



# Technical Assistance Report

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Project Number: 33453  
September 2008

Republic of the Philippines: Preparing the Irrigation  
System Operation Efficiency Improvement Project  
(Financed by the Japan Special Fund)

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 2 September 2008)

Currency Unit	–	peso/s (P)
P1.00	=	\$0.0216
\$1.00	=	P46.28

## ABBREVIATIONS

ADB	–	Asian Development Bank
IMT	–	irrigation management transfer
MTPDP	–	Medium-Term Philippine Development Plan
NIA	–	National Irrigation Administration
O&M	–	operation and maintenance
PPTA	–	project preparatory technical assistance

## TECHNICAL ASSISTANCE CLASSIFICATION

<b>Targeting Classification</b>	–	Targeted intervention (TI-H)
<b>Sector</b>	–	Agriculture and natural resources
<b>Subsectors</b>	–	Irrigation and drainage, water resource management, agriculture sector development
<b>Theme</b>	–	Sustainable economic growth
<b>Subtheme</b>	–	Developing rural areas

## NOTE

In this report, "\$" refers to US dollars.

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## I. INTRODUCTION

1. In 2004, the Government of the Philippines (the Government) requested Asian Development Bank (ADB) assistance to prepare a project to improve agricultural productivity through rehabilitation and improved management of irrigation schemes. The project preparatory technical assistance (PPTA)<sup>1</sup> was initially included in the ADB country strategy and program for 2005–2007.<sup>2</sup> However, following a reconnaissance mission in 2004, processing of the PPTA was suspended pending progress on proposed restructuring of the National Irrigation Administration (NIA) and the Government's confirmation of budget for the project. Following confirmation that (i) the NIA rationalization plan was initiated through Executive Order No. 718, 8 April 2008; and (ii) the reformulated Irrigation System Operation Efficiency Improvement Project was included in the Government investment plan, an ADB fact-finding mission was conducted from 2 to 13 June 2008. The mission reached an understanding with NIA on the PPTA design including impact, outcome, implementation arrangements, financing plan, and terms of reference for consultants. The PPTA design and monitoring framework is Appendix 1.<sup>3</sup>

## II. ISSUES

2. The performance of the agriculture sector is a significant determinant of overall economic growth in the Philippines. In 2006, it accounted for 19.1% of gross domestic product and provided employment for about 36.7% of the labor force. Agriculture is critical to poverty reduction as poverty incidence in the country is largely a rural phenomenon.<sup>4</sup> Strengthening rural economies by accelerating agriculture and rural development is a critical component for an inclusive growth strategy to reduce rural poverty.<sup>5</sup> By actively promoting agricultural and rural-based opportunities, jobs can be created and rural to urban migration slowed. Promotion of yield-improving technologies and expansion into high-value commodities and value-adding services are central elements of efforts to meet much-anticipated opportunities for employment and income growth in less well-developed regions of the country, as set out in the Medium-Term Philippine Development Plan (MTPDP) for 2004–2010.<sup>6</sup>

3. Agricultural production issues came into sharp focus in 2008 when international grain prices, including those for rice, soared with a 40% increase between March 2007 and March 2008.<sup>7</sup> In March 2008, the Government asked ADB for assistance in rehabilitating irrigation infrastructure and postharvest facilities for rice. Rice is the basic food staple for the population. As one of the largest importers of rice in the world, the higher rice price stimulated urgent efforts to return the country to self-sufficiency in rice production by 2013 through the development of several agricultural initiatives.<sup>8</sup> Irrigated agriculture accounts for about 76% of annual rice production and is therefore a major focus of the new initiatives on food security.

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<sup>1</sup> The name of the project at that time was the irrigation rehabilitation project.

<sup>2</sup> ADB. 2005. *Country Strategy and Program (2005–2007): Philippines*. Manila.

<sup>3</sup> The TA first appeared in the business opportunities section of ADB's website on 22 June 2006.

<sup>4</sup> In 2003, the incidence of poverty in farming communities was 42.4% compared with 30.0% nationwide and 15.9% in urban areas. Source: National Statistical Coordination Board of the Philippines.

<sup>5</sup> Bolt, Richard. 2004. Accelerating Agriculture and Rural Development for Inclusive Growth: Policy Implications for Developing Asia. *ERD Policy Brief* 29. Manila: ADB.

<sup>6</sup> National Economic Development Authority. 2004. *Medium-Term Philippines Development Plan 2004–2010*. Pasig City.

<sup>7</sup> Rice prices in the Philippines increased by 40% between March 2007 and March 2008. Source: ADB. 2008. *Soaring Rice Prices—Response to the Crisis*. Manila.

<sup>8</sup> Department of Agriculture. 2008. Focusing on Increasing Provincial Productivity. *Rice Self-Sufficiency Plan 2009–2010*. Manila.

4. The Philippines achieved self-sufficiency in rice in about 1970 as a result of steady investments in irrigation and green revolution technologies. However, during the last decades of the 20th century, the rate of increase of production slowed due to recurrent droughts and reductions in investment in public sector agricultural support services, such as research, extension, and irrigation development. While investment in the sector increased in recent years leading to rice production increasing at an annual rate of about 3.7% since 2000, the persistently high population growth rate of 2.3% results in a routine requirement to import, i.e., up to 1.8 million tons of rice in 2008.

