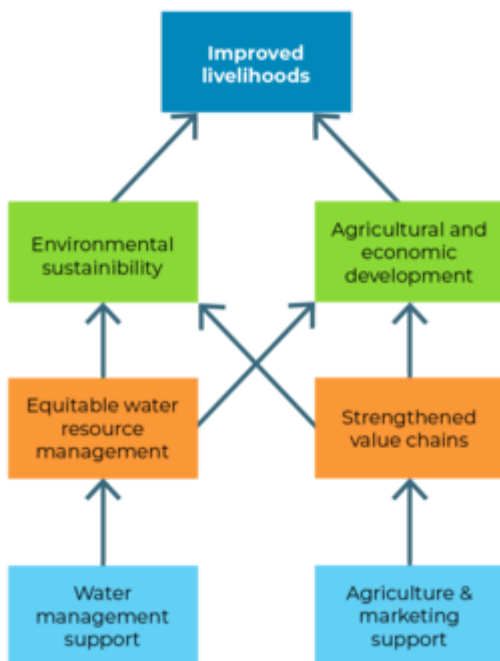
### **2016 Theory of Change**[\[edit | edit source\]](#)

Starting from the approaches set down in [GPWM 2000](#) and [PWMR 2014](#), Blue Gold developed and sharpened the concept of participatory water management (PWM) around four elements (which are further elaborated in [Section D chapter 19](#)):

1. Promoting in-polder water management as a pre-requisite for commercialising agriculture;
2. Making water management the core function of the WMOs;
3. Empowering WMOs to seek out partnerships for local economic development;
4. Forming WMOs within hydrological boundaries (as opposed to community or administrative boundaries).

Blue Gold's practical experience of developing PWM has also allowed an examination of the applicability of the [Participatory Water Management Rules 2014](#) (PWMR 2014), and resulted in a clearer understanding of the inter-relations between water resources infrastructure investment, organisation and cooperation, and opportunities for commercial agriculture in achieving local economic development objectives. An important contribution to this growing understanding was gained during the development of a 'Theory of Change' (ToC) in 2016.

The [2016 Theory of Change](#) (ToC) describes five main development pathways that comprise the BGP intervention. Within these five pathways, a total of 39 causal relationships are described, which link the actions of the Project, through a chain of effects and impacts to its intended development outcomes. Figure 30.3 provides a visual summary of the development pathways.



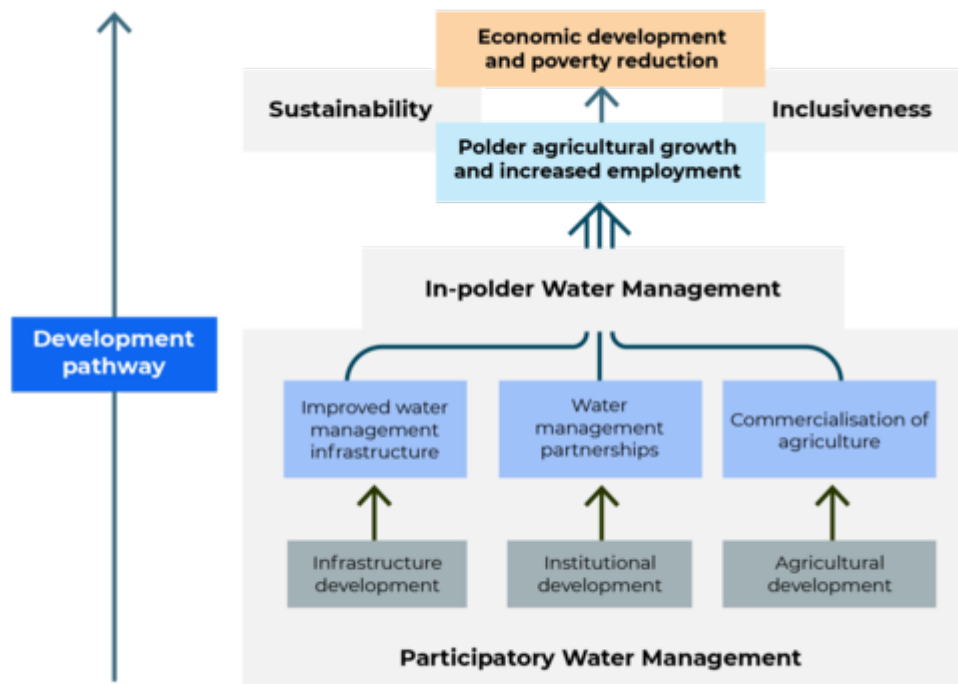
**Fig 30.3** BGP Theory of Change - summary results chain (2016 version)

