Validation Report

Reference Number: PVR-257
Project Number: 27245
Loan Number: 1668
December 2013

Philippines: Southern Philippines Irrigation Sector Project

Independent Evaluation Department
Asian Development Bank
ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>AFMA</td>
<td>Agriculture and Fisheries Modernization Act</td>
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<tr>
<td>ARMM</td>
<td>Autonomous Region of Muslim Mindanao</td>
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<tr>
<td>CIS</td>
<td>communal irrigation system</td>
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<tr>
<td>CPMO</td>
<td>central project management office</td>
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<tr>
<td>DENR</td>
<td>Department of Environment and Natural Resources</td>
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<tr>
<td>DMF</td>
<td>design and monitoring framework</td>
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<td>DOH</td>
<td>Department of Health</td>
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<tr>
<td>EIRR</td>
<td>economic internal rate of return</td>
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<tr>
<td>FIA</td>
<td>federation of irrigators’ associations</td>
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<td>ha</td>
<td>hectare</td>
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<td>IED</td>
<td>Independent Evaluation Department</td>
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<tr>
<td>LGU</td>
<td>local government unit</td>
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<td>MES</td>
<td>monitoring and evaluation system</td>
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<td>NIA</td>
<td>National Irrigation Administration</td>
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<td>NIS</td>
<td>national irrigation system</td>
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<tr>
<td>O&amp;M</td>
<td>operation and maintenance</td>
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<tr>
<td>PCR</td>
<td>project completion report</td>
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<td>PSC</td>
<td>project steering committee</td>
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<td>SRIS</td>
<td>small reservoir irrigation system</td>
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</tbody>
</table>

NOTE

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

Key Words

autonomous region for muslim Mindanao, asian development bank, beneficiary contribution, caraga, central visayas, detailed designs, farmer-beneficiaries, indigenous peoples, irrigation, irrigation infrastructure, irrigators’ associations, lumad, maranao, mindanao, project-affected persons, philippines, resettlement, sector lending, western visayas

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I. PROJECT DESCRIPTION

A. Rationale

1. At appraisal, poverty was a persistent problem in the Philippines. Rural poverty accounted for two-thirds of the country’s 27 million poor. The country was highly dependent on agriculture, which contributes about a quarter of the gross domestic product, 13% of its export revenues, and employs 45% of the labor force. Droughts induced by El Niño caused agriculture growth to stagnate and poverty levels to rise particularly in the rural areas. Increased investments in irrigation development and rehabilitation were seen as key elements that could spur increases in agricultural production and improvement in productivity. This followed the growing recognition that development of irrigation systems and human resources through user participation in irrigation systems were effective to help reduce poverty.

2. During the 1980s and early 1990s, the Philippines had some 3.13 million hectares (ha) of agricultural land with less than 3% slope, which was considered suitable for irrigation. Less than half of the total area (1.34 million ha) under rice cultivation was irrigated. The balance was rain-fed and generally limited to one crop per year. In Mindanao, only 29% of the potential area was then irrigated. The Autonomous Region for Muslim Mindanao (ARMM) and the Caraga
Region particularly suffered from lack of irrigation facilities despite their comparative advantages in terms of topography and climate. ¹ In Western Visayas (Region VI) and Central Visayas (Region VII), irrigation development was constrained by the prolonged dry season, which necessitated water storage. If profitability of agricultural activities was to be increased, the lack of rural infrastructure and support services had to be made-up in these four regions. The Government of the Philippines and the Asian Development Bank (ADB) had already recognized that improved irrigation systems were crucial for reinforcing agricultural production in economically depressed areas with high incidence of rural poverty and low standard of living. The incidence and prevalence of poverty were higher in the project area than in other areas of the country.

3. Sector lending was found appropriate to address the identified constraints. This was justified primarily by the established reputation of the National Irrigation Administration (NIA) in project development and implementation and by the need to rehabilitate existing irrigation systems and to promote their development as stipulated in the Agriculture and Fisheries Modernization Act (AFMA) of 1997. Identified subprojects were small in terms of volume and cost of works. Their selection, however, followed clearly defined criteria that took into account social, environmental, and economic considerations.

