ABBREVIATIONS

ADB  –  Asian Development Bank
CEW  –  community extension worker
DLS  –  Department of Livestock Services
EIRR  –  economic internal rate of return
GAP  –  gender action plan
IGA  –  income-generating activity
MDG  –  Millennium Development Goal
NGO  –  nongovernment organization
PCR  –  project completion report
PKSF  –  Palli Karma-Sahayak Foundation
PLDP  –  Participatory Livestock Development Project
PMU  –  project management unit

NOTE

In this report, “$” refers to US dollars.

Key Words

applied research, asian development bank, bangladesh, capacity building, community extension worker, empowerment of women, income-generating activity, livestock development center, microfinance, millennium development goals, poverty reduction, rural poor households, ultra-poor households, women-headed households

The guidelines formally adopted by the Independent Evaluation Department (IED) on avoiding conflict of interest in its independent evaluations were observed in the preparation of this report. To the knowledge of IED management, there were no conflicts of interest of the persons preparing, reviewing, or approving this report.

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I. PROJECT DESCRIPTION

A. Rationale

1. The livestock sector has an important role in the economy and employment of Bangladesh. At the time of appraisal, the sector contributed 3% to the gross domestic product and provided employment to about 20% of the rural population. It was also the fourth largest foreign exchange earner contributing 5% to the country's export earnings.1

2. A review by the Asian Development Bank (ADB) of the Bangladesh livestock sector acknowledged the sector’s potential to expand its production base and significantly improve

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rural livelihoods and income. However, the transfer of knowledge on modern livestock management practices has not been sufficiently undertaken. Traditional livestock management was still practiced by the rural households. The Department of Livestock Services (DLS), which was primarily tasked for livestock improvement, was not able to promote the adoption of modern livestock production and management. The livestock sector review cited that alternative approaches to livestock management developed by nongovernment organizations (NGOs) were successful in the introduction of better management practices.

ADB has been involved in various livestock development projects in Bangladesh, such as the Participatory Livestock Development Project (PLDP), in recognition of the role of the livestock sector in reducing poverty and the need to improve the capacity of DLS in the delivery of services. Building on the achievements of previous ADB projects, the Second Participatory Livestock Development Project was intended to broaden livestock development opportunities for the rural poor households.

**B. Expected Impact**

The expected impact, as indicated in the project framework of the report and recommendation of the President (RRP) for this project, was reduced poverty among the rural poor in 20 districts of northwest Bangladesh. The performance targets were twofold: spatial poverty reduced by 20%, and 30% of the Millennium Development Goals (MDGs) achieved in the project areas.

**C. Objective or Expected Outcome**

The project objective stated in the project framework was to enhance the status of women and increase income-generating activities (IGAs) and employment from livestock-related enterprises. The performance targets envisioned for this outcome include (i) incomes of at least 660,000 farming families increased by 20% and their nutrition from livestock improved by 20%; (ii) livestock incomes in gross domestic product increased by 20% per annum for the project areas; and (iii) women comprised 70% of the project beneficiaries, with 462,000 trained or provided with microfinance.

**D. Outputs**

Achievement of the project impact and outcome required the implementation of a combination of three components: (i) community development, (ii) livestock enterprise development, and (iii) capacity building for the DLS. The intended project outputs include (i) improved community capabilities to develop and manage income-generating activities through a technical and social development training program; (ii) microfinance provided for livestock, equipment, and infrastructure through NGOs, and technical support services provided for livestock enterprise development; and (iii) an improved capacity of DLS through leadership and change management training, among others.

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E. Provision of Inputs

7. Project cost at appraisal was estimated at $55.8 million equivalent. At completion, total project cost, including interests during construction, was $67.8 million or 21.5% higher than the appraised amount. This was triggered by minor changes in scope, price escalation for additional civil works, vehicles and equipment, technical services, and a 2-year extension to improve the capacity of DLS. ADB and the borrower agreed to the changes in scope and the reallocation of loan proceeds. Additional expenditures were mostly shouldered by the Palli Karma-Sahayak Foundation (PKSF) and partner NGOs. ADB extended a loan of SDR13.97 million ($20.0 million) to finance both foreign and local currency cost components of the project. 4 Final loan disbursements reached SDR13.62 million ($20.8 million). Actual inputs provided at completion were (i) $1.7 million for community development, (ii) $57.0 million for livestock development enterprises, (iii) $3.5 million for DLS capacity building, and (iv) $4.8 million for project services. Increased borrowings to finance livestock and poultry production ventures and other trades, and compensation paid to beneficiaries affected by the avian influenza pushed the appraisal cost of the livestock development enterprises up by 65% from $34.5 million. Community development, DLS capacity building, and project services had lower costs than their estimates as consultancy services and training requirements were scaled down.

