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Report No: ICR00003973

ON AGRANT

FROM THE GLOBAL AGRICULTURE AND FOOD SECURITY PROGRAM

IN THE AMOUNT OF

US\$ 46.31 MILLION

TO THE

FOR THE

INTEGRATED AGRICULTURAL PRODUCTIVITY PROJECT

June 22, 2017

Agriculture Global Practice South Asia Region

| NATP | National Agricultural Technology Project | SAAO | Sub Assistant Agriculture Officer |
|------|---|------|---|
| NGO | Non-Governmental Organizations | SCA | Seed Certification Agency |
| NSB | National Seed Certification Board | SMF | Social Management Framework |
| PAD | Project Appraisal Document | TPE | Third Party Evaluation |
| PD | Project Director | UAO | Upazila Agriculture Officer |
| PDO | Project Development Objective | UFO | Upazila Fishery Officer |
| PM | Project Manager | ULO | Upazila Livestock Officer |
| PMU | Project Management Unit | UPCC | Upazila Project Coordination Committee |
| RF | Result Framework | WB | World Bank |
| RPIU | Regional Project Implementation Unit | WUG | Water User Group |
| QPR | Quarterly Progress Report | | |

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Bangladesh Integrated Agricultural Productivity Project

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DATA SHEET

| A. Basic Information | | | |
|----------------------|------------|-------------------|---|
| Country: | Bangladesh | Project Name: | Bangladesh Integrated Agricultural Productivity Project |
| Project ID: | P123457 | L/C/TF Number(s): | TF-10378 |
| ICR Date: | 6/15/2017 | ICR Type: | Core ICR |

Lending 2 TmCnsimben

| Comments (incl. % achievement) | Achieved beyond target women beneficiaries. | (105.52% against | baseline), including percentage of |
|--|---|--------------------|---|
| Indicator 2 : | Incremental increase in j | productivity of pa | ddy |
| Value quantitative or Qualitative) | 2,200 kg/ha | 2,700 kg/ha | Boro: 5,950 kg/ha T-Aus: 3,300 kg/ha Aman: 3,300 |

(b) Intermediate Outcome Indicator(s)

| | | Original Target |
|-----------|-----------------------|------------------------|
| Indicator | Baseline Value | |
| | | |

| Value | 0 | 175.000 | 190.000 | 190,000 |
|---|--|---|----------------------------------|-------------------------|
| (quantitative | 0 | 175,000 | 180,000 | 180,000 |
| or Qualitative) | | | | |
| Date achieved | 09/30/2011 | 09/30/2016 | 10/26/2015 | 12/30/2016 |
| Comments | Fully achieved (100% aga | inst revised target v | alue). | |
| (incl. % | Additional 200 LFS (5, | | | The |
| achievement) | target was revised to 180,0 | 000 during the 2 nd re | evised DPP on 1 | 10/26/2015. |
| Indicator 6 : | Component 2 - Technology adoption - adoption of improved aquaculture by fish farmers | | | |
| Value | 0 | 60.000 | | 60.000 |
| (quantitative | 0 | 00,000 | | 00,000 |
| or Qualitative) | | | | |
| Date achieved | 09/30/2011 | 09/30/2016 | | 12/30/2016 |
| Comments (incl. % achievement) | Fully achieved (100% aga | inst target value). | | |
| Indicator 7 : | Component 2 - Technolog practices by farmers | gy adoption - adopt | tion of improve | ed breed/ husbandry |
| Value (quantitative or Qualitative) | 0 | 60,000 | | 60,000 |
| Date achieved | 09/30/2011 | 09/30/2016 | | 12/30/2016 |
| Comments (incl. % achievement) | Fully achieved (100% aga | inst target value). | | |
| Indicator 8 : | Component 2 - Technolog new facilities | gy adoption - certifi | ed seed process | sed by BADC in the |
| Value (quantitative or Qualitative) | 0 | 3,500 tons | | 3,546 tons |
| Date achieved | 09/30/2011 | 09/30/2016 | | 12/30/2016 |
| Comments (incl. % achievement) | Exceeded (101% against t additional 46 MT of seeds | arget value) due to . Those seeds were | increased dema processed by B | and from DAE of an ADC. |
| Indicator 9 : | Component 3 - Water man | agement - areas und | der improved ir | rigation |
| Value (quantitative or Qualitative) | 0 | 25,000 ha | | 27,750 |
| Date achieved | 09/30/2011 | 09/30/2016 | | 12/30/2016 |
| Comments (incl. % achievement) | Exceeded (111% against ta | arget value). | | |