5. While the importance of irrigation in reducing the risk of crop failure and increasing crop productivity is undisputed, the performance of irrigation investments have often fallen short of expectations created during project design. A number of generic issues affect many irrigation systems in the Philippines:

- (i) **Overoptimistic system development assumptions.** Designed service areas tend to be larger than available water resources. Limited hydrological records do not allow data-based hydrological analysis on water availability. Often the service area requires farmers to convert land, but due to shortage of resources and the value of existing crops, such lands are not developed.
- (ii) **Inadequate operation and maintenance, and limited farmer participation.** Limited operation and maintenance (O&M) activities result in deteriorating canals and structures, and silted and defective diversion works. O&M costs are expected to be covered by irrigation service fees, but collection efficiency is very low. Most O&M funding is utilized for NIA personnel and little remains for actual O&M. The irrigation management transfer (IMT) program aims to transfer system management to the implementing agencies and thus reduce O&M costs. Acceleration of IMT will depend on NIA rationalization and restructuring under the forthcoming World Bank irrigation project.<sup>9</sup>
- (iii) **System deterioration.** Irrigation development accelerated after the creation of NIA in 1963; however many of the schemes developed are now aging and have accumulated damage through natural calamities such that they are not able to fulfill the expected functions. Many systems now require comprehensive and systematic upgrading to bring them to full operating status.

6. Upgrading irrigation infrastructure and operations without adequate attention to the participation of beneficiaries in the design of project investments and development of the agricultural system is not likely to be successful and/or sustainable. The Southern Philippines Irrigation Sector Project has been successful in involving farmers in participatory planning and design of subproject investments.<sup>10</sup> Projects without adequate attention to agricultural support services will not achieve expected increases in crop yields and improved household income. Effective system management and agricultural development programs<sup>11</sup> must be an essential core activity in irrigation rehabilitation or development projects if system users are to obtain maximum benefit from investments.

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<sup>9</sup> The Participatory Irrigation Development Project, under preparation for financing by a World Bank adaptable program loan in 2008, will partially fund the costs of the rationalization plan. Approval of the \$70 million adaptable program loan is expected in January 2009.

<sup>10</sup> ADB. 1998. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of the Philippines for the Southern Philippines Irrigation Sector Project*. Manila

<sup>11</sup> System management and agricultural development program has been implemented in the Southern Philippines Irrigation System Project supported by ADB.

7. **Government's Response.** The Government, in its MTPDP for 2004–2010 (footnote 6) set development strategies for the agriculture sector based on two main goals: (i) expanding the production base, and (ii) increasing productivity. The MTPDP identifies Mindanao as a focal area for agricultural development in view of the high potential for a diverse range of crops and agribusiness ventures. Under the MTPDP, self-sufficiency in rice production is identified as a key component of the agriculture productivity goal; and the primary target of the 10-point legacy agenda of the President is to increase rice production, a key goal for most provinces. In response to the “rice-crisis” in 2008, the Government committed resources to increase rice production to meet projected demand of 19.8 million tons in 2010 from 16.24 million tons in 2007. These initiatives include the GMA rice<sup>12</sup> program, the FIELDS initiative,<sup>13</sup> and the Rice Self-Sufficiency Plan 2009–2010. Each of these initiatives recognizes the importance of upgrading and expanding irrigation infrastructure to enable farmers to capitalize on the range of improved agricultural technologies promoted through the programs. The Rice Self-Sufficiency Plan proposes a combination of physical upgrading of irrigation systems with irrigation management improvements and agricultural support services, including subsidies for hybrid seeds, geographic-specific interventions, and other technical assistance including training and technology demonstrations, and improved provision of market information.

8. NIA has been a leading advocate of IMT as a method to increase the participation of system users in the O&M of irrigation systems.<sup>14</sup> However, although NIA has implemented a variety of approaches to IMT, the issue of surplus staff continues to reduce NIA's capacity to reduce costs.<sup>15</sup> The enactment of Executive Order 718 (8 April 2008) authorizing the NIA rationalization plan opens the way for NIA to streamline its organization. The rationalization plan will be implemented after approval of a transition plan<sup>16</sup> which sets out the number of irrigation systems to be rehabilitated and transferred to implementing agencies annually over 5 years, and the personnel to be affected by the transfers. The proposed World Bank-funded Participatory Irrigation Development Project (footnote 9) is to support implementation of the rationalization plan and similar investments in system upgrading for the proposed ADB project.

9. **Rationale of the Irrigation System Operations Improvement Project.** In response to the current concerns about soaring prices of staple grains and the Government's initiative to achieve self-sufficiency in rice production by 2010, a review of the agriculture sector and the ability of current policies to achieve sustainable food security is urgently needed. As the country approaches the end of the current MTPDP (footnote 6), a review of agriculture sector strategies and the role of irrigation in food security would help the Government enunciate a clear vision for sector development beyond the period targeted by the Rice Self-Sufficiency Plan and enable ADB to prioritize future short- and medium-term operations in the sector.

10. The project will contribute to the Government's MTPDP objectives of reducing rural poverty, increasing agricultural productivity, and enhancing food security. The envisaged

<sup>12</sup> GMA is acronym of *Ginintuang Masaganang Ani* in local language which means “golden bountiful harvest.”

<sup>13</sup> FIELDS is the acronym for a program to support fertilizer, irrigation, education and training of farmers and fisherfolk, loans, dryers and other postharvest facilities, and seeds of high-yielding, hybrid varieties as the core of P43.7 billion (approximately \$1.0 billion) in government support to agriculture.

<sup>14</sup> Communal irrigation systems are owned (after payment of amortization charges) and operated by users, with technical support from NIA and local government units. NIA holds national irrigation system assets on behalf of the state. IMT is intended to increase user participation in O&M, reducing NIA costs and enabling improvement in service delivery.