F. Implementation Arrangements

8. The project required close collaboration among the PKSF, 5 DLS, and participating NGOs. PKSF was the executing agency for community development, livestock enterprise development, and project management in close coordination with DLS. PKSF engaged 15 partner NGOs for the delivery of services to the project beneficiaries. DLS was the executing agency for community extension worker (CEW) training, applied research, and capacity building for its staff. An inter-ministerial project steering committee chaired jointly by the secretaries of the Ministry of Finance and the Ministry of Fisheries and Livestock provided policy guidelines and guidance in project implementation. PKSF, in cooperation with DLS, established a project management unit (PMU) to supervise and monitor project implementation activities. The project completion report (PCR) noted that implementation arrangements under the guidance of PKSF worked toward the accomplishment of the project targets.

9. Of the 42 loan covenants, 38 were fully complied with while two unmet loan conditions relate to the proposed conduct of applied research and the construction of livestock markets and slaughter slabs. Loan provisions that were partially complied with pertained to the planned implementation of the institutional change action plan and the deregulation of input supply production and product prices. The procurement of supplies and equipment was generally in accordance with ADB procurement guidelines and government public procurement rules. The planned civil works were procured and completed as designed. Of the 400 person-months of domestic implementation consultants planned for PKSF, only 343 person-months or 86% of the total was utilized. Delays and difficulties in recruiting the required specialists accounted for this discrepancy. DLS procured only 50% of the revised allocation of 24 person-months of domestic institutional change consultants. This low

4 Grant cofinancing of $0.5 million was expected from the Danish International Development Agency during appraisal but this did not materialize.

5 PKSF was established by the government as a nonprofit organization registered under the Companies Act 1913/1994. It is run as a company headed by a managing director reporting to a governing body. It works with partner NGOs.
utilization rate was attributed to the technical assistance provided by the Danish International Development Agency to DLS under a separate project. Nonetheless, both executing agencies acknowledged at completion the satisfactory performance of the consultants they engaged.

II. EVALUATION OF PERFORMANCE AND RATINGS

A. Relevance of Design and Formulation

10. The PCR rated the project relevant because it supported the government’s effort to improve food and nutritional security for a growing population as provided for in its Perspective Plan for 2010–2021. Through interventions that promoted community and livestock enterprises development, the project generated employment and additional income for women-led poor households thereby allowing them to spend more on food, health and sanitation, and education. It also helped improve the women’s social status. The project was strongly aligned with the completed Fifth Five-Year Plan of Bangladesh and the ongoing Sixth Five-Year Plan (2011–2015) and its sector policies. It was also in line with the ADB Country Assistance Plan for Bangladesh, which had an overarching poverty reduction and food security objectives. The project invested heavily in farmers’ mobilization and training; market infrastructure development; and the required technical and credit support programs, project management support, and strengthening the capacity of relevant government institutions, as mandated. All of these underscored the project’s relevance to poverty reduction and contribution to achieving the MDG 2015 target, which is improving child nutrition before and after the project.

11. Minor changes in scope, cost overruns, and slippages occurred. While these could have arisen more from insufficient due diligence rather than a flaw in project design, a scaling down of output targets was done. For instance, the applied research and change management training for DLS were not pursued because of the lack of interest within the agency. Cost increases for the livestock development enterprises, which were eventually borne by the borrower, were largely triggered by the avian flu infestation and the shift to financing ruminant animal rearing due to higher profit potential. The DLS component got delayed, initially slowing down loan utilization and, subsequently, loan disbursements. All these did not adversely affect the targeted outcomes of the project. On the contrary, by promptly responding to the demands for compensation and micro-credit, the project put itself in a more relevant position. A departure from the original design was the conduct of vaccination and deworming of ruminants, and artificial insemination for breed improvement. These were deemed compensating and value-adding features of the project that resulted in high impact and outcome beyond the targets thereby ensuring its relevance. This validation concurs with the relevant rating for the project.