B. Expected Impact

4. As indicated in the design and monitoring framework (DMF) of the project, the expected impact was to enhance rural incomes in the southern Philippines particularly in provinces under the ARMM and Caraga Region. ² The project also covered some provinces in the Central and Western Visayas. A performance target of raising the per capita income in the project areas from P8,000 to P12,500 (at 1998 prices) by 2005 was prescribed at appraisal.

C. Objectives or Expected Outcomes

5. The project had a single expected outcome—to increase agricultural production and crop diversification through user participation in irrigation improvement and management. For this outcome, performance indicators were (i) increase in the production of rice from 21,000 to 133,000 metric tons, and (ii) increase in the production of vegetables and other horticultural crops from 5,000 to 19,000 metric tons. As per the DMF, these increments in agricultural production were to be realized by 2005 in the project areas.

D. Components and Outputs

6. Two institution-building type components were designed to achieve the outcome and impact of the project. The participation and irrigation transfer component was intended to develop, field test, document, and implement a participatory process that would involve users in decision making, organize irrigators’ associations and build their capacity for sustained operation and maintenance (O&M). Training for NIA and local government unit (LGU) staff, and on-the-job training courses for farmer-beneficiaries were to be provided. Farmers’ trainings were to focus on improved cultural practices from seedbed preparation to postharvest operations, and on cooperation in O&M irrigation delivery schedules and facilities. Farmers were also to be

¹ In 1996, Surigao del Norte, Surigao del Sur, Agusan del Norte, and Agusan del Sur were separated from Region X and Region XI to form a new region called Caraga, designated as Region XIII.

trained on how to access credit and provided with seed funds—to be made available to their irrigators’ associations for relending. Seed funds were envisaged to be financed by the members’ own savings, which were to be set aside from their wages during the construction of the subprojects. The other component was a support to project management.

7. These components were to lead to the development of national irrigation systems (NISs), communal irrigation systems (CISs), small reservoir irrigation systems (SRISs), and the construction of access and service roads. For downstream benefits of the irrigation systems at their optimal levels, an environmental and social measures component was designed to maintain and improve the hydrologic integrity of the subprojects’ watershed areas. These required different measures as watershed conditions in the subproject areas varied. Social measures included: (i) schistosomiasis control, such as primary health measures, regular channel maintenance, and drainage of swampy areas to destroy snail habitat, and provision of health facilities; and (ii) the development of indigenous peoples development plans for the Maranaos in ARMM and the Lumad people in the Caraga Region, which incorporate measures to improve their access to health and other social services and increase women’s participation.

E. Provision of Inputs

8. ADB extended a loan of $60.00 million from its ordinary capital resources to finance both foreign and local currency cost components of the project. Final disbursements reached $50.01 million after three extensions of loan effectiveness from the original date of May 1999, two extensions of loan closing dates that lasted for 5 years from June 2006 until June 2011, and a partial loan cancellation of $2.60 million. The borrower’s actual contribution, including beneficiary contributions of $0.97 million, amounted to $30.92 million compared to the $42.00 million estimated at appraisal. Project expenditures were $80.94 million or 20.6% less than the appraised amount of $102.00 million. Financing was extended for (i) the organization and capacity building of irrigators’ associations, including members’ participation in subproject preparation and design and the transfer of completed infrastructure facilities, which cost only $4.15 million compared to $6.94 million at appraisal; (ii) the construction of NIS, CIS, and SRIS schemes and rural access roads amounting to $41.62 million or 12.1% lower than the estimate at appraisal; (iii) initiatives in watershed management, resettlement, schistosomiasis control, and indigenous peoples development plans, which cost only $3.93 million compared to the $9.48 million estimated at appraisal; and (iv) various project management support costing $20.46 million or 144.4% more than the estimate at appraisal. Beneficiaries’ contribution, which was lower than the appraisal target of 10.2% of investment cost, represented only 3.3% at project completion, significantly contributed to the deviations in financing arrangements. Widespread delays in implementing project activities, such as recruitment of project staff, preparation of detailed engineering designs, liquidation, and replenishment of funds also contributed to the lower disbursement.