G. Ratings of Project Performance in ISRs

| Date ISR Archived | DO | IP | Actual Disbursements (USD millions) |
|----------------------|---------------------------|--------------|---|
| 04/01/201 | 2Satisfactory | Satisfactory | 4.05 |
| 12/11/201 | 2Satisfactory | Satisfactory | 8.79 |
| 05/31/201 | 3Satisfactory | Satisfactory | 11.84 |
| 12/09/201 | 3Satisfactory | Satisfactory | 19.75 |
| 06/06/201 | 4Satisfactory | Satisfactory | 21.42 |
| 08/31/201 | 4Satisfactory | Satisfactory | 23.30 |
| 06/10/201 | 5 Moderately Satisfactory | Satisfactory | 35.08 |

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1.1 Context at Appraisal

1. At appraisal, Bangladesh made considerable progress in sustaining high rates of economic growth and reducing poverty incidence by 9% between 2000 and 2005 (from 49% to 40%), and even achieved self-sufficiency in the production of its staple food - rice.

2. Despite these significant achievements, the country still faced considerable challenges: pockets of extreme poverty persisted (one-sixth of the total population of almost 150 million lived in extreme poverty); the incidence of malnutrition was one of the highest in the world; and agricultural productivity, (notably, crops, livestock and fisheries) in the North-West and the South were significantly below the national average. According to the Household Income and Expenditure Survey (HIES, 2008), the poverty rate in the North-West was 57% and in the South

fisheries; (ii)

improved agricultural (crops, livestock and fisheries) production technologies and management practices. This also enabled them to increase productivity as well as intensify and diversify

improving availability of quality seed/b -farmer linkages and augmenting as appropriate - their productive assets and social capital base.

12. This component had five sub-components, including: (i) crop production; (ii) fish production; (iii) livestock production; (iv) enhancement of seed availability; and (v) community mobilization and extension. The crop production sub-component comprised support for community seed production and for adoption of improved agronomic practices. Fish production comprised activities related to fish nursery, carp polyculture, intensive fish monoculture and cage culture. Livestock production comprised activities related to poultry, goat and dairy production as well as animal health campaigns. Enhancement of seed availability comprised activities related to seed certification and enhancement of seed distribution capacities. Community mobilization and

disseminated technologies and practices, and in enabling them to further spread them through farmer-to-farmer interactions. The activities financed under this component included demonstrations, provision of seeds and inputs, community productive assets, mobilization asdID10 reW*6024

market linkages and a relatively constrained role for private sector; and (vii) a lack of institutions and instruments for agricultural risk-bearing and risk-sharing.

18. The project design also incorporated

increase productivity in agro-ecologically constrained areas by strengthening and integrating the weak national research and extension systems. By design, the project has targeted areas with significant environmental stress (seasonal droughts, cold snaps and flash flood submergence in the North; varying levels of salinity, tidal and saline submergence in the South). Furthering agricultural development in these areas requires suitable varieties, and location/ problem specific technologies and production practices, which were rightfully identified at appraisal. Agriculture was a very high priority for GOB, with allocations to this sector increasing over time, especially after the food price crisis of 2008. As part of the Global Agriculture and Food Security Program (GAFSP) process, a

25. The project relied heavily on community involvement, through a variety of farmer groups, for implementation, building on the growing experience with community-driven implementation in Bangladesh and in Bank projects. A salient feature of the project was the emphasis on adoption. Active participation of the stakeholders in the project activities contributed to enhance the relevance of varieties selected for cultivation, to increase adoption of new technologies and practices, and to the sustainability of both technical interventions and the local institutions supporting farmers. Farmer group structure, technical guidance from extension agencies as well as in-

e disseminated technologies, and thus pioneering a new approach to ensuring rapid, sustainable spread of new technologies. The heavy emphasis on community involvement and the technology generation mechanism helped creating an environment that led to significant adoption of technologies and yield increases.