<sup>15</sup> Ofrecio, Bayani P. 2006. Participatory Development and Management: A Cornerstone of Philippine Irrigation Program. *Journal of Developments in Sustainable Agriculture* 1:1–5.

<sup>16</sup> The draft transition plan was submitted to the Department of Budget Management on 17 July for the first year of operation beginning on September 2008.

investments to enable improved irrigation services to farmers are in line with the MTPDP to “make food plentiful at competitive prices.” The project will extend implementation of the NIA rationalization plan in parallel with World Bank investments in other systems. The PPTA will assist the Government in undertaking a review of the agriculture sector to identify binding constraints and opportunities to adjust ongoing programs to better focus efforts to ensure food security in the medium to long term. Institutional and structural constraints that limit agriculture sector performance will be assessed and an investment project formulated to increase agricultural production in selected irrigation systems.

### **III. THE TECHNICAL ASSISTANCE**

#### **A. Impact and Outcome**

11. The impact of the proposed investment project is increased farm household incomes and reduced rural poverty. The outcome of the PPTA will be the formulation of an investment project that will improve agricultural productivity and production by (i) improving irrigation services and institutional arrangements that increase the role of water users in system O&M; and (ii) upgrading rural infrastructure, including irrigation systems, roads, and postharvest facilities of selected irrigation systems in Mindanao and the Visayas.

#### **B. Methodology and Key Activities**

12. The PPTA will be conducted in two phases: (i) agriculture sector and irrigation subsector analysis, and (ii) investment project design.

##### **1. Phase 1: Agriculture Sector and Irrigation Subsector Analysis**

13. The key activities will be to (i) identify, analyze, and prioritize binding constraints in the agriculture sector with a major focus on staple food production and food security, (ii) analyze sector policies and development strategies, (iii) conduct a diagnostic analysis of the constraints on performance of irrigated agriculture and the role of irrigation in national food production, (iv) evaluate irrigation subsector development needs, and (v) prepare a sector road map.

##### **2. Phase 2: Investment Project Design**

14. This phase will formulate a sector-type investment project, including preparing and/or updating feasibility studies for core subprojects, and completing compliance and safeguard requirements and project packaging. Specific activities include (i) formulate subproject selection criteria; (ii) undertake participatory subproject identification and feasibility studies for core subprojects; (iii) identify candidate noncore subprojects, including potential for expansion of irrigated areas; (iv) prepare social and environmental safeguards and requisite action plans; (v) formulate social development strategies and action programs for development of service areas and provision of agricultural support services; (vi) assess NIA implementation capacity and support requirements; and (vii) formulate project packaging for implementation. The initial poverty and social analysis is in Appendix 2.

#### **C. Cost and Financing**

15. The total cost of the PPTA is estimated at \$1,250,000 equivalent. ADB will provide \$1,000,000 equivalent, which will be financed on a grant basis by the Japan Special Fund, funded by the Government of Japan. The Government will provide the balance of local currency cost of \$250,000 equivalent through the provision of experienced counterpart staff, office space,

data, administrative and clerical services, logistics, and communications support. Details of the cost estimates and financing plan are provided in Appendix 3. The Government has been informed that approval of the PPTA does not commit ADB to finance any ensuing project.

#### **D. Implementation Arrangements**

16. NIA, under the guidance of the Department of Agriculture, will be the Executing Agency for the PPTA, and will assign a project coordinator with the rank of a division manager at NIA headquarters in Manila to oversee overall activities and to coordinate with other agencies. An adequate number of full-time engineers, a sociologist, and an environmental specialist will be assigned to assist the project coordinator and will serve as counterparts to the consultants. NIA will form a PPTA coordination committee to facilitate interagency coordination and review the progress and outputs of the PPTA. The committee will be chaired by the administrator of NIA, and will comprise senior representatives from the National Economic Development Authority, Department of Agriculture, Department of Environment and Natural Resources, Department of Public Works and Highways, and local government units concerned.

17. Consulting services will be provided in two teams. The phase 1 team will comprise an international agriculture sector policy specialist (1 person-month), and four national consultants (11.5 person-months) to provide expertise in agricultural economics, agricultural policy analysis and sector reform, and irrigated agriculture performance analysis; and facilitate workshops. The phase 2 team will require 13.0 person-months of international consulting and 39.5 person-months of national consulting. The international expertise will include a rural development specialist as team leader; and specialists in the fields of agricultural economics, sociology, environment, and institutional development. The expertise of the national consultants will include irrigation engineering, hydrology, institution building, agronomy, rural sociology, resettlement, database and geographic information systems, and workshop facilitation. The outline terms of reference are in Appendix 4. ADB will engage the phase 1 consultants on an individual basis. The phase 2 consultants will be engaged through a firm, or association of firms, based on simplified technical proposals evaluated using the quality- and cost-based selection (80:20) method. ADB will engage all the consultants in accordance with its *Guidelines on the Use of Consultants* (2007, as amended from time to time), and procure equipment in accordance with its *Procurement Guidelines* (2007, as amended from time to time). NIA will retain all equipment upon PPTA completion. The PPTA will be implemented from October 2008 to September 2009. ADB will assist the Government in implementing the PPTA with regular review missions with participation of staff of the ADB Philippines Country Office and NIA.

#### **IV. THE PRESIDENT'S DECISION**

18. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$1,000,000 on a grant basis to the Government of Philippines for preparing the Irrigation System Operation Efficiency Improvement Project, and hereby reports this action to the Board.