9. Procurement of consulting services and contracts for civil works and materials and equipment was in accordance with ADB’s procurement guidelines. For international consulting inputs, a total of 157.19 person-months for irrigation, watershed management, and resettlement were provided at a higher cost of $6.78 million, compared to 146.5 person-months originally allocated at a cost of $4.86 million. For national consulting inputs, a total of 576.5 person-months or nearly double the original requirement were procured using counterpart funds in accordance with the loan agreement and domestic procedures acceptable to ADB. Consultants were also tasked to supervise the preparation of detailed engineering designs and construction of civil works. Seven contract variations were made, requiring upward revisions in consultants’ technical engineering inputs and funding. The PCR attributed these to logistical problems
triggered by the extensive area covered by the project, thereby constraining thorough reviews of engineering designs, and consequently delaying the preparation of feasibility studies. The poor quality of information gathered during site investigations led to unfavorable physical and security conditions in the field that also led to design deficiencies. Some of these were corrected while others led to inaccurate command area estimates. Procurement of contracts for civil works requiring international and national competitive bidding was managed by the central project management office (CPMO). While generally well-managed, the procurement of the construction package for the Cantilan subproject in Caraga Region was tainted with favoritism. Delivery of materials and equipment by contracted suppliers complied with specified delivery arrangements.

F. Implementation Arrangements

10. The main executing agency for the project was NIA, which was tasked to have operational jurisdiction over NISs and SRISs. The executing agency for the CISs was the provincial government of Agusan del Norte, which was to draw technical assistance from NIA based on the government’s devolution policy and as endorsed in the AFMA. For monitoring, supervision, and overall coordination, a project steering committee (PSC) was to be formed at NIA with representatives from the Department of Health (DOH), Department of Environment and Natural Resources (DENR), and the provincial government of Agusan del Norte. The CPMO was to be established at NIA to provide technical support to the PSC. To directly manage their implementation, subproject management offices were to be established in each participating agency and LGU. In Agusan del Norte, a project management committee tasked to oversee and monitor the implementation of CISs was also prescribed. The project completion report (PCR) reported that all recommended management structures were set up during project implementation. Of the 28 loan covenants, 26 were fully complied with. The borrower partly complied with only the loan covenant on ensuring that all the assets and management of the completed project facilities under each subproject, except reservoirs, shall be transferred to concerned irrigators’ associations within 3 years of completion. The borrower also failed to comply with the covenant that NIA shall complete the time-bound transfer of assets of CIS schemes to LGUs by 1 March 2003. The PCR stated that these had little impact on the intended benefits.

II. EVALUATION OF PERFORMANCE AND RATINGS

A. Relevance of Design and Formulation

11. The PCR rated the project relevant.3 In terms of policies and priorities to develop rural communities and reduce poverty, the project was attuned with the national Medium-Term Philippine Development Plan, 2004–2010,4 and the Medium-Term Agricultural Development Plan (1993–1998) and its successor plans. These plans’ key result areas were increased farm production and improved agricultural productivity from higher cropping intensities and better crop diversification practices aided by the expansion and rehabilitation of irrigation systems. Implementation arrangements coincided with the Local Government Code of 1991, and supported government initiatives under the AFMA for bigger investments in irrigation development and rehabilitation. The project was consistent with the agricultural and rural development strategy of ADB for the country focused on increasing agricultural production and

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improving productivity to address rural poverty through investments in rural infrastructure and services and with local community participation. The project invested heavily in the social preparation of farmer-beneficiaries for their mobilization and participation in critical project interventions. The project also invested in protecting the surrounding environment, mitigating health risks among the communities, empowering women, and resettling project-affected farm households. All these underscored the project’s relevance to the poverty reduction and agricultural development strategies at project formulation through to loan closing stages from both the country’s and ADB’s perspectives.

