

**JBIC ODA Loan Projects: Mid-term Review**

Project Title: Philippines “Malitubog – Maridagao Irrigation Project I” (PH-P112)

**[Outline of Loan Agreement]**

Loan Amount/Disbursed Amount: 4,867 million yen/4,561 million yen (as of March 2005)

Loan Agreement: February 1990 (16<sup>th</sup> year)

Executing Agency: National Irrigation Administration of the Philippines

**[Project Objective]**

This project’s objective was to increase and stabilize agricultural productivity in the central region of Mindanao Island via the construction of irrigation facilities, thereby contributing to the alleviation of poverty by improving the incomes of local farmers.

Consultant: Sanyu Consultants Contractor: Shinsung Corp.(Korea), China Electric Power Technology Import and Export Corp. (China)

**[Outline of Results]** (Field Survey : December 2004)

Item	Ex-ante Evaluation (June 1989)	Mid-term Review
<b>[Relevance]</b>	<p>(1) The development of irrigation infrastructure was one of the priority policies outlined in the five-year Medium-Term Development Plan (1993-1998). (As of the end of 1986, 1.5 million hectares (49%) of a total nationwide irrigable area of approximately 3.1 million hectares was developed; however, the government’s goal was to raise this to 1.7 million hectares (55%) by the end of 1992.)</p> <p>(2) The Aquino administration had made increasing agriculture productivity on Mindanao Island an urgent priority from the standpoint of mitigating regional gaps.</p> <p>(3) This project was a high priority undertaking that was designed to contribute to poverty alleviation in central regions of Mindanao Island by developing irrigation infrastructure as a means of raising productivity and stabilizing yields and thereby increasing the incomes of farmers.</p>	<p>(1) The current Medium-Term Philippine Development Plan (2004-2010) places a strong emphasis on strengthening the nation’s agriculture and stipulates that the development of irrigation infrastructure is key to achieving this goal.</p> <p>(2) Under the aforementioned plan, the restoration and development of Mindanao Island are identified as being crucial to ongoing peace-building initiatives in the region. The development of irrigation infrastructure is also highlighted in the current agriculture plan (Ginituang Masaganang Ani, GMA).</p> <p>(3) This project involves the development of irrigation systems in central Mindanao Island and has thus maintained its significance to current policy.</p> <p>* 1986: F/S, Asian Development Bank (ADB)</p>
<b>[Effectiveness]</b> (1) Develop irrigation systems and raise agricultural productivity	<p>(1) Maridagao area · Beneficiary area: 6,625ha (appraisal target) (No other targets or current statistics were set at appraisal.)</p> <p>(2) Upper Malitubog area · Beneficiary area: 4,215ha (appraisal target) (No other targets or current statistics were set at appraisal.)</p>	<p>(1) Maridagao area (achievements in 2004) · Beneficiary (irrigated) area: 6,526ha<sup>1</sup></p> <ul style="list-style-type: none"> <li>· Full-scale cropping began in 2002 in the Maridagao area, and the area under cultivation increased by around 12% from 3,000ha to 3,357ha (51% of the planned area) in the three-year period from 2002-2004.</li> <li>· There have also been steady increases in crop yields, which increased by approximately 50% in the three years from 2002, from 10,887 tons to 16,785 tons. In the Detailed Design, yield of rice per hectare in this area was calculated to be 4 tons per year in the wet season and 4.75 tons in the dry season, while the average yield was 5.0 tons per hectare, thus exceeds the projection.</li> <li>· The number of farmers benefiting from the project has also increased from 1,572 to 1,737, or by 10%.</li> <li>· However, the water use fee collection rate<sup>2</sup> had reached just 36.8% in 2004. Available data show that the distribution of water for agricultural irrigation is also affected by political factors, and that it is not necessarily rational.</li> </ul> <p>(2) Upper Malitubog area (achievements in 2004) · Beneficiary (irrigated) area: 1,155ha<sup>1</sup></p> <ul style="list-style-type: none"> <li>· As of 2004, the area served by irrigation in Malitubog was around 27% of the planned level (mainly in consequence of holdups in the construction work caused by problems with land acquisition and counterpart fund shortages). The work is currently moving ahead under Philippine government funding, but irrigated agriculture has yet to get off the ground. Activities at the pilot farm also had to be suspended in 2001 because the executing agency was strapped for cash.</li> <li>· Of the 4,278ha-area targeted for development, construction work on 1,728ha is scheduled for completion in fiscal 2005, but since it is not clear when the work on the other areas will be finished, it is impossible to calculate cropping targets for the entire area.</li> </ul> <p>* The agency has confirmed that in both areas there are farmers to whom farming (agriculture) is new, and who are too poor to purchase rice seeds. In response, the province of North Cotabato has received a social component budget from the Office of the President. The provincial government has used 8 million pesos. Hand tractors, tillers and sprayers have been extended to 6 Irrigation Associations and seedlings, fertilizers and agricultural chemicals will be extended in the future.</p>
<b>Reference Information</b>		