26. **Technical assistance from FAO** was also instrumental to effective implementation by: (i) strengthening the project implementation capacity of the IAPP Project Management Unit (PMU) in relation to: the preparation of the Operational Manual; setting up the M&E system; and demonstration of the financial viability of buried pipe irrigation schemes through high quality financial and economic analysis (FEA); (ii) Strengthening the capacity of the IAPP PMU and other project stakeholders on technical aspects related to seeds and nutrition, through study tours abroad (i.e., India and Indonesia), which contributed to the establishment of 216 IAPP seed villages ; and (iii) training of 473 IAPP-recruited Community Facilitators (CFs) and Field Assistants (FAs) 13 in community mobilization, M&E, troubleshooting, nutrition, and cooperation with Farmers Organizations (FOs). Training resulted in effective outreach and communications at the field level with good uptake of technologies and practices promoted through the IAPP, as confirmed by the

of-

27. During the initial period of the project

implementing agencies had their own M&E unit, which was tasked to plan, monitor and evaluate the project activities and report progress on key performance indicators. During earlier days of project implementation, implementing agencies had used their own departmental human resources to collect information from field and consolidated information at the district level and then finally monitoring forms, were developed as of August 2013. In addition, an ethnic minority development plan was prepared for three of the eight districts having tribal communities among the beneficiaries, namely Patuakhali, Barguna and Rangpur, as stipulated under the Bank OP 4.10 on indigenous peoples.

2.5 Post-completion Operation/Next Phase

40.

at PMU level were dissolved. All deputed staff from the government of Bangladesh at district and region level were re-integrated back into their original departments (DAE, DLS, DoF, BADC, SCA).

41. Given its important achievements, the Ministry of Agriculture (MoA) has expressed strong interest in engaging on a new operation to consolidate and scale-up the results of IAPP, as well as to provide support in areas that may sustain investments and results. MoA submitted a proposal in Window. Building on IAPP,

MoA is also seeking engagement on a transformative/ more comprehensive operation with the aim to unlock the full potential of agriculture in Bangladesh in terms of productivity growth, value-addition, and employment creation, while minimizing risks and ensuring sustainability and climate resilience.

42. Sustainable intensification and diversification of agriculture through technological change requires an efficient and productive national agricultural technology system, comprising agricultural research (technology development and refinement) and agricultural extension (technology dissemination). In this respect, it is noteworthy that the Technology Generation Mechanism developed under the project is being mainstreamed in other projects, including NATP II. Moreover, IFAD has committed to financing a follow-on operation to scale-up the IAPP achievements, including (i) continuing to strengthen the capacity of the research and extension services to generate and disseminate agricultural technologies aimed at increasing farm productivity; and (ii) promoting the sustainability of existing and new farmer groups and producer organizations by strengthening their linkages with markets.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

43. <u>Relevance of Objectives:</u> At ICRR, the PDO remains highly relevant. The project

Bangladesh for FY16-20, agriculture is highlighted under Focus Area 2 (Social Inclusion) and Focus Area 3 (Climate and Environment Management), more specifically 2.4: Enhanced Rural Income Opportunities for the poor and 3.3: Increased Adoption of Sustainable Agriculture Practices.

45. <u>Relevance of Design</u>: The project design remains *highly relevant* to the current development agenda of agricultural research and extension systems in the country as it promoted high priority, pluralistic, participatory and demand-led agricultural research including institutional reforms of NARS and supported decentralized, participatory, demand-led and knowledge-based agricultural extension service delivery also supported by the National Agricultural Technology Phase II Project (NATP-II), jointly Bank/IFAD/USAID-financed. ocus on improving irrigation efficiency remains highly relevant in view of increasingly important efforts to make agriculture in Bangladesh more resilient against the effects of climate change.