B. Effectiveness in Achieving Project Outcome and Outputs

12. Overall, the PCR considered the project effective in achieving its intended outputs and outcomes. At the output level, the PCR project framework reported that 29,897 farmer groups

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were formed although only 25,955 groups were in operation at project completion. This was a little short of the targeted 26,000 farmer organizations. The 13.2% dropout rate was not explicitly expounded in the PCR. Locally selected CEWs were trained by DLS in primary animal health care and extension. Though this started late, 1,300 CEWs or 100% of the target took this training. This same group was likewise trained to become farmer-trainers. At completion, a dropout rate of 23.1% was recorded as only 1,000 CEWs remained as farmer-trainers, serving as effective networking agents between the farmers and the DLS upazila offices. The PCR did not explain the reason for this. Due to time constraints and the lack of training facilities, refresher courses for 900 CEWs were cancelled.

13. For the intended output of strengthening NGO participation for improved service delivery, a total of 2,513 NGO organizers out of the 2,640 target underwent training in general livestock rearing techniques, social development issues, and environmental protection. Leadership training was provided to all 106 area managers of the partner NGOs while 2,520 NGO program assistants—representing 168% of the target—availed of the cross-farm visit program of the project. Marketing and market entrepreneurship development activities proceeded as envisioned in the project framework.

14. On the livestock enterprise development component, the PCR reported the project’s provision of microcredit assistance to 68,409 beneficiaries for poultry and duck rearing. This was way below the target number of 250,000 beneficiaries due to the avian or bird flu outbreak. From the target of 50,000 beneficiary families, a significantly higher number of 710,612 beneficiaries were provided with microcredit support for ruminant animal production as a result of its high profit potential. The proposed establishment of live animal markets was not feasible given government systems and procedures, hence, it was not achieved.

15. On the expected output of strengthening and reorienting DLS capabilities, various training programs, such as disease monitoring, quality assurance, skills development, and project management were conducted that enhanced the capacities of DLS officers. However, the change management training for DLS officials was not pursued due to lack of interest on reform measures and reorientation. The targeted 3-year institutional change action plan of the DLS was not implemented. A needs assessment study prior to project implementation would have spared the project from this dilemma.

16. Implementing the envisaged component activities produced a cadre of trained NGO community organizers and extension workers, including groups of enlightened and capacitated women-led poor households. It also promoted strong partnerships between the DLS and partner NGOs, created a viable and sustainable microfinance program, and improved the capability of extension agents and the delivery of livestock extension services.

17. The intended outcomes of the project were met based on the assessment of the three indicators. The Final Impact Assessment Study reported that the average household income—the first indicator—rose by about 30% per year (107% in 4 years in nominal term) against the envisaged 20% per year. Another data set suggested that some 813,400 poor farm households benefited from the project, which is higher than the target of 660,000 farming families. The Final Impact Assessment Study further claimed that project beneficiaries increased their food intake, including livestock products, by 14%–25%. From this validation’s perspective, however, such assessment does not exactly equate to improving nutrition from livestock by 20%. Hence, this could be a subject that should be thoroughly studied in the future.
18. For the second outcome indicator, the PCR (para. 52) reported that livestock income increased by 28% compared to the 20% target. The average income of project beneficiaries was 78% higher than the income of farmers not covered by the project. For the third outcome indicator, more than 98% of these beneficiaries were women, surpassing the target of 70% in the project framework. Through the project, gender awareness and the decision-making role of women were strengthened. The project developed and implemented a gender action plan (GAP) so that women beneficiaries would become more enlightened and be strengthened in their role of running the affairs of their families. The PCR deemed the implementation of the GAP satisfactory. The foregoing considered, this validation concurs with the effective rating for the project.

C. Efficiency of Resource Use in Achieving Outputs and Outcome

19. The PCR rated the project efficient. The project was implemented in 8.5 years as opposed to the planned 6.5 years. The project aggregately posted a cost overrun of 21.5%. This was not considered symptomatic of inefficiency as incremental funds were used to meet the critical financing needs of the beneficiaries. The economic internal rate of return (EIRR) was recalculated at 37% as compared to the opportunity cost of capital of 12%. All investment costs from ADB, the government, the NGOs, and the beneficiaries were ranged against the incremental economic cash flows on a “with and without” project basis primarily from the various livestock, poultry and milk production enterprises, and the increased usage of farm labor. The latter was derived from livestock enterprise models, which were drawn from technical parameters and monetary farm costs and returns supplied by survey respondents from the project areas, net of those from farmers in control areas. These farm models were then aggregated to represent the whole project. An EIRR of 8% was estimated at appraisal (PCR, Appendix 9, para. 17) but this took into account only the milk production enterprises. Hence, directly comparing the EIRRs calculated at appraisal and at completion is not useful as the appraisal estimate was confined in scope. This validation finds the quantitative efficiency analysis followed in the PCR, including the economic valuation of financial costs and benefits,10 to be consistent with established ADB guidelines and procedures.11 Economic benefit valuation did not consider the incremental benefits from milk processing and marketing, beef and meat selling, and feed production enterprises, which at completion remained insignificant. Not quantified benefits like livestock infrastructure and logistics improvement, functioning disease diagnostic laboratories, and improvement of treatment facilities were acknowledged. This validation agrees with the efficient rating accorded to the project as it finds the assumptions and methodology used in the economic analysis plausible and sufficient.