The Blue Gold activities are represented by the two boxes (water management support and agriculture and marketing support). The five main development pathways are:

- Pathway 1: From Water Management Support to Environmental Sustainability
- Pathway 2: From Water Management Support to Agricultural & Economic Development
- Pathway 3: From Agriculture & Marketing Support to Environmental Sustainability
- Pathway 4: From Agriculture & Marketing Support to Agricultural & Economic Development
- Pathway 5: From Environmental Sustainability and Agricultural & Economic Development to Improved Livelihoods

## 2019 Theory of Change [\[edit\]](#) | [edit source](#)

During 2019, the Theory of Change was revised to better reflect the importance of in-polder water management as a means for achieving development outcomes. Figure 30.4 below is the distillation of Blue Gold's experience, setting out the conceptual basis for PWM in coastal polders. The figure reads from bottom to top and shows the steps to achieve the objective of agriculture-based growth in the polders - of enhanced incomes and employment - resulting in overall economic development and poverty reduction.



**Fig 30.4** Participatory Water Management - The BGP Theory of Change (2019 version)

At the heart of Blue Gold are the local stakeholders, WMGs, which were empowered to be the drivers for local development through water management. The project focused on ‘in-polder water management’ - bringing benefits of water management to the polders, with increased returns from more intensive agriculture and more profitable crop choices. The expectation was that a portion of these increased returns would be contributed by stakeholders to the operation (eg salary of officials and gate keepers) and maintenance (eg painting of gates, clearance of sediment, water hyacinth etc) of the improved water management infrastructure.

As of June 2019, just under an average of BDT 7,000 - equivalent to Euro 70) was held in WMG bank accounts to fund O&M activities ([WP9H WMG Tracker Final Report to June 2019](#)). Given the anticipated scale of O&M expenditures, this is a negligible amount. Interviews with WMGs revealed that they preferred to fund specific O&M activities through a general collection from both WMG members and non-members - and this could be in cash, by crop share or in labour. For the period July 2017 to June 2019, collective actions by WMGs on O&M activities averaged BDT 14,000 per WMG, mostly made in labour and in-kind contributions for khal clearance (41%), excavation of field channels (21%), embankment repair (18%) and repair of structures (19%).

To promote in-polder water management (IPWM), interventions were made through Blue Gold to improve or rehabilitate infrastructure, to develop institutional partnerships and to promote cropping patterns suited to the local conditions and from the perspective of farming-as-a-business:

- Infrastructure development initially focussed on rehabilitation works on embankments, sluices and primary *khals* or drainage channels. From 2015, Blue Gold promoted the utilisation and improvement of water management infrastructure to provide better conditions for agricultural production and sometimes fisheries: *khals* were cleaned, illegal obstructions (both cross-bundhs and fishing nets) were removed from the *khals* and communities were helped to invest in new small-scale infrastructure to optimise local conditions for profitable agriculture.
- Institutional development kicked-off with the establishment of WMGs (an average of 23 WMGs



per polder), followed by a single WMA at polder level<sup>[4]</sup>. The initial focus on WMG formation and registration was replaced by the practical development of institutional networks - between WMGs/WMAs and departments, local governments, other community-based organisations and the private sector. By promoting partnerships for water management, WMGs and WMAs achieve much more than they would in isolation.