## DESIGN AND MONITORING FRAMEWORK

<b>Design Summary</b>	<b>Performance Targets and/or Indicators</b>	<b>Data Sources and/or Reporting Mechanisms</b>	<b>Assumptions and Risks</b>
<p><b>Impact</b> Upgraded irrigation systems and services that respond to stakeholders needs to increase agriculture production</p>	<p>An estimated 40,000 ha of irrigated command area benefit from upgraded infrastructure and services by 2016</p>	<p>NIA project monitoring data</p>	<p><b>Assumption</b> The Government seeks ADB funding for proposed investment project</p>
<p><b>Outcome</b> Agreed project design for upgrading irrigation systems and services that respond to stakeholders needs to increase agricultural production and fulfill ADB design and safeguard requirements</p>	<p>The Government and ADB make loan project effective by Q2 2010</p>	<p>The Government confirms the memorandum of understanding of final tripartite review mission and endorses PPTA final report</p>	<p><b>Assumption</b> Political support for rural infrastructure investment remains strong</p>
<p><b>Outputs</b> Phase 1 1. Agriculture sector road map guides future operations in sector.</p> <p>Phase 2 1. Subproject selection criteria and long list of potential projects</p> <p>2. Agreed IMT strategy for selected subprojects in response to NIA rationalization plan</p> <p>3. Fully appraised selected core subproject design including agricultural, social, resettlement, environmental, and economic evaluation</p> <p>4. Loan project design including identification of candidate noncore projects, cost estimates, safeguard framework, procurement plans, and assessment of NIA project implementation support requirements.</p>	<p>Road-map workshop outputs and agreement of joint strategic directions between the Government and ADB available by month 4 (after mobilization).</p> <p>Subproject selection criteria agreed by month 1 (after phase 2 mobilization)</p> <p>NIA and beneficiaries approve the IMT strategy and implementation plan for the rationalization plan for subprojects by month 2</p> <p>Selected subproject feasibility studies completed by month 3</p> <p>Draft final report completed by month 4</p>	<ul style="list-style-type: none"> <li>• Workshop proceedings</li> <li>• Inception, progress, and final report by the consultant</li> <li>• Memorandum of understanding of review mission and final review mission confirmed</li> </ul>	<p><b>Assumption</b> Rationalization plan is fully implemented in project locations</p> <p><b>Risk</b> World Bank Participatory Irrigation Development Project is not processed and the Government does not have funds to finance the rationalization plan</p>

<b>Activities with Milestones</b> (milestones are months after mobilization of phase consultants)	<b>Inputs</b>
<b>Phase 1</b>	<ul style="list-style-type: none"> <li>• <b>ADB (\$1,000,000)</b></li> <li>- Consulting services (\$664,500)</li> <li>- Office equipment (\$8,000)</li> <li>- Stakeholder workshops and meetings (\$40,000)</li> <li>- Surveys and studies (\$180,000)</li> <li>- Miscellaneous administration costs, representative for contract negotiations, and contingencies (\$107,500)</li> </ul>
<ol style="list-style-type: none"> <li>1.1 Review of rural development, agriculture, and irrigation sector strategic directions</li> <li>1.2 Analysis of intersection between Government sector strategies and ADB strategic goals</li> <li>1.3 Strengths, weaknesses, opportunities and threats (SWOT) analysis to identify role and contribution of irrigated agriculture to inclusive growth, poverty reduction, and sustainable rural development</li> <li>1.4 Preparation of shared road map and sector vision (by month 4 after mobilization)</li> <li>1.5 National workshop to confirm sector road map with key stakeholders</li> </ol>	<ul style="list-style-type: none"> <li>• <b>Government (\$250,000)</b></li> <li>- Office accommodation (\$95,000)</li> <li>- Counterpart staff (\$130,000)</li> <li>- Surveys and investigations (\$25,000)</li> </ul>
<b>Phase 2</b>	
<ol style="list-style-type: none"> <li>1.1. Subproject selection criteria finalized by month 2</li> <li>1.2. Long list of subprojects prepared with initial evaluation of suitability under the selection criteria by month 3</li>   <li>2.1 Review of proposed NIA IMT strategy and implementation plan (inception)</li> <li>2.2. Consultation with expected project beneficiaries to obtain initial agreement on proposed IMT in selected projects (month 3)</li> <li>2.3 NIA approves IMT strategy and rationalization plan implementation by month 4, including implementation plan for core subprojects</li>   <li>3.1 Review of existing NIA monitoring and evaluation systems, development of proposals for revisions and upgrading where required (during inception)</li> <li>3.2 Design of socioeconomic surveys, pre-testing and implementation in sample project areas (by month 2 after phase 2 mobilization)</li> <li>3.3 Preparation of socioeconomic baseline data and report by month 3</li> <li>3.4 Review of agricultural potential and alternate employment opportunities in project area</li> <li>3.5 Beneficiary consultations and participatory outline design of proposed infrastructure rehabilitation or modernization and/or new construction</li> <li>3.6 Feasibility studies and outline design preparation, including costing; economic analysis; and environmental, social, and resettlement surveys following ADB guidelines and policies</li>   <li>4.1 Preparation of project components, implementation arrangements and plan, including procurement plans and consulting services requirements</li> <li>4.2 Analysis and reporting on NIA implementation capacity and support requirements</li> <li>4.3 Preparation of detailed project costing (using COSTAB)</li> <li>4.4 Preparation of financial management and analysis, and financial sustainability and viability of the project</li> <li>4.5 Draft final report and workshop (month 6)</li> <li>4.6 Participation in ADB fact-finding mission and preparation of draft memorandum of understanding</li> </ol>	

ADB = Asian Development Bank, IMT = irrigation management transfer, NIA = National Irrigation Administration, PPTA = project preparatory technical assistance.