12. The relevance of the project was substantively affected by a number of design flaws at appraisal and subsequent adjustments made during implementation. Consequently, deviations from the targeted output, scope of work, and activities ensued. For instance, fixing the farmers’ equity contribution at 25% of the cost of developing and rehabilitating the facilities was not a realistic assessment of the poverty situation in the subproject areas and of the farmers’ ability to pay. Another flawed approach that contradicted common practice was to invite local contractors to use local labor at the government’s minimum wage rate. These resulted in a lower contribution of beneficiaries of only 3.3% of investment cost instead of the targeted 10.2% planned at appraisal. This negatively impacted the capacity to generate funds thus delaying completion of the subprojects. Delayed completion was also due to the poor appreciation by the executing agencies of the entire project development process. The delays translated into delayed inflow of benefits and disruption of farmers’ livelihood in some sites as ongoing construction works prevented them from planting wet season crops. Due diligence on the part of project’s organizational structure and internal procedures and processes of the DOH were not undertaken in earnest. There is no mention in the PCR if the ramifications of the centralized nature of the schistosomiasis control program and the risks of shifting from chemical control of eradicating the snail vector to a new program and their impacts on the expected outputs were assessed or not. These limitations and subsequent design and scope changes in the project resulted in the partial achievement of intended results. This validation assesses the project less than relevant.

B. Effectiveness in Achieving Project Outcomes

13. The PCR rated the project less effective based on the overall outcome of the project, which is to increase agricultural production and crop diversification through user participation in irrigation development projects. Notable achievements were recorded only in institutionalizing partnership with the irrigators’ associations, the transfer of management responsibility of the systems to them, watershed management, and protection and resettlement of project-affected persons. These outputs achieved their target and continued to generate positive results. Targets for infrastructure development, which accounted for half of the total resources invested, and for schistosomiasis control were, however, not realized. Outputs that materialized during implementation led only to the partial achievement of the envisaged outcomes. Thus, this validation also assesses the project less than effective.

14. The irrigation transfer and participation component was to organize 15 federations of irrigators’ associations (FIAs) consisting of 70 irrigators’ associations in 15 subprojects. At project completion, this component managed to support 46 irrigators’ associations that eventually grouped themselves into seven FIAs with a total membership of 8,748 farming households or 12 percentage points short of the appraisal target. These FIAs were registered with either the Securities and Exchange Commission or the Cooperative Development Authority. To transfer the O&M responsibility of the funded NIS subprojects, memoranda of agreement were signed between FIAs and the executing agency. For the federated irrigators’ associations,
their participation in the planning and development of operations plans for the subprojects helped them in preparing and implementing the system management and agricultural development plans for the 10 core and noncore subprojects. The objectives of system management and agricultural development are to: (i) ensure that the invested infrastructure is well maintained and fully utilized, (ii) optimize contributions to improving farm household’s income in the long-run. As of March 2009 or less than 2 years from the last revised loan closing date, the average rate of utilization was only 67% of the already firmed-up service areas.

15. Despite a scaled down target of 11 subprojects covering a potential service area of 11,279 ha, the physical infrastructure component of the project completed only five subprojects—three core subprojects (Calayagon CIS, Can-asuan SRIS, and Gibong Right Bank), and two noncore subprojects (Aclan Amontay CIS, Daun SRIS). As of June 2010, completion rates of the six others ranged from 89% to 98%. The PCR attributed the delayed completion to poor engineering designs on account of poor site investigations, increased cost of materials, and disrupted livelihood activities of affected farmers, thus, impairing their capacity to contribute to the equity requirements. At project completion, all these irrigation systems covered a total of 11,064 ha (5,040 ha during wet season and 6,024 ha during dry season), translating to a low cropping intensity of 98%. At this rate, expected full production and yield gains were obviously beyond the project’s reach. In comparison, the construction or upgrading of 60 kilometers of access road by 2005 exceeded its target with 127 kilometers of service roads constructed and/or upgraded. The PCR reported that access roads lowered transport costs by 40%.

16. Watershed management and protection fared well in its assigned target of protecting 40,000 ha, supported with conservation plans and demonstrations. At project completion, DENR more than doubled its target accomplishment by protecting some 75,826 ha and rehabilitating another 8,807 ha via agro-forestation, natural strip vegetation, and stream bank stabilization in both core and noncore subprojects at roughly two-thirds the appraised cost. The PCR attributed the success of this subcomponent to the good partnership and cooperation between NIA and DENR.