- For agriculture, the transfer of technology for field crops was led by DAE, and support was provided through the TA team working with the Department of Livestock Services (DLS) and Department of Fisheries (DoF) to diversify, increase and improve homestead production. For both field crops and homestead production, a strong market-orientation was provided. For field crops, the aim was to demonstrate how improved water management and a more desirable cropping pattern would realise higher productivity and profitability. Activities used to provide practical demonstrations included farmers' field schools (FFSs), community-led agricultural water management (CAWM) schemes, the cropping intensification initiative (CII), and a large number of horizontal learning activities for field crop and homestead production. Collective activities, such as the bulk purchase of inputs (eg seeds and fertilisers) and the joint sale of agricultural produce, demonstrated the immediate benefits of working together - lower unit rates for bulk purchases and higher prices and/or additional services for bulk sale of agricultural produce (for example, collection of watermelons from the farm).

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Whilst some activities remain within one of the three activity areas of the ToC, there was increasing recognition of the importance of cross-linkages. For example, DAE used CAWM schemes to demonstrate adjustments to the year-round cropping cycle to favour the winter cultivation of high value crops. WMGs promoted crop synchronisation amongst the farmers so that planting of the T Aman (monsoon rice) crop could be carried out at the same time (with the result that drainage of the paddy fields prior to harvesting is also synchronised) and so that *rabi* winter crops - with higher profit margins than rice - could be planted in December.

The demonstration activities described above typically covered relatively small blocks of about 20 to 100 ha. But the aim of Blue Gold was to scale these benefits to a wider group of farmers, and eventually to all 22 polders. The first step was to encourage those farmers within the catchment drained by a regulator or sluice to agree on how the sluice should be operated so as to optimise water levels for all farmers in the catchment, and to also consider potential investments in works to improve the drainage (and irrigation) infrastructure within the catchment area. A typical sluice catchment area averages 470 ha (ranging from 185 ha to 1,300 ha) and involves up to five WMGs. There are many examples where catchment committees formed from these WMGs have used investment plans, backed collectively by the WMGs within the catchment area, to present a case for financial assistance from the Union Parishad (UP) - for example, for small-scale infrastructure such as the clearance of *khals* and construction of culverts. Over the years of BGP implementation, the (financial) support from UPs to WMGs for the implementation of small-scale water management infrastructure has increased significantly.

These various IPWM activities have resulted in:

- reduced waterlogging
- higher cropping intensities and reduction in fallow areas
- higher paddy production due to the selection of varieties which are better suited to local conditions (eg BR 52 which has submergence tolerance)
- an expansion of the area under high value crops such as watermelon and sunflower
- development of water management partnerships
- greater awareness of commercial opportunities, which led to higher incomes (for those who



- own and operate land) and better employment opportunities (for those who provide labour)
- Increases in farmers' incomes, also enhancing non-farm economic development in the polders.

Local economic development is most effective when it is based on collaborative decisions by community-based water management organisations, technical departments, local governments and local businesses. When communities, leaders and experts work together there is an opportunity to take account of long-term sustainability and how outcomes contribute to livelihood of different classes of people. The majority of Blue Gold beneficiaries were smallholder farmers or landless farmers - making it a poverty-targeted project at its core.

## **Inclusiveness and Sustainability**[\[edit](#) | [edit source](#)]

Apart from in-polder water management being the main driver for to achieving BGP's outcomes and impact, two transversal themes were considered essential for the success of the program: inclusiveness and sustainability, which became explicitly included as part of BGP's Theory of Change, see Figure 30.4.

From its start, the Blue Gold Program aimed to be inclusive. Inclusive development intended to achieve that potentially all inhabitants of the Blue Gold polders, including marginalized groups, had access to opportunities and benefits created by BGP. In practice this meant that women / women farmers, landless and smallholder farmers were also explicitly targeted by BGP interventions. Gender mainstreaming was the main approach to ensure that women were reached (i.e. ensuring that activities involved both men and women). This was complimented by selected specific gender activities, eg for raising gender awareness and some special training for women, eg on market linkages and women's empowerment. Poor and (nearly) landless households were reached by pro-poor interventions, including homestead FFS, and by creating income generating opportunities through Labour Contracting Societies, that acted as contractors to implement earthwork for the water management infrastructure. It should be realized that this inclusiveness approach was not only helpful to the concerned (marginal) groups, but also contributed to better achieving BGP's goal of economic development within its polders.