## INITIAL POVERTY AND SOCIAL ASSESSMENT

Country and Project Title:	Philippines/Irrigation System Operation Efficiency Improvement Project		
Lending or Financing Modality:	Sector Loan	Department and Division:	Southeast Asia Department Agriculture, Environment, and Natural Resources Division

### I. POVERTY ISSUES

#### A. Linkages to the National Poverty Reduction Strategy and Country Partnership Strategy

1. Based on the country poverty assessment, the country partnership strategy, and the sector analysis describe how the project would directly or indirectly contribute to poverty reduction and how it is linked to the poverty reduction strategy of the partner country.

**Contribution of the Sector or Subsector to Reduce Poverty in the Philippines.** The project will be implemented in less developed regions of the country, namely the Visayas and Mindanao. The poverty situation in the target area will be analyzed through the project preparatory technical assistance (PPTA). The southern Philippines, especially Mindanao, lags the rest of the country significantly in most development indicators according to the country poverty analysis.<sup>a</sup>

The project will address poverty in rural areas and contribute to increased food security. The country poverty analysis shows that most of the poor are dependent on agriculture, and poverty rates among farming households have remained above 50% since 1985. The project will help increase agricultural production and farm household income through construction and modernization of irrigation infrastructure, and improvement of the performance of irrigation systems.

**Linkage with National Poverty Reduction Strategy.** The Philippines does not have a national poverty reduction strategy; but freedom from persistent, pervasive, and intense poverty is the cornerstone of the Medium-Term Philippine Development Plan 2004–2010. ADB and the Government signed a poverty partnership agreement in October 2001 identifying agriculture modernization with social equity as one of four broad goals and/or strategies. The proposed project will address modernization of irrigation infrastructure through rehabilitation of the irrigation infrastructure serving some 30,000 hectares. Irrigation modernization is one component of the Government's Food Self-Sufficiency Plan 2009–2010, which aims to reduce the country's exposure to elevated staple food grain prices as experienced in 2008.

**Linkage with ADB's Country Strategy And Program for the Philippines (2005–2007).** The project will be implemented in parallel to a World Bank-financed project (Participatory Irrigation Development Project) expected to be implemented from 2007; applying the same IMT strategies and processes and working to increase harmonization of procurement procedures. The country strategy and program<sup>b</sup> notes that processing of the loan for the proposed ADB project will be conditional on clarification and confirmation of adequate budget allocation for the eventual loan project.

#### B. Targeting Classification

1. Select the targeting classification of the project:

General Intervention (GI)  Individual or Household (TI-H);  Geographic (TI-G);  Non-Income MDGs (TI-M1, M2, etc.)

2. Explain the basis for the targeting classification:

The project will increase beneficiary farmers' household income and reduce poverty by increasing agricultural production through rehabilitation of irrigation infrastructure and improvement of performance of irrigation systems. Individual farm families will obtain direct benefits from participation in the project and access to improved agricultural support services.

#### C. Poverty Analysis

1. If the project is classified as TI-H, or if it is policy-based, what type of poverty impact analysis is needed?

Detailed poverty and social analysis will be conducted during the PPTA. Full poverty and social analysis is proposed. The PPTA will look at the incidence of poverty using existing data sources and the social survey of potential beneficiaries. The analysis will be carried out following ADB's *Poverty Handbook 2006*<sup>c</sup> and *Handbook on Social Analysis*.<sup>d</sup> Particular attention is to be given to profiling the beneficiaries, including gender disaggregated demographic, economic, and social data where possible, plus the incidence of poverty, vulnerable groups, and any adverse impacts anticipated from the Project. The proposed project areas in Mindanao and the Visayas are less developed than other areas in the Philippines and rural poverty rates exceed those of urban areas.

2. What resources are allocated in the project preparatory technical assistance (PPTA)/due diligence?

A rural development specialist and a rural sociologist will be mobilized during the PPTA.

3. If GI, is there any opportunity for pro-poor design (e.g., social inclusion subcomponents, cross subsidy, pro-poor governance, and pro-poor growth)?

## II. SOCIAL DEVELOPMENT ISSUES

### A. Initial Social Analysis

Based on existing information:

1. Who are the potential primary beneficiaries of the project? How do the poor and the socially excluded benefit from the project?

Immediate primary beneficiaries will be farming households in the project schemes that will receive improved irrigation services enabling increased agricultural production and increased incomes. Increased agricultural production of staple grains, namely rice, will benefit the poor by reducing upward price pressures and reducing exposure to international rice markets.

2. What are the potential needs of beneficiaries in relation to the proposed project?

Farming households may require agricultural extension to capitalize fully on the improved irrigation services, in addition to access to other support services such as extension, agricultural inputs, rural credit, and postharvest marketing.

3. What are the potential constraints in accessing the proposed benefits and services, and how will the project address them?

Inefficient irrigation services constrain farmers from fully benefiting from access to irrigation water. The project will improve performance of irrigation services by rehabilitating the systems and strengthening NIA and the irrigators associations for system operations.

### B. Consultation and Participation

1. Indicate the potential initial stakeholders.

Primary stakeholders have been identified namely:

- (i) beneficiary farmers, (ii) irrigator associations, (iii) landholders who own the right-of-way of the related facilities, (iv) upstream and downstream water users such as domestic water and industry, (v) farmers who conduct slash-and-burn agriculture in the catchment forest area, (vi) nongovernment organizations in the area, and (vii) government line agencies and NIA.

