PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE

Report No.: PIDC11855

Project Name	Bangladesh NATP-2: National Agricultural Technology Program - Phase II (P149553)
Region	SOUTH ASIA
Country	Bangladesh
Sector(s)	Agricultural extension and research (50%), Animal production (20%), Crops (20%), Information technology (10%)
Theme(s)	Rural services and infrastructure (50%), Technology diffusion (25%), Rural markets (25%)
Lending Instrument	Investment Project Financing
Project ID	P149553
Borrower(s)	Economic Relations Division, Ministry of Finance
Implementing Agency	Ministry of Agriculture (MOA)
Environmental Category	B-Partial Assessment
Date PID Prepared/ Updated	04-Sep-2014
Date PID Approved/ Disclosed	09-Sep-2014
Estimated Date of Appraisal Completion	05-Nov-2014
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Concept Review Decision	

I. Introduction and Context

Country Context

Building on its remarkable social and economic performance over the last 20 years, Bangladesh aims to become a middle income country by 2021; to achieve this will require among other that the GoB overcomes considerable challenges in agricultural development and rural economic growth. The country's GDP growth averaged 5.8 percent between 2000 and 2010, accompanied by a decline in the national poverty headcount rate from 48.9 percent to 31.5 percent over the same period, effectively lifting some 16 million people out of poverty. Bangladesh, a country of over 160 million inhabitants, has also made noteworthy gains in education and health, and is well set to achieve most of the MDGs.

Bangladesh remains a predominantly agricultural country and growth and development achievements in rural areas must be brought on par with those in urban areas. Agriculture occupies

some three-quarters of the scarce land space of the country and supports the livelihoods of the majority of the population. While overall poverty has significantly declined over the 2000 to 2010 period, the poverty headcount in rural areas (still 35.2 percent) has not declined as fast as in urban settings; moreover, the proportion of people living in extreme poverty in rural areas is still three times higher than in urban areas. The contribution of agriculture to the country's economic output has declined over the past decade, but crops, livestock, forestry, fisheries still combine for almost one-fifth of GDP. Moreover, with some 70 percent of the population living in rural areas and over 43 percent of the country's total labor force engaged in agriculture, achieving further economically, socially and environmentally sustainable economic growth and poverty reduction will require policies and investments conducive of lasting transformational changes in rural areas – including through technological innovations in agriculture.

Sectoral and Institutional Context

To eliminate the country's extreme poverty by the year 2030 and to promote shared prosperity for the poorest 40 percent, agriculture must continue to grow (in ways that are sustainable and adapted to climate change) and rely on a more diversified production base. Poverty reduction in rural areas depends crucially on growth in agricultural productivity, which is driven by investment in infrastructure, generation of new or improved technologies adapted to changing climate, and their adoption by farmers and other value chains actors (e.g. processors). 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 and adoption). This needs to be supported by appropriate value addition and market linkages through smallholder participation in emerging/established supply chains for higher value agriculture. To achieve these strategic goals, the GoB has been seeking the support of development partners such as the Bank, to develop and finance activities aimed at boosting agricultural production through productivity enhancement, and increasing smallholders' income.

In Bangladesh, while the performance of the NARS has been impressive in contributing to food security (in particular with rice), research in some key sub sectors (e.g. livestock, fisheries) has yet to reach its potential productivity in terms of releasing a sufficient stream of useful innovations (including a range of new climate smart technologies for production and post-harvesting). The extension system has still extremely limited reach into the myriad communities of the nation (in particular for the fisheries and livestock subsectors were local level public extension workers are absent), and worse, hardly communicates with the NARS, or the relevant private and non-government entities also engaged in technological advance. In short, the national agricultural innovation system is far from exploiting the systemic interactions that should drive it to success, and the insufficiencies pervade the system both within the subsystems, the all-too disconnected and in some instances less than strong elements of the NARS: public-private links are disturbingly absent, and links between research entities public and private with the higher education sector are sparse and severely underexploited. To enable agriculture and stakeholders to adapt readily when challenges occur and to respond readily when opportunities arise, the proposed project will seek to overcome some of the key constraints to increasing the efficiency and performance of the national agricultural innovation system.

The National Agricultural Extension Policy (NAEP, 2012) and the Bangladesh Agricultural Research Council Act (BARC, 2011) provide the sector policy framework for the proposed NATP-2. NAEP advocates inter alia the development of decentralized, integrated, demand-driven agricultural research and extension services. Support is now required for the Department of Agricultural Extension (MoA) towards achieving the strategic objectives of the NAEP and as well

as technical assistance for the Department of Livestock Services and the Department of Fisheries (both MFL) for the completion of their respective sector extension strategy/policy. The 2012 BARC Act aims at fostering the coordination of research activities conducted by the twelve NARS institutes, making BARC responsible for the allocation of resources among the NARS institutes and for the approval of the institutes' research programs; it is among other things expected to reduce duplication of research efforts and enhance accountability. Implementation of the BARC Act remains a challenging process and requires additional financial and technical assistance. Further, there are some significant differences in the institutional capacity and performance among the various NARS institutes (with livestock and fisheries lagging behind), and the project is expected to strengthen the research agenda and outcomes for livestock and fisheries given the importance of these sub sectors for rural economic growth and rural livelihoods.