The need for more attention to sustainability emerged at the start of BGP. The assumption, implicitly made in the Blue Gold [Program Document](#) of 2012, that organizing community members into WMGs and WMAs would be adequate enough to ensure that the Blue Gold outcomes would be sustained after the closing of the program, was found to be overoptimistic. This meant that over time more attention was given to sustainability, focusing on sustaining maintaining and operating the water management infrastructure, thereby discussing to which extent WMGs and WMAs are an end (and hence need to be sustained) or rather a tool (hence accepting that they become inactive if there is no felt need for them anymore). Maintaining and improving increased agricultural production as well as local capacities of polder inhabitants to cope and handle risks were also seen as important sustainability elements. Because the (future) role and capacity of BWDB as a support organisation of WMGs and WMAs, including to actively maintain major polder infrastructure, was considered very limited, other avenues of enhancing sustainability were emphasized, focusing more on the strengthening of local networks, involving local governments and relevant private sector actors.

## **References**[\[edit](#) | [edit source](#)]

1. [↑ Engaging Local Government Institutions in Water Management - DRAFT Sourcebook](#) (PDF). Euroconsult Mott MacDonald & Associates. February 2015.
2. [↑ Sustainability from The Start - Exit Strategy \(draft final\), Working Paper 2A](#) (PDF). Euroconsult Mott MacDonald & Associates. February 2016.

3. [↑ \*Theory of Change \(version 2\), Working Paper 5\*](#) (PDF). Euroconsult Mott MacDonald & Associates. May 2016.
4. [↑](#) BWDB preference was to have a single WMA per polder so that there was a single point of contact for the O&M Agreement between the WMA and BWDB's Executive Engineer. For historical reasons, and because of the large size and population of some of the Bleu Gold polders, it was impossible to have a single WMA per polder in all cases.

## Notes[\[edit | edit source\]](#)

1. [↑](#) The 66% (i.e. € 33.1 million out of a total GoN contribution of € 49.8 million) is based on figures from the Administrative Arrangement signed on 20<sup>th</sup> February 2013. Over the course of the 7+ year life of the program, revisions to the TA contract, reduced the percentage allocated to the TA team to 52% (i.e. € 32.4 million out of a total GoN contribution of € 61.2 million).
2. [↑](#) The total original budget allocation was € 57.7 million (GoN €49.8 million and GoB € 7.9 million). Under the BWDB DPP (recast March 2013), GoB allocated a total equivalent budget of € 7.499 million (€ 1.349 million for the revenue component and € 6.150 million for the capital component) was allocated, and under the DAE DPP, GoB allocated a total equivalent budget of € 0. 356 million).
3. [↑](#) Described in the Programme Document page 39.
4. [↑](#) The Programme Document describes three components, but at inception the TA-team organisation was further split-up into five components with little or no arrangements for their coordination

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## Technical Assistance

A process by which the local stakeholders are directly and actively involved in identification, planning, design, implementation, operation & maintenance and evaluation of a water management project.

Embassy of the Kingdom of the Netherlands, the contractual representative of the Minister of Foreign Trade and Development Cooperation of the Netherlands and signatory to the agreement for the Blue Gold Program with the External Resources Division of the Ministry of Finance as the signatory for the Government of Bangladesh

## Integrated Planning for Sustainable Water Management

### Char Development and Settlement Project

Bangladesh Rural Advancement Committee (an NGO)

## Water, Sanitation and Hygiene

Value chain - the set of activities that need to be performed in a specific production sector in order to deliver the end product to the consumer. Agricultural value chains typically include input supply, growing/production, processing and marketing/distribution.