2. What type of consultation and participation is required during the PPTA or project processing (e.g., workshops, community mobilization, involvement of nongovernment organizations and community-based organizations, etc.)?

Workshops and community mobilization will be undertaken of core subprojects during the PPTA. For the noncore subprojects these actions will be carried out during project implementation.

3. What level of participation is envisaged for project design?

Information sharing     Consultation     Collaborative decision making     Empowerment<sup>7</sup>

4. Will a consultation and participation plan be prepared?  Yes     No    Please explain.

The project is to be designed using participatory approaches. The PPTA consultants will provide a plan during the inception phase.

### C. Gender and Development

1. What are the key gender issues in the sector and/or subsector<sup>8</sup> that are likely to be relevant to this project or program? Women's access to information, participation in irrigation management institutions, and ability to protect their interests and improve their livelihoods need to be improved.

2. Does the proposed project or program have the potential to promote gender equality and/or women's empowerment by improving women's access to and use of opportunities, services, resources, assets, and participation in decision making?<sup>9</sup>  Yes     No    Please explain.

The gender action plan will include various steps to enhance women's access to information, participation in irrigation management institutions, and ability to protect their interests and improve their livelihoods. Through gender sensitization training and gender-disaggregated data, awareness about gender and development issues will be created among the staff as well as implementing agencies and service providers.

3. Could the proposed project have an adverse impact on women and/or girls or widen gender inequality?

Yes     No    Please explain

The Project will not have an adverse impact on women.

<b>III. SOCIAL SAFEGUARD ISSUES AND OTHER SOCIAL RISKS</b>			
<b>Issue</b>	<b>Nature of Social Issue</b>	<b>Significant, Limited, No Impact, or Not Known</b>	<b>Plan or Other Action Required</b>
<b>Involuntary Resettlement</b>	The project envisages interventions for the rehabilitation and improvement of existing irrigation and possible construction of new rural infrastructure. Land acquisition is expected to be minimal and impact will be assessed during the PPTA. A resettlement framework will be prepared and agreed with the Government for core subprojects. Where necessary, full or short resettlement plans will be developed after detailed design of structures during implementation.	Limited	<input type="checkbox"/> Full Plan <input type="checkbox"/> Short Plan <input checked="" type="checkbox"/> Resettlement Framework <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
<b>Indigenous Peoples</b>	The project is not expected to significantly affect indigenous people's groups with special vulnerabilities, as the project interventions will be in downstream areas. If indigenous peoples are identified as possibly being affected by the project, then an indigenous peoples planning framework will be prepared for the entire project to guide subproject selection, and to ensure that screening for impacts on indigenous peoples is conducted and relevant safeguard requirements, including free, prior, and informed consent, which is a requirement under Philippine laws, are complied with during subproject preparation and implementation.	Limited	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input checked="" type="checkbox"/> Indigenous Peoples Framework <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
<b>Labor</b> <input type="checkbox"/> Employment Opportunities <input type="checkbox"/> Labor Retrenchment <input type="checkbox"/> Core Labor Standards	Rural communities will be involved in rehabilitation of tertiary irrigation units as the counterpart contribution to project funding. Following rehabilitation and IMT, farmers will continue to contribute labor for regular operation and maintenance (O&M). NIA's rationalization plan was approved in April 2008, including a reduction of total staff as part of proposed Government streamlining of government agencies. The parallel World Bank project will include components related to compensation of staff released from NIA service.	Limited	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input checked="" type="checkbox"/> No Action <input type="checkbox"/> Uncertain
<b>Affordability</b>	IMT will result in farmer communities having increased roles in the O&M of the schemes after rehabilitation. The overall cost of operations are expected to be reduced due to the reduction of NIA input to O&M; however costs for individual farmers may be increased. Improved irrigation deliveries enabling higher incomes should increase the willingness to pay irrigation service fees.	Limited	<input type="checkbox"/> Action <input checked="" type="checkbox"/> No Action <input type="checkbox"/> Uncertain
<b>Other Risks and/or Vulnerabilities</b> <input type="checkbox"/> HIV/AIDS <input type="checkbox"/> Human Trafficking <input type="checkbox"/> Others (conflict, political instability, etc.), please specify	Restructuring of NIA may have impacts on irrigation system operations during the transition from NIA operation to full IMT. A contingency plan may be required for O&M during the transition. The PPTA will evaluate potential O&M problems during the transition.	Limited	<input checked="" type="checkbox"/> Plan <input type="checkbox"/> Other Action <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
<b>IV. PPTA OR DUE DILIGENCE RESOURCE REQUIREMENT</b>			
1. Do the terms of reference for the PPTA (or other due diligence) include poverty, social and gender analysis and the relevant specialist(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why.			
2. Are resources (consultants, survey budget, and workshop) allocated for conducting poverty, social and/or gender analysis, and consultation and participation during the PPTA or due diligence? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why.			

<sup>a</sup> ADB, 2005, *Poverty in the Philippines: Income, Assets, and Access*. Manila.

<sup>b</sup> ADB, 2005. *Country Strategy and Program 2005-2007*. Philippines. Manila.

<sup>c</sup> ADB, 2006. *Poverty Handbook*. Manila.

<sup>d</sup> ADB, 2007. *Handbook on Social Analysis*. Manila.