<sup>1</sup> The executing agency is scheduled to conduct the final review of the irrigated area at the end of 2005. In addition, Upper Malitubog area may be further developed. Therefore the above mentioned estimate width may change.

<sup>2</sup> Water use fee collection rate: the amount collected/the amount billed

<p><b>[Efficiency]</b> (1) Outputs  (2) Project period  (3) Project cost</p>	<p>(1) Outputs (as detailed below) Development of irrigation systems in the Maridagao and Malitubog areas of North Cotabato and Maguindanao provinces in central Mindanao. · Construction of head works/intake gates · Construction of water channels (144km) and drainage canals (157km) in the Maridagao and Upper Malitubog areas (Areas targeted for construction: Maridagao 6,625ha, Upper Malitubog area: 4,215ha) · Consulting services: 331M/M (man-months)</p> <p>(2) Feb. 1990 – Dec. 1996 (83 months)</p> <p>(3) 6,489 million yen</p>	<p>(1)</p> <ul style="list-style-type: none"> <li>· Changes were made to both construction areas: Maridagao to 6,562ha; Upper Malitubog area to 4,278ha.</li> <li>· Initially, the work in both Maridagao and Upper Malitubog area was to be executed using Japanese ODA loan funds, but due to constraints on the loan amount, the decision was made to execute the works in the Upper Malitubog area using funds provided by the executing agency. The executing agency subsequently submitted a request for funding assistance for the outputs in the Upper Malitubog area, thus some of the Japanese ODA loan funds were redirected to cover part of the work (main canals and laterals) in the area (1,728ha) (the outstanding work is to be covered by funds put up by the executing agency).</li> </ul> <p>· Consulting services: 336M/M</p> <p>(2) Feb. 1990 – Nov. 2001 (Maridagao area)<sup>3</sup> Feb. 1990 – Dec. 2005 (Upper Malitubog area) (Reasons for delays): construction has been held up by security problems, land acquisition procedures, funding shortages and bad weather</p> <p>(3) 7,996 million yen</p>
<p><b>[Lessons Learned and Recommendations]</b></p>	<p>[Recommendations] Original plans for the project envisaged that project effects would start to be generated across the entire area with the completion of Phase 2, thus thought needs to be given to the execution of the second phase, taking priority issues with other projects and political stability in the area into consideration. In the event that the Phase 2 project goes ahead, the matter of incorporating the presidential social components into the project needs to be discussed with the provincial governments.</p>	
<p><b>[Indicators set for the ex-post evaluation]</b></p>	<p>n.a.</p>	<ol style="list-style-type: none"> <li>1. Area irrigated by the project (ha)</li> <li>2. Benefited area (ha)</li> <li>3. Cropping intensity</li> <li>4. Cultivated area by crops (ha)</li> <li>5. ISF collection efficiency</li> <li>6. Production volume of major crops (t/year)</li> <li>7. Yield of major crops per hectare : rainy season/dry season (t/ha)</li> <li>8. Gross annual average farm income</li> </ol> <p>(Consultation between JBIC and implementing agency is needed regarding target value.)</p>

<sup>3</sup> The construction of siphons and bridges was excluded from the contract with the contractor (C-1) due to security problems at the sites and difficulties encountered in negotiations over land, and the work came under direct NIA supervision. Siphon and bridge construction work was completed in November 2003. The project period cited above does not include the construction of siphons and bridges.