## Department of Cooperatives

Department of Livestock Services, a government department under the Ministry of Fisheries and Livestock responsible for the livestock industry in Bangladesh

Department of Fisheries, a government department under the Ministry of Fisheries and Livestock responsible for regulating the fisheries industry in Bangladesh

Bangladesh Water Development Board, government agency which is responsible for surface water and groundwater management in Bangladesh, and lead implementing agency for the Blue Gold Program

Government of Bangladesh; a donor to the Blue Gold Program

In-polder water management; term used in Blue Gold to describe water management interventions which aim to deliver excess water from the field through field drains to secondary khals and thence to primary khals for evacuation through the sluice/regulator

Water Management Group - The basic organizational unit in Blue Gold representing local stakeholders from a hydrological or social unit (para/village). Through Blue Gold, 511 WMGs have been formed and registered. The average WMG covers an area of around 230 ha has 365 households or a population of just over 1,500.

Water Management Association - In Blue Gold, the polder-level representative of WMGs, and signatory to an O&M Agreement with BWDB

Local Government Institutions - Union Parishad, Upazila Parishad etc

human intervention in the capture, conveyance, utilisation and drainage of surface and/or ground water in a certain area: a process of social interaction between stakeholders around the issue of water control.

Water Management Organizations - The common name of organizations of the local stakeholders of a water resource project/sub-project/scheme. The concept WMO typically refers to WMGs and WMAs (and/or WMFs) together

Annual Review Mission, the broad objective of which was to secure and where possible further enhance the relevance, efficiency, effectiveness and sustainability of the project. ARM members were individuals who were appointed by, and reported directly to, EKN and BWDB/DAE

An area of low-lying land surrounded by an earthen embankment to prevent flooding by river or seawater, with associated structures which are provided to either drain excess rainwater within the polder or to admit freshwater to be stored in a khal for subsequent use for irrigation.

The Blue Gold approach which integrated the earlier 'four components' (ie social empowerment, water management infrastructure, agricultural technologies and farming-as-a-business) into a single work process

Blue Gold Program

Collective action - by a producer group is one way to partially overcome constraints such as in weak markets, where inputs and services essential to production innovations, are generally scarce, costly to access and/or to obtain. Collective action is working in group instead of individually in order to gain economic or social benefit. Through collective action, farmers can address constraints in their market linkages, organise their activities jointly and use their collective bargaining power to reduce input costs through bulk purchase, or to obtain services from buyers such as farm-level collection of produce

an environment of policies, regulations, norms, institutions, and overall economic governance which allows market systems to function and perform well

Theory of Change, planning tool

A livelihood is a way of making a living. It comprises capabilities, skills, assets (including material and social resources), and activities that households put together to produce food, meet basic needs, earn income, or establish a means of living in any other way.

Water Management Group - The basic organizational unit in Blue Gold representing local stakeholders from a hydrological or social unit (para/village). Through Blue Gold, 511 WMGs have been formed and registered. The average WMG covers an area of around 230 ha has 365 households or a population of just over 1,500.

Participatory Water Management Rules (2014)

Any issue where relations, differences, connections and/or inequalities between men and women have either a positive or negative effect or influence

Water Management Association - In Blue Gold, the polder-level representative of WMGs, and signatory to an O&M Agreement with BWDB

A process by which the local stakeholders are directly and actively involved in identification, planning, design, implementation, operation & maintenance and evaluation of a water management project.

Community Organiser

Farmer Field School - A group-based learning process through which farmers carry out experiential learning activities that help them to understand the ecology of their fields, based on simple experiments, regular field observations and group analysis. The knowledge gained from these activities enables participants to make their own locally specific decisions about crop management practices. This approach represents a radical departure from earlier agricultural extension programmes, in which farmers were expected to adopt generalized recommendations that are formulated by specialists from outside the community.