17. Of the project-affected persons, 231 persons or 65% more than the estimate at appraisal became recipients of the resettlement subcomponent; they were resettled in two villages that were developed with associated public amenities. Resettled families and existing settlers were provided with income-generating initiatives that boosted farm household income. Notably, this subcomponent was implemented at just a quarter of the projected cost. At project completion, the PCR reported that resettlement had generated a substantial impact on the relocated families.

18. The original design for schistosomiasis control—to be undertaken by the DOH in five subprojects where the disease was endemic—initially included the use of chemical control to eradicate snail vectors. Prompted by the World Health Organization’s prohibition on the use of chemical control, this was changed at the request of the DOH to a new program comprising public awareness campaign, capability building, detection and treatment, sanitation through creek and canal clearing for snail control, provision of clean water supply and toilet bowls, and monitoring and surveillance. In Caraga Region, a total of 143,474 persons were examined and 7,295 were treated for the disease. The PCR observed that incidence of the disease in confined areas was reduced but the project failed to achieve the desired outcome of eliminating the snail vector as no significant positive change was recorded.
19. The envisaged effect of the project on indigenous peoples did not materialize. It was confirmed during feasibility studies and detailed design stages that they were already mainstreamed in the identified beneficiary groups, hence, negating the need for the development and subsequent implementation of an indigenous people’s development plan. This resulted in project savings of $0.85 million in expenditures. Women empowerment was highlighted during project implementation. Some 1,504 households that joined the irrigators’ associations were headed by women. Among the officers of the FIAs, 31% were women who were instrumental in running the affairs of the associations and leading their groups’ pass through the usual “growing up” pains of any organization. Of the 34 institutional development officers commissioned for this project, 23 (68%) were also women. Of the 38,505 farmer-beneficiaries who underwent various trainings, 15,503 (41%) were women.

20. Management structures were established following appraisal recommendations to implement, monitor, and regularly evaluate project progress. The project completed the establishment of the PSC, CPMO, and subproject management offices although with some start-up delays. Capacity building was carried out to develop project management competence, improve O&M skills of the irrigation systems funded by the project, and enhance the understanding and appreciation of participation and transfer of irrigation management responsibility to the irrigators’ associations. The support to project management component established a benefit monitoring and evaluation system within NIA. As planned, NIA assumed a key coordinating role for all project administrative and support services. Incremental staff and the necessary equipment were provided by NIA. International and domestic consultants were recruited but at levels higher than appraisal estimates (para. 9).

C. Efficiency of Resource Use in Achieving Outcomes and Outputs

21. The PCR rated the project less efficient. Aggregate economic viability analysis was not undertaken both at appraisal and project completion owing to the sector modality of the project. The economic analyses focused only on selected core subprojects—four ex ante (Calayagon CIS, Can-asujan SRIS, Gibong Right Bank extension, and Malaig NIS) and two ex post (Calayagon CIS and Can-asujan SRIS). Benefits were estimated mainly from incremental crop income and increased cropping intensity. At completion, recalculated economic internal rates of return yielded 10.1% for Calayagon CIS as against 17.1% at appraisal, and 8.5% for Can-asujan SRIS compared to the appraisal rate of 18.9%. Both rates fell below the opportunity cost of capital and the PCR attributed these to the delayed benefit streams as subproject preparation activities started late and from the lower-than-anticipated cropping intensities. While limited in scope, this validation finds the assumptions and methodology used in the economic analysis (PCR, Appendix 10) acceptable and appropriate. This validation, however, maintains that there is a need, and it is possible, to conduct an aggregate economic analysis at least for all rural infrastructures supported by the project to generate a more realistic economic efficiency assessment of the component. This component has directly quantifiable benefits to facilitate its conduct.