**COST ESTIMATES AND FINANCING PLAN**  
(\$'000)

<b>Item</b>	<b>Total Cost</b>
<b>A. Asian Development Bank Financing <sup>a</sup></b>	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	354.50
ii. National Consultants	235.00
b. International and Local Travel	65.00
c. Reports and Communications	10.00
2. Equipment <sup>b</sup>	8.00
3. Stakeholder Consultation Workshops	40.00
4. Surveys <sup>c</sup>	180.00
5. Miscellaneous Administration and Support Costs	15.00
6. Representative for Contract Negotiations	0.50
7. Contingencies	92.00
<b>Subtotal (A)</b>	<b>1,000.00</b>
<b>B. Government Financing</b>	
1. Office Accommodation and Transport	95.00
2. Remuneration and Per Diem of Counterpart Staff	130.00
3. Information, Data, and Security	25.00
<b>Subtotal (B)</b>	<b>250.00</b>
<b>Total</b>	<b>1,250.00</b>

<sup>a</sup> Financed by the Japan Special Fund, funded by the Government of Japan.

<sup>b</sup> Includes computers, software, communications, survey, and investigation equipment.

<sup>c</sup> Includes socioeconomic assessment, core subprojects; technical investigations, soil surveys, and procurement of satellite images.

Source: Asian Development Bank estimates.

## **OUTLINE TERMS OF REFERENCE FOR CONSULTANTS**

1. The project preparatory technical assistance will support preparation of the proposed Irrigation System Operation Efficiency Improvement Project. The assistance will be conducted in two phases: agriculture sector and irrigation subsector analysis (phase 1), investment project design (phase 2). The Asian Development Bank (ADB) will engage the phase 1 consultants on an individual basis, and the phase 2 consultants through an international firm in association with national consultants. The consultants will undertake the following tasks, which may be adjusted by ADB as needed, in consultation with the National Irrigation Administration (NIA). The consultants will closely coordinate with NIA, especially with a project coordinator, and use the materials and analysis provided by ADB, NIA, and the Government. Key consultants will participate in the ADB loan fact-finding mission expected to be undertaken immediately after the final tripartite review.

### **A. Phase 1: Agriculture Sector and Irrigated-Agriculture Subsector Review**

#### **1. Analytical Activities**

2. Undertake a desk study to review the agriculture sector and irrigated-agriculture subsector. The review will include (i) central and local government policies, laws, and regulations on food security, agriculture, and irrigated agriculture; (ii) central and local government agricultural and irrigation development strategies, investment priorities, and programs; (iii) relevant studies and reports of previous, ongoing, and proposed projects; (iv) current issues and binding constraints faced in the sector and subsector; (v) analysis of performance of irrigated agriculture and its role in national food production; and (vi) lessons from ongoing and completed irrigation projects funded by ADB and other development partners.

3. Conduct a policy analysis with reference to current concerns over soaring food prices and make projections for future price trends for staple food stuffs. Consider the impact of the expected food prices on poverty reduction and economic growth in the Philippines, and prepare policy and reform recommendations as appropriate.

4. Undertake an analysis to identify key stakeholders for subsequent dialogue on possible future scenarios, policy development, and institutional reform in the national food sector.

5. Undertake a diagnostic review of the performance of irrigated agriculture to identify sources of underperformance to enable formulation of policy objectives and strategic directions, leading to draft road maps to guide future investment decisions.

#### **2. National Dialogue**

6. Following the desk reviews of the sector and subsector, visit selected provinces to verify key findings with stakeholders. Based on these consultations, update sector road maps and convene a national workshop to seek a broad-based consensus on a vision for the development of the agriculture sector and the role of irrigated agriculture in achieving national food policy objectives.

#### **3. Reporting**

7. Prepare a report with the findings of the sector and subsector reviews, policy and reform recommendations, proposed road maps for agriculture and irrigated agriculture, summary of outcomes of the national consultation workshop, and recommendations for the revision of road maps and future investments. Submit the draft final report within 4 months of mobilization and

the revised final report within 4 weeks of receiving comments from the Government and ADB, within 6 months after mobilization.

## **B. Phase 2: Preparation of an Investment Project**

### **1. Subproject Selection and Consultation Process**

8. Prepare a long list of candidate subprojects, formulate subproject selection criteria that meet project objectives, and identify core subprojects and noncore subprojects that include national irrigation systems as well as communal irrigation systems within a reasonable assumed loan amount and government budget. Drawing on the findings of the phase 1 consultants' assessment of irrigation sector performance and findings of independent reviews by ADB's Operations Evaluation Department,<sup>1</sup> identify good practices to be implemented during project development and implementation.

9. For the core subprojects selected, conduct consultation meetings, including subproject walk-through, with stakeholders including expected beneficiaries and affected people to establish basic needs and interest in proposed interventions. Where an implementing agency already exists, assess its willingness and capability to participate in irrigation management transfer (IMT); and needs for capacity development.

10. For subprojects selected, identify the responsible provincial and municipal local government unit, and assess willingness for the subproject and financial capability for budget share. Especially for communal irrigation systems subprojects, assess the technical and institutional capacities of responsible local government units as they will be implementation agencies and executing agencies.

### **2. Feasibility Study for Core Subprojects**

11. Assess the basic conditions of the subproject site, including climate and soil condition, land use, cropping pattern and agricultural production, use of agricultural inputs, extent of farm mechanization, and the farmers' organization of the subproject area; and prepare a land classification and land use plan. Where necessary, conduct surveys such as a topographic survey, land use survey, and soil survey.

12. Develop an agricultural development plan, irrigation plan based on water requirement and availability, basic design for necessary infrastructure (feasibility study) and cost estimation. Closely assess any impact on other water users, and assess potential competition for water resources within the river basin in the form of a basic integrated water resources management plan. Develop a drainage plan if required. In design, consider recent irrigation modernization concepts, such as the MASSCOTE approach.<sup>2</sup> Conduct necessary surveys for the plans including hydrological survey and basic geological survey. Where an existing NIA feasibility study is available, undertake necessary studies to update and confirm NIA's assessments.