FFS Organiser in the technical assistance (TA) team

Producer Group Facilitator

Farmer Field School - A group-based learning process through which farmers carry out experiential learning activities that help them to understand the ecology of their fields, based on simple experiments, regular field observations and group analysis. The knowledge gained from these activities enables participants to make their own locally specific decisions about crop management practices. This approach represents a radical departure from earlier agricultural extension programmes, in which farmers were expected to adopt generalized recommendations that are



formulated by specialists from outside the community.

Any formal or informal structure (not necessarily a physical place) in which buyers and sellers exchange goods, labour, or services for cash or other goods. The word 'market' can simply mean the place in which goods or services are exchanged. Essentially, markets are defined by forces of supply and demand, rather than geographical location

Department of Agricultural Extension, a department of the Ministry of Agriculture responsible for disseminating scientific research and new knowledge on agricultural practices through communication and learning activities for farmers in agriculture, agricultural marketing, nutrition and business studies.

empowerment is a process, enabling people to make choices and convert these into desired actions and results. In doing so, people take control of their own lives, improve their own position, set their own agenda, gain skills, develop self-confidence, solve problems, and develop self-sufficiency. Empowerment leads to genuine participation of all actors as it is a process of gaining self-confidence for individual development as well as to contribute towards development of others.

Community Development Facilitator - a member of the Blue Gold technical assistance team who lived and worked in a specific polder, and provided the main point of contact between the project and the polder communities

Community Development Facilitator - a member of the Blue Gold technical assistance team who lived and worked in a specific polder, and provided the main point of contact between the project and the polder communities

Within BGP this refers to enhancing insights of especially FFS participants in how markets work, how to collect market information, facilitating linkages with market actors and increasing negotiation capacities

A vertical gate to control the flow of water; also referred to as 'regulator'

the principal function of a regulator or drainage sluice is to allow the drainage of water from the polder into a peripheral river when there is a differential head across the regulator (ie when the polder or country-side water level exceeds the level in the tidal river). The regulator is provided with a lift gate on the country-side (to allow freshwater to be held in the khal for irrigation during the dry season) and a flap gate on the river-side (to prevent water entry from the river channel into the polder during high tide conditions). A frame is provided on the river-side so that the flap gate can be lifted when there is freshwater in the river (during the monsoon flood season), thus allowing freshwater to be stored in the khal within the polder and used for irrigation during the dry season. The size of the culvert is determined from the drainage area served by the structure.

A defined set of temporary activities through which facilitators seek to effect change

small traders

A rice crop planted under irrigation during the dry season from December to March and harvested between April and June. Local boro varieties are more tolerant of cool temperatures and are usually planted in areas which are subject to early flooding. Improved varieties, less tolerant of cool conditions, are usually transplanted from February onwards. All varieties are insensitive to daylength.

A hajol is an unfired earthenware nesting vessel for egg hatching, with small receptacles for water and seed to provide the immediate needs. The hajol saves the hen effort and time for searching food, thus ensuring proper hatching in less time, thereby reducing egg waste.

the adjustment of gates in water management infrastructure to control hydraulic conditions (water levels and discharges) in a water management system.

Community-led Agricultural Water Management - with DAE, Blue Gold established a network of schemes for demonstration purposes where locally-applicable annual cropping patterns are introduced along with water level control facilitated by small-scale water infrastructure, and the development of value chain skills in farmers

Identification and planning of both interventions and operations & maintenance within the catchment, resulting in an action plan for the catchment.

Cropping Intensity Initiative: Year-long demonstrations with farmers on increasing cropping intensity related to improved water management, also involving market actors, and by organising demand driven sessions and workshops

A process through which stakeholders influence and share control over development initiatives and the decisions and resources which affect them.

agricultural production aimed at meeting market-demands. It is based on establishing a profitable farming unit and involves a multitude of business relations with other actors in the market system. Used in contrast to subsistence farming which focuses mostly on home consumption.

A process by which the local stakeholders are directly and actively involved in identification, planning, design, implementation, operation & maintenance and evaluation of a water management project.

actions taken to prevent or repair the deterioration of water management infrastructure and to keep the physical components of a water management system in such a state that they can serve their intended function.