22. Even with two loan closing date extensions that lasted for a total of 5 years, the project failed to completely meet its performance targets. The extensions were then deemed warranted to offset delays attributed to (i) difficulties encountered by contractors in recruiting local labor and paying them at the prescribed minimum wage rate, (ii) poor engineering designs on account of poor site investigations, (iii) increased cost of materials, and (iv) disrupted livelihood activities of project-affected farmers. Despite these extensions, only five subprojects were finished. The combined achievements of the components and subcomponents were overshadowed by the
relative inefficiencies of the infrastructure development. This validation, therefore, assesses the project less than efficient.

D. Preliminary Assessment of Sustainability

23. The PCR rated the sustainability of the project less likely. Farmers’ participation in the development, O&M of irrigations, and their equity contributions, even if below expectations, were facilitated during project implementation. This happened due to the capacity building and project management support activities of the executing agencies. Women’s participation in irrigation management, transfer skills training, community organizing, and technology transfer activities have allowed them to gain confidence to later play important roles in the operations of the irrigators’ associations. These activities paved the way for a smooth working relationship between the entities and the farmers, which the PCR observed to have remained conducive till completion. An overriding concern was the ability of the irrigators’ associations to collect enough irrigation fees to enable them to manage the systems at their optimal levels and achieve the expected outcomes. Funds for maintaining the systems and the access roads from the participating LGUs were uncertain due to their limited budgets. The varying capacities of the irrigators’ associations to properly operate and maintain the facilities, despite the numerous trainings conducted, is another concern. Hence, this validation also assesses the project less than likely sustainable.

E. Impact

24. The PCR acknowledged that construction of new irrigation infrastructure, roads, and the rehabilitation of existing irrigation schemes had a moderate impact on the socioeconomic condition of the target communities. The PCR reported that the average per capita income from farming was P10,300 in 2009 (at 1998 prices) compared to the target of P12,500 by 2005, while the average per capita income from all sources was recorded at P15,500 in 2009. Full benefits in terms of increased rice production, and diversification to vegetable and horticultural crops had yet to be achieved with only 5 of 11 subprojects capable of delivering the required water supply. Capacity building activities and project management support for irrigators’ associations had improved their capabilities to operate and manage small irrigation systems. While no hard evidence was presented, the construction of access roads was believed to have reduced transport costs, improved the marketing of farm produce, and opened up other commercial activities in the project areas. Watershed management measures designed to protect the facilities were accomplished and several project-affected persons were successfully resettled. Another notable benefit generated by the project was the increased participation of women in implementing the project as shown in their heavy involvement in organizing and strengthening the irrigators’ organizations, training and extension, and in collaboration activities with community development and extension officers of the executing agencies. Based on these, this validation rates the impact of the project moderate.

III. OTHER PERFORMANCE ASSESSMENTS

A. Performance of the Borrower and Executing Agency

25. The performance of the borrower and the executing agencies was satisfactory. The PCR noted the executing agencies’ commitment to complete the project primarily through the provision of counterpart funds and deployment of staff, compliance with procurement procedures, maintenance and effective management of separate accounts for the project, appropriate financial management, and timely submission of progress reports. The borrower
closely monitored and guided the project through a high-level interdepartmental committee and acted promptly to resolve implementation issues. As the lead executing agency, NIA seconded and recruited qualified and committed staff and delivered the required support to the CPMO. The PCR, however, observed the very centralized nature of management by the DOH of its schistosomiasis control program, which impeded coordination at the field level among the participating entities. Given the limited achievements, extensive delays, and loan cancellations that occurred, this validation assesses the performance of the borrower and the executing agencies as less than satisfactory. Delays in start-up and poor technical designs appeared to be inadequacies from the government side, including the poor coordination between NIA and DOH. The PCR also rated project management less effective (para. 45, PCR).

B. Performance of the Asian Development Bank

26. The PCR rated the performance of ADB satisfactory. It carried out 1 inception mission, 11 review missions, 1 midterm review mission, 1 special loan administration mission, and 1 PCR review mission. All these were undertaken at regular intervals so that project progress could be tracked and reviewed closely. The PCR indicated that ADB was responsive to government requests for timely approvals for subproject preparation, reallocation of loan proceeds, one variation to the loan agreement, and two loan closing date extensions to facilitate the completion of the civil works component of the project. Given the limited achievements, extensive delays, and loan cancellations that occurred, this validation assesses the performance of ADB as less than satisfactory.