D. Preliminary Assessment of Sustainability

20. The PCR rated the project's overall outcomes to be likely sustainable. It noted that mobilization and organization of farmers, planning and implementation of various IGAs, and the provision of upgraded technical services with credit support was done through participatory processes and capacity-building activities. Funds on-lent by ADB to PKSF were already integrated into that entity’s core credit program, thus, ensuring the availability of credit to partner NGOs for relending to small farmers; and providing them opportunities to scale up their enterprises. Revolving funds from group members’ savings in partner NGOs

10 Standard conversion factor of 0.90 applied to financial costs of non-traded goods and shadow wage rate factor of 0.75 applied to cost of unskilled labor.
likewise assured farmers of continuing technical support services and financing for the ultra-poor program of the project. Two years after completion, the PCR noted that these activities continue to be in operation. Participation of women in IGAs, who comprised 98% of the beneficiaries, allowed these women to gain confidence and improve their status in the society as legitimate income earners. Micro-credit operations by the NGOs were implemented in a successful manner, registering a high repayment rate of 98% from the TK16,614 million lent to 813,403 borrowers. These milestones clearly point to the project’s better chances at sustainability.

21. From the small-scale impact assessment survey conducted in 2010 for the PCR mission, the resulting financial internal rate of return of the project at completion reached 23%. The income of beneficiaries increased at an average of 25% due to the adoption of improved livestock management system and the availability of NGO support services. This represented a 22%–100% increase in income of beneficiaries over those in the counterfactual group. With demand for livestock products still on the rise and the potential for growth projected to be on the high side, the majority of beneficiaries would likely continue their engagement in livestock-related IGAs. Hence, this validation also rates the project to be likely sustainable.

E. Impact

22. Project investments to develop the livestock subsector produced a direct impact on the income of close to a million beneficiary households. Enabling them to access the project’s technical, financial, and social support services contributed to the envisaged impact, which are reduction in poverty rates by increasing household income from employment and involvement in IGAs, improved nutrition with increased consumption of meat and dairy products, and employment opportunities created for women. MDG-related impacts were manifested in the 84% drop in poverty rate (20% target), 65% reduction in child malnutrition rate, and 73% decrease in child mortality rate. Based on these, this validation rates the project impact significant.

23. Important provisions of the GAP were also adhered to during implementation, enhancing the participation of women in the livestock sector through better access to credit, technical support services, and markets. Of the total project beneficiaries, 98% were women. They became more involved and took on increased workloads that brought in more gender equality in the households. Above all, as women beneficiaries achieved economic empowerment, the opportunities opened to them by the project to participate in community-based groups improved their self-confidence and self-respect.

24. The project was classified as Category B under the ADB environmental assessment category. An initial environmental examination was undertaken in accordance with the ADB environmental policy and guidelines. At completion, no recorded irreversible adverse environmental effect was recorded. Instead, soil productivity was improved as more organic manure and fodder were produced from livestock- and poultry-raising activities. Biodigesters that were put up provided some rural families with alternative energy supply. The PCR did not indicate any resettlement-related issue.

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12 Depending on the type of enterprise, income increases ranged from 9% to 96%.
III. OTHER PERFORMANCE ASSESSMENTS

A. Performance of the Borrower and Executing Agencies

25. The PCR rated the performance of the borrower and executing agencies satisfactory. It noted the government’s commitment to complete the project primarily through the provision of counterpart funds to the extent of underwriting the unexpected incremental expenditures, and deployment of staff. It closely monitored and steered the project through a high-level, inter-ministry project steering committee and acted promptly to resolve emerging implementation issues. PKSF set up the PMU, recruited and deployed qualified and committed staff, promptly complied with the ADB reimbursement method, and delivered the required support to the beneficiaries. It diligently partnered with NGOs with good track record in microfinance and social mobilization obtained from their engagement with PLDP. These NGOs, in turn, demonstrated managerial competence and ability to keep the project on track. DLS, on the other hand, not only ensured the availability of counterpart funds for civil works and other procurements but also ensured that procurements followed ADB guidelines. While the change management training, the institutional change action plan, and the applied research subcomponent were not pursued, DLS managed the project well. This validation rates the performance of the borrower and executing agencies satisfactory.