13. Conduct economic analyses following ADB's *Guidelines for Economic Analysis of Projects* (2001 on CDROM). Develop a financing plan and assess the financial viability and

<sup>1</sup> Operations Evaluation Department. 2008. Best Practices in Irrigation and Drainage. Case Study 2006 Annual Evaluation Review. Manila (July).

<sup>2</sup> Food and Agriculture Organization. 2007. *Modernizing Irrigation Management—the MASSCOTE (Mapping System and Services for Canal Operation Techniques) Approach*. Rome.

sustainability of the subprojects. Assess the willingness and capability of beneficiaries to pay part of the project cost and then develop a mechanism for cost recovery.

14. Making use of the outcome of phase 1, develop an IMT program and operation and maintenance plan including pricing of irrigation service fees. Assess needs for agricultural extension service and access to rural credit support in the area, and develop an appropriate program to support sustainable agricultural development. The experience with the ongoing system management and agricultural development program by the Southern Philippines Irrigation Sector Project provides approaches that could be developed. Assess the condition of watersheds and develop a management plan, if required.

15. Undertake a social analysis including participation, gender and development, social safeguards, and other social risks and vulnerabilities in accordance with ADB's *Handbook on Social Analysis* (2007) and *Policy on Indigenous Peoples* (1998), as well as national policies on indigenous peoples and ancestral domains, specifically the Indigenous Peoples Rights Act. Develop a gender action plan and indigenous people development plan and/or framework, and confirm national policies on land acquisition and resettlement. Prepare a resettlement plan and/or framework as appropriate. Undertake an in-depth poverty analysis in accordance with ADB's *Poverty Handbook* (2006). Establish subproject baseline socioeconomic and agricultural performance data, including data monitoring systems to strengthen NIA's monitoring and evaluation systems to enable effective project monitoring and subsequent impact evaluation.

16. Undertake an initial environmental examination or environmental impact assessment by following ADB's *Environmental Assessment Guidelines* (2003) and as required by government. Include a recommendation of measures to eliminate, offset, or reduce adverse impacts and estimates of mitigation costs.

17. Conduct a workshop and explain the final subproject plan including safeguard policy to beneficiaries and other people concerned, and seek endorsement for implementation.

### **3. Overall Project Formation**

18. Develop a comprehensive project proposal meeting ADB's loan project appraisal document format. Include (i) analysis of sector constraints and project rationale; (ii) overall project design such as project component formation, and design and monitoring framework; (iii) project cost estimate (using COSTAB software) and financing plan; (iv) implementation arrangements such as project management framework, implementation schedule, procurement plan, consulting services, and disbursement arrangement; (v) project benefits, impacts, assumptions, and risks; and (vi) relevant necessary appendixes. For total cost estimation, roughly assess viability and cost estimation for noncore subprojects based on basic information available at NIA.

19. Give specific attention to (i) mechanisms for cost recovery; (ii) implementation of NIA rationalization plans, including implications for rehabilitation works and needs for institutional strengthening for IMT; (iii) arrangements for operation and maintenance of project facilities and assessment of capacity development requirements; (iv) strengthening of NIA management information systems as a basis for monitoring and evaluation of project benefits; (v) assessment of methodologies for setting appropriate irrigation service fees; and (vi) agricultural support service components.

20. Conduct poverty and social analysis for the project and develop a summary poverty reduction and social strategy. Develop an involuntary resettlement framework, indigenous people's development framework, and gender action plan for the project, based on the outputs for core subprojects.<sup>3</sup> Analyze watershed management needs for the project and consider whether watershed management plans are required and how activities in the watersheds will be coordinated with other related projects.

#### 4. Reporting and Workshop

21. The consultants will produce (i) an inception report to be submitted within 4 weeks of commencing phase 2; (ii) midterm report describing the findings and key issues to be reviewed in a tripartite meeting between the Government, ADB, and the consultants about 4 months after mobilization; (iii) a draft final report to be submitted at month 8 and discussed at the final tripartite meeting; and (iv) a final report to be submitted within 4 weeks of the final tripartite meeting reflecting comments received from the Government and ADB.

**Table A4: Indicative Consulting Service Inputs**

Expertise	Person-Months	
	Phase 1	Phase 2
<b>A. International</b>		
Agriculture Sector Policy Specialist	1.0	
Rural Development Specialist and Team Leader for Phase 2		6.0
Irrigation Engineer		3.5
Project Economist		2.0
Cost Estimator and Contracts Engineer		1.5
Unallocated		1.5
<b>Subtotal (A)</b>	1.0	14.5
<b>B. National</b>		
Agricultural Economist and Team Leader for Phase 1	3.0	
Agriculture Sector Development Specialist	3.0	
Irrigation Performance Specialist	3.0	
Workshop Facilitator	1.5	
Institutions and Capacity Development Specialist		4.0
Environment Specialist		3.0
Rural Sociologist		4.0
Hydrologist		2.0
Irrigation Agronomist		4.0
Geodetic Engineer		4.0
Monitoring and Evaluation Specialist		2.0
Geotechnical Engineer		2.0
Civil and Irrigation Design Engineer (2 consultants)		10.0
Financial Management Specialist		2.0
Unallocated		2.5
<b>Subtotal (B)</b>	10.5	39.5
<b>Total</b>	11.5	54.0

Source: ADB Estimates.

<sup>3</sup> These should be in accordance with ADB's *Poverty Handbook* (2006) and *Handbook on Social Analysis* (2007).