C. Others

27. There was no recorded adverse effect on the environment. Initial environmental examination for the project screened environmental impacts related to site selection, design, construction, and operation. The process did not identify any environmental impacts that could not be mitigated. Commitment to involve and cooperate with the DENR in undertaking watershed management and protection measures to safeguard the environmental integrity of the systems constructed was secured during project implementation and the results were satisfactory. The PCR made a concise presentation and analysis of the resettlement issue induced by the subprojects, which was handled by the executing agencies with adequate planning and extensive consultations with concerned LGUs and the affected persons. Reports gathered concluded that the project generated beneficial results in terms of restored household income and better quality of living for the affected farm households.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

28. The PCR rated the project partly successful. This validation also rates the project less than successful (see table). The project was less than relevant due to design flaws at appraisal and subsequent adjustments made during implementation. The project invested heavily in the irrigator associations’ organization and capacity building, participatory planning, development and rehabilitation of irrigation systems, construction of access roads, watershed management, and project management support that built strong partnerships among the concerned government agencies, LGUs, and the project beneficiaries. These helped catalyze farmer-beneficiaries to participate in capacity-building activities and promote the organization of irrigators’ associations to effectively manage and sustain the operations of the irrigation systems that were funded and transferred to them by the project. These institutional development achievements, however,
continued to be overshadowed by the completion of only five subprojects, and the low levels of collection and equity contributions. The project erroneously projected that farmers in the project area could contribute 25% of the capital cost of the irrigation systems without conducting a thorough assessment of their paying capacity. The resulting resource limitations meant that funds would not be sufficient for routine and periodic maintenance of the project-funded infrastructures. All these reinforced the possibility that full production and productivity gains envisioned at appraisal were not forthcoming in the near term.

### Overall Ratings

<table>
<thead>
<tr>
<th>Criteria</th>
<th>PCR</th>
<th>IED Review</th>
<th>Reason for Disagreement and/or Comments</th>
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<tbody>
<tr>
<td>Relevance</td>
<td>Relevant</td>
<td>Less than relevant</td>
<td>Relevance was substantively affected by design flaws at appraisal and subsequent adjustments made during implementation (para. 12).</td>
</tr>
<tr>
<td>Effectiveness in achieving outcome</td>
<td>Less effective</td>
<td>Less than effective</td>
<td></td>
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<tr>
<td>Efficiency in achieving outcome and outputs</td>
<td>Less efficient</td>
<td>Less than efficient</td>
<td></td>
</tr>
<tr>
<td>Preliminary assessment of sustainability</td>
<td>Less likely</td>
<td>Less than likely</td>
<td></td>
</tr>
<tr>
<td>Overall Assessment</td>
<td>Partly successful</td>
<td>Less than successful</td>
<td></td>
</tr>
<tr>
<td>Borrower and executing agency</td>
<td>Satisfactory</td>
<td>Less than satisfactory</td>
<td>Given the limited achievements, extensive delays, and loan cancellations that occurred, the performance of the borrower and the executing agencies is rated less than satisfactory (para. 25).</td>
</tr>
<tr>
<td>Performance of ADB</td>
<td>Satisfactory</td>
<td>Less than satisfactory</td>
<td>There are many references throughout the PCR that alluded to less than satisfactory performance, including the unrealistic design by ADB. The PCR listed various issues in its lessons section where ADB could have performed better (para. 26).</td>
</tr>
<tr>
<td>Impact</td>
<td>Not rated</td>
<td>Moderate</td>
<td>The construction of new irrigation infrastructure and roads and the rehabilitation of existing schemes had a moderate impact on the socioeconomic condition of the target communities (para. 24).</td>
</tr>
<tr>
<td>Quality of PCR</td>
<td>Satisfactory</td>
<td>Refer to para. 32.</td>
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**ADB** = Asian Development Bank, **IED** = Independent Evaluation Department, **PCR** = project completion report.

Note: From May 2012, IED views the PCR's rating terminology of "partly" or "less" as equivalent to "less than" and uses this terminology for its own rating categories to improve clarity.