Bangladesh Taka

drainage channel or canal

Earthen dyke or bundh raised above surrounding ground level, for example so that roads or railway lines are above highest flood levels, or so that an area is empoldered to protect it from external floods and saline waters.

In-polder water management; term used in Blue Gold to describe water management interventions which aim to deliver excess water from the field through field drains to secondary khals and thence to primary khals for evacuation through the sluice/regulator

transplanted aman; a rice crop, with nurseries for seedlings started in June/July, for transplanting in July/August in areas liable to a maximum flood depth of about 50cm. Harvested in November/December. Local varieties are sensitive to daylength whereas modern varieties are insensitive or only slightly sensitive.

The dry season (typically mid-October to mid-March) with low or minimal rainfall, high evapotranspiration rates, low temperatures and clear skies with bright sunshine. Crops grown are boro, pulses, sunflower, sesame and mungbean.

hectare

an idealised hydrologically independent drainage unit within a polder - comprising a network of inter-connected khals draining to a regulator from where water is discharged to a peripheral river. Because the land levels in a polder vary within a small range (typically up to a maximum of 1.5 m), water flows can be affected by downstream water conditions and eventually drain through more than one regulator at different times of year. .

Union Parishad - Union Council chaired by an elected Union Chairman

Union Parishad - Union Council chaired by an elected Union Chairman

Soil is regarded as waterlogged when it is nearly saturated with water much of the time such that its air phase is restricted and anaerobic conditions prevail. In agriculture, various crops need air (specifically, oxygen) to a greater or lesser depth in the soil. Waterlogging of the soil stops air getting in. How near the water table must be to the surface for the ground to be classed as waterlogged, varies with the purpose in view. A crop's demand for freedom from waterlogging may vary between seasons of the year.

assumed in this report to operate up to 0.5 acres (0.2 ha)

The inclusion of the (interests of) different types of people and treating them fairly and equally, considering their different roles and interests in water management

Also known as 'business linkages'. Linkages refer to the trading relationships between and among producers, input providers and traders, and other enterprises in a supply chain or value chain. We refer to Backward linkages on the input side and Forward linkages on the output side of the producer.

Farmer Field School - A group-based learning process through which farmers carry out experiential learning activities that help them to understand the ecology of their fields, based on simple experiments, regular field observations and group analysis. The knowledge gained from these activities enables participants to make their own locally specific decisions about crop management practices. This approach represents a radical departure from earlier agricultural extension programmes, in which farmers were expected to adopt generalized recommendations that are formulated by specialists from outside the community.

Labour Contracting Societies - Groups of usually landless people who are contracted by an agency to carry out a certain type and volume of earthwork within a given time period. For BWDB, the rules for engagement of an LCS are set down in PWMR 2014 Chapter 6

Government of the Netherlands; a donor to the Blue Gold Program

Development Project Proforma: a formal document which sets out the intention of a GoB organisation to invest in a development project, seeking approval for the investment and, if successful, a budget allocation. The DPP follows a prescribed format, including the project's financial and physical scope, benefits, and proposals for monitoring and internal and external audits. The approval of a development project proposal follows a number of stages: formation with preliminary studies, formulation to develop greater detail and with additional information to make the economic case for the project, scrutiny by the executing agencies and concerned ministries, appraisal by the Planning Commission, recommendation for approval by Project Evaluation Committee (PEC), Minister/ECNEC approval, and inclusion of a budgetary allocation in the Annual Development Plan (ADP).

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## Variants

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## Blue Gold Program Wiki

The wiki version of the Lessons Learnt Report of the Blue Gold program, documents the experiences of a technical assistance (TA) team working in a development project implemented by the Bangladesh Water Development Board (BWDB) and the Department of Agricultural Extension (DAE)

over an eight+ year period from March 2013 to December 2021. The wiki lessons learnt report (LLR) is intended to complement the BWDB and DAE project completion reports (PCRs), with the aim of recording lessons learnt for use in the design and implementation of future interventions in the coastal zone.

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