B. Performance of the Asian Development Bank

26. The PCR rated the overall performance of ADB satisfactory. The administration of this project was largely delegated to the Bangladesh Resident Mission. It was preceded by a project preparatory technical assistance, which was consistent with the government’s priorities and to the ADB country assistance program.13 ADB carried out 1 inception mission, 1 midterm review mission, 12 review missions, and 1 PCR mission. These were undertaken at regular intervals to closely track physical project progress, compliance with loan covenants, performance of the executing agencies, implementation of the GAP, and various capacity-building activities. These reviews enabled ADB to interact closely with all stakeholders to facilitate early resolution of implementation issues. This validation also rates the performance of ADB satisfactory.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

27. The PCR rated the project successful and this validation concurs (see table). This validation rates the project relevant, effective, efficient, and likely sustainable.

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B.  Lessons

28. This validation concurs with the key lessons identified by the PCR, which essentially reaffirm the benefits of a participatory approach in planning and implementing poverty-alleviating interventions and of partnering with established NGOs. The key lessons are as follows: (i) workable partnerships between NGOs and frontline government service agencies promote the effective delivery and targeting of project services; (ii) in an environment where livestock demand is present, good access to inputs and production techniques by rural households are critical and can increase their income; (iii) employing extension workers that come from the community and equipping them with appropriate skills supported better service delivery and linked beneficiaries with other support providers. Government should, however, be forewarned of the need to also explore and develop possible exit mechanisms for NGOs with the view of promoting self-reliance among the beneficiaries.

C.  Recommendations for Follow-Up

29. Post-project benefit and monitoring evaluation must be institutionalized within the PKSF and DLS to provide guidance should opportunities to replicate PLDP in other areas arise. This validation, moreover, finds merit in an impact assessment study covering a bigger number of livestock enterprises supported by the project for a more definite results assessment.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A.  Monitoring and Evaluation Design, Implementation, and Utilization

30. Consistent with the project design, a project performance management system in the PKSF was established to provide the PMU with a veritable reporting tool based on ground information gathered from both participating farmers and farmers designated as counterfactuals. The PMU ensured that the project was periodically monitored. Benchmark, midterm, and ex post project evaluation surveys were conducted to measure the impact of the project in terms of changes in income and consumption patterns; landownership; access to, and utilization of, loans; and efficiency of farmers in managing livestock enterprises, among others. This validation notes that income growth data and targets were in nominal values (e.g., 20% increase per annum). These need to be set in real terms to exclude the effect of general price inflation. A more comprehensive impact assessment study could still be commissioned 2–3 years after project completion to generate and analyze “with” and “without” project conditions across a wider range of economic and technical monitoring variables. This study could now include statistical tests to determine if the variances
observed between baseline and impact assessment results are indeed significant or not. The loan covenant recommended that this study be undertaken.

B. Comments on Project Completion Report Quality

31. The preparation of the PCR is consistent with Project Administration Instruction 6.07 of the ADB particularly in assessing outcomes, impact, relevance, effectiveness, and efficiency. Lessons and recommendations were clearly drawn from the findings of the report. The PCR discussed and categorized them according to the executing agency involved. By relying on the results of the baseline, midterm, and impact evaluation surveys of sample beneficiary households, the financial and economic analysis in Appendix 9 was more thorough and conclusive. This validation, therefore, finds the quality of the PCR satisfactory.

C. Data Sources for Validation

32. This validation made use of the following data sources: RRP, PCR, loan review mission reports, and project processing documents.

D. Recommendation for Independent Evaluation Department Follow-Up

33. The project was successful in attaining the desired impact. The Independent Evaluation Department may consider conducting a project performance evaluation report. Important areas to be assessed would be the (i) modalities for improving membership levels in farmers' organizations, (ii) project assistance to the very poor, and (iii) expanding the delivery of credit to potential investors in biodigesters. It might be worthwhile, too, for the project performance evaluation report to already look at possible exit mechanisms for the partner NGOs to cultivate self-reliance among the beneficiaries.