46. <u>Relevance of Implementation</u>: Project implementation was *highly relevant* by effectively responding to changing needs and circumstances. Project management exhibited a strong commitment to the objectives and success of the project. Implementation focused on performance improvements of government agencies working at Union and village levels and promoted decentralized and demand driven extension service delivery. The project exceeded even the updated targets that were revised upward at Mid-Term Review e based on newly available information at that time. Findings of various reports, including DIME, TPE and IAPP M&E indicated that the project considerably increased productivity of agricultural production and profitability on account of timeliness of operation, better quality of work and more efficient utilization of inputs. nsuring that women significantly shared in generated benefits also remains highly relevant today. Moreover, several committees in relation to ensure governance and oversight arrangements were formed for (i) effective implementation, (ii) better coordination of the project, and (iii) collaboration and shared responsibility across the various line departments, agencies and their key stakeholders.³

3.2 Achievement of Project Development Objectives

47.

48. The assessment of project outcomes was based on three sources:

52. <u>Crop production and productivity</u>. The targets for increased paddy productivity were exceeded (106% Boro, T-Aus 141%, and Aman 138%), with reported yields of 6,300 kg/ha for Boro, 4,650 kg/ha for T-

use in fish under Component One (Technology Generation and Adaptation); Adoption of improved aqua-culture by fish farmers under Component Two (Technology Adoption). Achievement of these indicators against agreed target values is presented in Table 2.

60. <u>Fish production and productivity</u>. The targets for increased fish productivity were also exceeded (159%), with reported yields of 5,420 kg/ha against a target of 5,420 kg/ha. A total of

| Table 2: 1 | Increased pro | oductivity of | fish | |
|---|--------------------|------------------|-----------------------|---------------|
| Indicator | Baseline Values | Target Values | Value Achieved | % Achieved |
| Incremental increase in yield of fish (Kg/ha/WSA) | 2,700 | 3,400 | 5,420 | 159% |
| Adoption of improved aqua-culture by fish farmers (Number) | 0 | 60,000 | 60,000 (25% women) | 100% |
| Farmers whose productivity increased in crops (Number) | 0 | 48,000 | 48,177 (25% women) | 108.57% |
| use in Fish - BFRI (Number) | 0 | 9 | 9 | 100% |
| Improved production packages released Fish - BFRI (Number) | 0 | 9 | 9 | 100% |

*Target assumed 80% sustainability rates of intervention by adopting farmers

64. **PDO-level Indicator (iv): Productivity of milk (as representative of livestock subsector)**. With respect to the fourth element of the PDO, the related key PDO-level and intermediate outcome indicator was Adoption of improved breed/husbandry under Component Two (Technology Adoption). Achievement of these indicators against agreed target values is presented in Table 3.

65. *Livestock production and productivity*. The targets for increased milk productivity were also exceeded (130%), with reported yield of 2.86 l/day/cow against an upwardly revised target of 2.2 l/day/cow. Livestock LFS model adopted by the DLS on par with DAE groups was used for the groups formed during the project year 2014-15 and 2015-16. ⁵ Within the project period, DLS oriented the remaining farmers groups (formed during the previous years) on the latest husbandry practices. 3,000 livestock development groups (dairy, goat and poultry groups) were formed involving 60,000 farmers, 89% of which were women

68. *Training and capacity building*. Implementation of activities to be carried out by DLS

76.

The dissemination of seasonal agro-meteorological, soil and hydrological information relating to crop suitability using cellular phone/mobile internet network (ICT) strongly contributed to helping improving crop/animal productivity and resilience in the saline/drought regions. Moreover, farmer groups developed entrepreneurships for a number of IGAs and environmental safeguard issues, including milk, quality seed, fodder, vermi-compost, fish production (pen and cage cultures), processing, marketing and group capital formation. This further contributed to empowering women given that women were especially involved in these sectors.