Source: ADB Independent Evaluation Department.

**B. Lessons**

29. The PCR drew out seven key lessons valuable to both the borrower and ADB operations. This validation concurs with the PCR when it noted that implementation delays and loan reallocation could not have ensued and the two loan extensions could have been negated if the following were undertaken early on during project preparation or implementation: (i) participation
of beneficiaries at an early stage of subproject preparation; (ii) realistic assessment of beneficiary equity contributions; (iii) adequate and accurate technical data gathering; (iv) thorough assessment of the partner LGUs’ fiscal position, and human and financial resources; (v) capacity building on procurement and bid evaluation for LGU partners; (vi) proper due diligence on the technical capacity, resource capability, and commitment of government partner institutions to implement components assigned to them to determine the risks and sustainability of involving them; and (vii) coordinated provision to beneficiaries of technical support along with input supplies, such as farm credit.

C. Recommendations for Follow-Up

30. This validation subscribes to the recommendations of the PCR. Post-project monitoring and evaluation must be institutionalized within the executing agencies to monitor the condition and utilization of the funded systems and collection of irrigation fees. Complementary impact assessment studies should also be undertaken. The executing agencies should be bound by a covenant requiring them to allocate funds for the O&M of the systems, the duration of which should be mutually agreed upon by the executing agencies and ADB. This validation also finds funding other rural infrastructure projects (e.g., rural water supply, farm storage facilities, and others) to complement further assistance to the rehabilitation of irrigation systems and construction of access roads as an appropriate step to enhance poverty reduction. Schemes to ensure collection of irrigation fees and counterpart contributions and proper valuation of farmers’ labor as equity contribution must be worked out.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A. Monitoring and Evaluation Design, Implementation, and Utilization

31. Rapid social assessment surveys were conducted in the core subproject areas to generate information on the (i) number and ethnicity of beneficiaries participating in institutional and village-based training programs, (ii) current cropping intensities and cropping patterns, and (iii) income levels of participating farmers. The borrower established a monitoring and evaluation system (MES) where indicators for monitoring socioeconomic and environmental impacts were formulated. The MES regularly reported the project's physical progress and financial status. Even with the “pre-project” data gathered from the rapid social assessment surveys, the MES was unable to fully function as a project performance management system capable of periodically monitoring and assessing project impact and the achievement of project objectives. Its completion would have generated and analyzed “with” and “without” project conditions across a wide range of economic and technical monitoring variables.

B. Comments on Project Completion Report Quality

32. The preparation of the PCR was consistent with Project Administration Instruction 6.07. The PCR candidly assessed the outcomes, impact, relevance, effectiveness, and efficiency of the project based on evidence found on the ground. The lessons and recommendations were clearly drawn from the findings of the report. The PCR gave a straightforward presentation and detailed analysis of the issues, outputs, and outcomes. The DMF was clear in presenting the appraisal targets and actual performance. The economic reevaluation in Appendix 10 was informative as it focused first on the financial affordability of the subprojects to the beneficiaries then followed by their attractiveness from the point of view of the society as a whole. The assumptions and other project parameters, and the methodology used were sufficient and up to standards. However, some computational procedures need to be revisited. For instance, both
Can-asujan SRIS and Calayagon CIS subprojects yielded economic internal rates of return of below 12%, yet both their economic net present values at 12% were positive. Overall, this validation finds the quality of the PCR satisfactory.

C. Data Sources for Validation

33. This validation made use of the following data sources: the report and recommendation of the President, the PCR, back-to-office mission reports, and project processing documents.

D. Recommendation for Independent Evaluation Department Follow-Up

34. The project was only partially successful in attaining the desired impact. The IED can consider conducting a project performance evaluation report particularly because only 5 of the 11 subprojects were finished at project completion. Important focal points of this project performance evaluation could (i) be the modalities for improving irrigation fee collection and ensuring availability of funds to operate and maintain the completed subprojects and to complete the remaining unfinished subprojects, (ii) expanded economic efficiency tests for all rural infrastructures, and (iii) reassessment of conditions for the transfer of O&M of the irrigation systems to the irrigators’ associations.