Relationship to CAS

Agriculture has long occupied a central place in the Bangladesh development agenda and in the CPSs of the WBG. In the CPS for FY11-14 (subsequently extended to FY15), agriculture is highlighted in Pillar 3, Vulnerability, Adaptation and Inclusion, although the sector surely contributes to the growth Pillar 2, and benefits from initiatives under the 4th Pillar of Governance. As the CASPR (Report No. 73983-BD) of November 20, 2013 notes concerning Pillar 3 Outcome 3.1 on Agriculture and Food Security, program implementation has been ramping-up and is showing significant improvements in agricultural productivity as measured in crops and livestock performance. Recurrent natural disasters and deficiencies in technology remain the basic threats to improvements in agricultural production, and are therefore the focus of Bank interventions in the sector. IFC, with financing from the Pilot Program for Climate Resilience, is also assisting by supporting the climate resilience of agribusiness companies and their supply chains, and is exploring availability of low-cost housing and livestock protection structures in flood-prone coastal areas. Furthermore, IFC's investment climate and advisory services include activities in agriculture that are complementary to NATP-2 (e.g. development of Seed Act and National Seed Policy, strengthening of sanitary and phyto-sanitory registration and certification system, development of the dairy value chain). The proposed follow-up to NATP Phase 1 was retained in the revised CAS for FY15 implementation.

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II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

6. The proposed project development objective (PDO) for NATP-2 is to enhance the agricultural productivity of smallholders through better research and extension and improve their market access through better integration in selected value chains. To that effect, NATP-2 will support a decentralized, demand-driven agricultural research and extension services, and promote market-oriented smallholder production. NATP-2 will also support access to markets for smallholder farmers by facilitating their linkages with selected value chains, contributing in turn to increased farm income and to the sustainability of farmer groups and producer organizations formed by the project. The following project design emerged as an outcome of the Identification mission: Comp.1: Promoting Agricultural Innovation, Comp.2: Supporting Crops Development; Comp.3: Supporting Livestock Development; Comp.4: Supporting Fisheries Development; and Comp.5: Project Management and Coordination.

7. NATP-2 will achieve the PDO: (i) by strengthening the capacity of the NARS and the extension services to generate and diffuse agricultural technologies aimed at increasing farm productivity; and (ii) by promoting the sustainability of existing and newly created farmer groups

and producer organizations by strengthening their linkages with markets. 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). This needs to be supported by appropriate value addition and market linkages through the strengthening of supply chains for high value agriculture. To that effect, while NATP-2 will continue supporting agricultural research and extension, it will need to have a stronger focus on market-oriented production, on value chains and on the participation of smallholders in those emerging market opportunities, than under NATP-1.

Key Results (From PCN)

(i) Client satisfaction (including for female-led households) with the agricultural extension and advisory services provided by the agricultural innovation system has increased
(ii) New technologies generated by the agricultural innovation system have been adopted by producers (including by female-led households) and other value chain actors targeted by the project
(iii) The increase achieved in agricultural productivity (for crops, fisheries and livestock) is larger for farmers supported by the project
(iv) The proportion of smallholder agricultural production marketed relative to total smallholder farm output has increased
(v) The women-led Common Interest Groups for homestead gardening are making a significant contribution to improving nutrition in participating households

III. Preliminary Description

Concept Description

NATP-2 will achieve the PDO by: (i) continuing to strengthen the capacity of the NARS 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. 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). This needs to be supported by appropriate value addition and market linkages through the development of supply chains for high value agriculture. To that effect, while NATP-2 will continue supporting agricultural research and extension, it will need to have a much stronger focus on market-oriented production, on value chains and on the participation of smallholders in those emerging market opportunities, than under NATP-1. A differentiated approach will be required for project activities at field level to account for the vertical and horizontal scaling up efforts under NATP-2. The new project will deepen the interventions in existing upazillas (vertical scaling up) while expanding the geographic coverage to include new districts and upazillas (horizontal scaling up) .
The project design for NATP-2 takes into account some of the shortcomings identified under NATP-1 and reflects the integrated approach required to achieve the PDO. NATP-2 includes a broader component that addresses the multiple dimensions required for decentralized, demand-driven agricultural research as a core pillar of an agricultural innovation system in the country context. The project further includes three sub sector components, each tackling specific constraints to the development of selected commodities from technology generation to transfer and adoption at farm level, to market-oriented production and agro processing. This value chain approach is expected to lead to a better integration of research and extension, which was regularly reported in

NATP-1 as an area requiring further improvement. Finally, the project includes a component that covers most cross-cutting activities as well as regular project management tasks. Project components, their objectives and contribution to the PDO, as well as the core activities covered, are described below.