4. Assessment of Risk to Development Outcome

Rating: Satisfactory

84. Overall, the project was implemented in accordance with agreed desing, while being on time and on budget. Actual expenditures under project components deviated only marginally from their allocations as agreed at appraisal, reflecting a well-designed project. Design of the IAPP benefited from international and Bank experience in designing research and extension projects. The Bank provided timely and quality support during project preparation and appraisal. The Bank team ensured that the project design incorporated key lessons from relevant projects. The diagnostic

intervention was well established. The project approach for strengthening pluralistic institutional structure of the research and extension service providers as well farmer organizations was relevant, and the anticipated risks and their mitigation measures were adequate

85. The lack of time and financial resources to conduct a baseline study at appraisal to meet the time window for GAFSP proposal submission prompted the Bank to make use of national average data, which were the sole information available, to inform baseline and target values of the Result Framework. However, the Bank made provisions at design stage to have DIME conduct a baseline study during the first year of project implementation. Also, FAO, as co-supervising entity, was closely involved in the implementation of the project.

(b) Quality of Supervision

Rating: Satisfactory

86. The Bank team carried out 10 review missions to support project implementation

mobilization and capacity building. The Bank had also fully involved FAO in the supervision of IAPP implementation.

(c) Justification of Rating for Overall Bank Performance

Rating: Satisfactory

89. Overall, the Bank did solid work at entry level and demonstrated pro-activity in addressing issues as they arose. Bring DIME on board from inception ensured objective measurement of outcomes and working closely with FAO contributed to strengthening M&E arrangements and to lowering implementations risks throughout the project life. Quality at Entry is rated as *Satisfactory* rated as *Satisfactory Satisfactory*.

5.2 Borrower Performance

(a) Government Performance

Rating: Satisfactory

90. GOB was fully committed to and had a strong ownership of the project both during preparation and implementation. GOB ensured full availability of counterpart funds and fiduciary aspects were respected. In addition to the GAFSP Grant of USD 46.31 million, GOB contributed USD 17.50 million (about 27%), most of which contributed to financing civil works, procuring goods and equipment, and pay salaries and allowances of deputed officers from government.

locally and abroad throughout the implementation of the project provided a positive expression of technology to local farmers, carried positive messages about agriculture and farming system, and established linkages among the technology demonstrators and adopters. Although farmers gained

(c) Other partners and stakeholders

102. N/A

A detailed description of the achievement of outputs by component is given below.

1. Component 1: Technology Generation & Adaptation

Improved technology generation for farmers use

Key participants in the seed value chain are research institutes (BRRI and BARI) for producing breeder seeds, seed growers, and SCA for quality control and certification of seeds, and BADC for seed processing and distribution. BRRI and BARI developed 15 crop varieties including five varieties of rice, four varieties of wheat, two maize hybrids, two varieties of mung bean, and one variety each of mustard and lentil-142(v)11(ar)-5(

Farmers rally and Exchange visit: DOF organized during the project period 22 Exchange visits. The exhibits of farmers rally and exchange visits focused on fish production, management practice, management of improved feeding & fingerlings fish farming, and integrated fish culture.

Training & Capacity Building: The project had a provision to enhance the skills and efficiency of the farmers regarding commercial species culture, carp Polyculture, cage/pen culture, etc. The IA had planned that a total number of 60,000 selected fish farmers of different categories will be trained at EOP in Union /Upazila level. This was fully achieved.

2.3. Department of Livestock Services (DLS)

1. *Livestock group formation.* 3,000 livestock development groups (dairy, goat and poultry groups) were formed involving 60,000 farmers, 89% of which were women. PMU reported productivity increments (milk, live goats, eggs and live chicken) in about 50,652 farm families against a target of 48,000 farmers.

selective animal breeding, fodder cultivation, improved husbandry practices, and health care campaigns have been carried out as per schedule.

2. *Livestock Production and Productivity* Compared to non IAPP groups, milk productivity of cows in IAPP groups was reported to be 147% higher; household milk consumption nearly doubled (96% increase); and milk sales and earnings were 4 to 5-fold VI的顧識演GAND

2. IAPP farmers procured most of their seeds from demonstration farmers in IAPP seed villages (68.5% in Northern regions and 57% in Southern regions), followed by BADC seed dealers. BADC processed and distributed 3,546 tons of certified seeds against a target of 3,500 tons. SCA carried out field inspections of 40.6 tons and 50 tons of breeder seed of rice and wheat against a target of 30 and 50 tons respectively. DAE has established 246 seed villages, among which 87% are producing paddy seeds, representing about 18% of all the crop farms.

3. However, a number of sustainability issues pertaining to the seeds village were raised. Although SCA personnel conducted routine inspections and all seeds produced in seed villages were systematically tested for quality, it was noted that some farmers had difficulties maintaining the set of congenial circumstances necessary to keep quality seeds. While some farmer groups, both in the North and in the South, received certification from SCA that guarantee that their seeds met SCA quality standard, the TPE findings warned that the system of seed production in some of the seed villages would not remain effective after the project end unless adequate resources were made available to continue quality support. The opening of two seed testing laboratories toward the end of the project (one in the North and one in the South) operated by IAPP-SCA and recognized by NSB would significant contribute to sustainable seed testing activities

3. Component 3: Water Management

1. This component has improved availability of irrigation water and efficiency use. It enabled farmers to increase cropping intensity, diversify crops, and reduce irrigation related risks and variability in crop production. The target increase area under improved irrigation was exceeded to about 27,750 ha versus a target of 25,000 ha. A total of 306 buried pipes were installed in project areas covering more than 208 km. More than 29,000 beneficiaries directly benefited from these schemes. Estimation shows: (i) 49% reduction water loss; (ii) 50% irrigation cost decrease; (iii) 123% irrigation area increase; and (iv) 60% production increase in both regions. Results were even more impressive with canal re-excavation (150 km long) with: (i) 150% irrigable land increase plus crop diversification; and (ii) more than 17,700 ha increase of irrigable land and 12,500 beneficiary farmers. Re-excavation of canal has improved conveyance system of tidal water in the south and removed water logging and more inundated land came under cultivation.

2. The Water Users groups were well functioning, with opened savings accounts and member contributions covering the costs of regular system maintenance. However, there was a targeting issue regarding the installation of rain water harvest system. In the south where scarcity of safe drinking water was an acute problem of the communities, the project installed more than 1,600 household rain water harvest storage systems in Patuakhali and Barguna districts. A total of 8,200 people benefited from this rain water harvest system as a result of relevant adaptation in the technology. In fact, according to the project design, rain harvesting systems were to be provided to households that had roof plate so that rain water could be harvested into a water tank. However, during implementation, the project realized that most of the intended beneficiaries (i.e., marginalized poor people) did not have a house with roof plates/GI sheet. Thus, the project decided to provide rain water facilities with small roof plate and also collected rain water using the rain water harvesting system. Throughout the project life, 1,280 farmers, seed dealers and technicians received capacity building training from the project.

Annex 3. Economic and Financial Analysis

I. Context

The PDO of IAPP was

On adoption rates, the IAPP M&E system and the IAPP Results Framework report that of the total 250 000 farmers who have benefitted in some way from the some project investments about 180,000 people have adopted improved crop varieties or cropping practices promoted by IAPP. However, in order to compensate for any overly optimistic reporting on what constitutes having adopted an improved crop variety, this analysis assumed that only two-thirds of those farmers, or some 120 000 of those farmers have adopted and are getting the full benefits and have sustained production at levels recorded by the project in the various production models. In a similar vein, based on project progress reports, the analysis assumes that the project took sometime to become fully operational and to make improved seeds and other practices available to farmers. Therefore, the realization of benefits from improved practices at the farm level starts only in PY3 and then increases gradually through PY4 with full realization of improved yields only in PY5.

Farms sizes, as classified by the project are marginal, with a farm size ranging from 0.5 to 1.49 acres (0.20 to 0.60 ha) or small with a farm size from 1.5 to 2.49 acres (0.61 to 1.00).