Component 1: Enhancing the Agricultural Innovation System
This component, led by the Project Management and Coordination Unit with implementation support from other agencies, will support the development of decentralized, demand-driven and integrated agricultural research. This component will likely include investments, capacity enhancement and technical assistance in areas launched under NATP-1 (such as sustainability of Common Interest Groups (CIGs) and emerging Producer Organizations (POs), rehabilitation of rural markets, technical advisory services), strengthening National Agricultural Research Institutes (NARI) (including investments in physical infrastructure), developing one-stop farmer advisory service centers. The component will also include the window for competitive research and matching grants under the Agricultural Innovation Fund.

Component 2: Supporting crop development
This component, coordinated by the Department of Agricultural Extension, will support the development of decentralized extension services and demand-driven research for crop production (including horticulture), post-harvest management and processing, and facilitate the integration of smallholder farmers in selected crop-based value chains (bananas, vegetables, and aromatic rice). This component would include investments, capacity enhancement and technical assistance in e.g. smallholder farm mechanization, seed testing facilities (with IFC), an electronic phytosanitary certification system (with IFC), food safety, agricultural commercialization, and promotion of smallholder-based commodity value chains. Financial incentives to smallholder farmers for the adoption of productivity enhancing and post-harvest loss reducing technologies, as well as support to private small and medium agro entrepreneurs in the selected value chains (e.g. food processing) will be secured through the corresponding AIF window.

Component 3: Supporting fisheries development
This component, coordinated by the Department of Fisheries, will support the development of decentralized extension services and demand-driven research for fish and aquaculture, and facilitate the integration of smallholder fish farmers in selected commodity value chains (tilapia, major carps, and shrimps). This component would include investments, capacity enhancement and technical assistance in e.g. the rehabilitation of fish ponds, food safety, quality improvement of fish feed and fingerlings, fish commercialization and the promotion of aquaculture-based commodity value chains. Financial incentives to smallholder farmers for the adoption of productivity enhancing and post-harvest loss reducing technologies, as well as support to private small and medium agro entrepreneurs in the selected value chains (e.g. food processing) will be secured through the corresponding AIF window.

Component 4: Supporting livestock development
This component, coordinated by the Department of Livestock Services, will support the development of decentralized extension services and demand-driven research for livestock products, and facilitate the integration of smallholder farmers in selected commodity value chains (dairy, goat meat). This component would include investments, capacity enhancement and technical assistance in e.g.: laboratory infrastructure and equipment (including at the regional level), artificial insemination, fodder production and conservation, efficient biogas production, farm mechanization,

food safety, and the promotion of livestock-based commodity value chains. Financial incentives to smallholder farmers for the adoption of productivity enhancing and post-harvest loss reducing technologies, as well as support to private small and medium agro entrepreneurs in the selected value chains (e.g. food processing) will be secured through the corresponding AIF window.

Component 5: Project Management and Coordination
Under this component a Project Management and Coordination Unit will be in charge of overall day-to-day project management and implementation, as well as coordination among the project PIUs from the Ministry of Agriculture and Ministry of Food. The PCMU will have the operational, safeguards and fiduciary responsibility and be accountable for overall project performance. The PCMU will carry out procurement and financial management activities. Other specific PMU-led activities under this component will include among others: (i) the support to the development of a national agricultural atlas, (ii) the coordination of third-party project monitoring and impact evaluation (with baseline, midline, endline surveys), (iii) the coordination of analytical studies and dissemination of findings, (iv) the support to short- and longer term assistance to the project management team and other agencies involved in component implementation, (v) the coordination of all staff training and (vii) preparation studies for a potential follow-up operation (phase III of NATP).

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	×		
Natural Habitats OP/BP 4.04		×	
Forests OP/BP 4.36		×	
Pest Management OP 4.09	×		
Physical Cultural Resources OP/BP 4.11		×	
Indigenous Peoples OP/BP 4.10	×		
Involuntary Resettlement OP/BP 4.12	×		
Safety of Dams OP/BP 4.37		×	
Projects on International Waterways OP/BP 7.50		×	
Projects in Disputed Areas OP/BP 7.60		×	

V. Financing (in USD Million)

Total Project Cost:	200.00	Total Bank Financing:	150.00
Financing Gap:	0.00		

Financing Source	Amount
BORROWER/RECIPIENT	3.00
International Development Association (IDA)	150.00
US Agency for International Development (USAID)	25.00
Bangladesh MDTF for Climate Change	0.00
International Fund for Agriculture Development	22.00
Total	200.00

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