The following table summarizes the basic assumptions on the key parameters used in the analysis.

| Project life | 20 years |
|----------------------------|----------|
| Standard Conversion Factor | 0.90 |
| Discount rate | 10% |
| Famers Adopting | 120 000 |
| Benefits phased over | 3 years |
| Benefits accrue over | 20 years |
| Marginal farm size | 0.4 ha |
| Small farm size | 0.8 ha |
| Cost (US\$ million) | |
| GAFSP World Bank | 41.02 |
| GAFSP FAO | 3.69 |
| | |

Key Assumptions & parameters

Annex 4. Grant Preparation and Implementation Support/Supervision Processes

(a) Task Team members

| Names | Title | Unit |
|-----------------------|------------------------------------|-------|
| Toufiq Ahmed | Operations Officer | GFDRR |
| Mohammad Baharul Alam | Senior Executive Assist1 4] TJETQo | |

(DLS), MOFL (f) Community Mobilization, MoA; and; Component-3: Water Management: Bangladesh Agricultural Development Corporation (BADC), MOA; Component -4: Technical Assistance and Capacity Building Component: Food and Agricultural Organization (FAO) of UN and Component-5: Project Management: (a) Project Management Unit (PMU), MOA and (b)Regional Project Implementation Unit (RPIU), MOA.

Project Cost and Financing:

Total project cost was US\$ 67.50 million, jointly financed by the Government of Bangladesh (GoB) 17.50 million, and the Global Agriculture & Food Security Programme (GAFSP) US\$ 50.00 million:(RPA US\$ 46.31 million and DPA

38 metric tons of breeder seed to BADC for seed multiplication and DAE for distribution to the farmers.

green vegetations as well as favourable environments for living beings. In some cases, it is used as drainage channels and leads to remove water logging. Thus helps to improve and save environment.

Social Impact: In the project areas, construction of seed storage go down, re-excavation of ponds and canal, construction and repairing of village road on the bank of the canals, construction of milk selling

private land, the lands are handed over to authority and LFS groups by deed. So, no land litigation exists in these project activities. Even there is less probability of land litigation in future. It creates a long term positive social impact in the project areas.

Sustainability of the project: Sustainability is the continuation of best activities/practices of the project that generate positive results after termination of the project. Capacity building of the LFS in the form of skills, knowledge, group managements and communication with extension service providers has been improved. 3000 Common Groups comprising 60,000 livestock farmers, 2292 group of fishery farmers with 60,000 members, 605 water user group with beneficiary 43650 were registered. DAE,. DOF,DLS, BADC have regular setup for take over the responsibilities to provide technical assistance, co-operation and monitoring LFS farmers will get financial support (Credit) from Pally Sanchaya Bank. These will helpful for sustainability of the LFS groups activities.

Alleviate / reduce poverty and sustained economic growth: The development of agricultural new technology packages on crops and fishery, skilled human resource with improved facilities, and research management would have important role in augmenting agricultural production and productivity. Increase in productivity of crops, livestock, fishes, vermi-compost. Quality seeds and marketing of these products increase the income of the farmers. Women participation and involvement in production and creation of new work opportunities also leads to increase income and reduce poverty. The continued improvement in agricultural productivity could play a complementary role to the GOB efforts to alleviate/reduce poverty and sustained economic growth. Due to implementation of the project, the productivity of crop, fishery and livestock commodities has been increased substantially and the household income of project targeted farmers also increased over baseline. The increase of productivity and income created a substantial impact on poverty reduction.

Annex 6. List of Supporting Documents

- 1. Project Appraisal Document
- 2. Aide Memoires and ISRs after implementation of support missions
- 3. Management letters after implementation of support missions
- 4. Bangladesh Country Assistance Strategy FY2006-09
- 5. Bangladesh Country Partnership Strategy FY2011-14 (extended to FY2015)
- 6. Bangladesh Country Partnership Framework FY2016-20
- 7. Bangladesh Country Investment Plan, 2011
- 8. Financial Management Manual
- 9. Environmental and Social Management Framework
- 10. Government project completion report
- 11. Annual reports of M&E (PMU)
- 12. DIME Baseline Report (WB)
- 13. DIME Midline Report (WB)
- 14. DIME Endline Report (WB)
- 15. Impact Assessment of M&E and DIME (Consultant)

| MAP |
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