

## **Second western johor agricultural development project**

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The Malaysia Second Western Johor Agricultural Development project, supported by Loan 2740-MA for US\$55.0 million, was approved in FY87. When the loan was closed on June 30, 1996, 18 months later than planned, a total of US\$5.7 million was canceled. The Asia Regional Office prepared the Implementation Completion Report (ICR). The borrower's own ICR (appendix 2) provides additional data that complement the Bank's ICR, including an assessment of the project's impact on beneficiaries.

The project area comprised about 210,000 ha of the coastal plain of western Johor. About 97,000 ha were low lying (less than 1 meter above s.l.), poorly drained, and subject to frequent flooding. About 75,000 ha were used for agriculture, principally rubber, and the remainder was scrub and swamp.

Frequent waterlogging reduced the area's productivity. The project's objective was to improve drainage and control floods in the area to facilitate development and upgrading. The project aimed to replant 14,500 ha of existing smallholder rubber with high-yielding rubber, oil palm or other crops under the replanting program of the Rubber Industry Smallholders Development Authority. Planned civil works included construction of a storage dam, main and secondary drains, and new agricultural roads and flood protection bunds; river improvement works; resurfacing of roads and maintenance tracks along existing secondary drains; and replacement of eight bridges. The project would provide support to the Drainage and Irrigation Department (DID) for engineering consulting services, equipment, vehicles and buildings.

The major civil works were completed by the closing date and have been properly maintained. Work on five of the 18 contracts for drainage works and farm roads is not complete, but all are expected to be completed by the end of 1998. The delays resulted from inadequate counterpart funding in the project's first years, major changes in the design of the bridges, land acquisition problems, inadequate design capacity in DID, problems with contractors, and shortages of labor and materials caused by a nationwide construction boom. The 74 families displaced from the reservoir site have been resettled and compensated, although titles to the new lands have not yet been issued. Evidence suggests that the households' current incomes and living standards are higher than before the project.

The area replanted from rubber (14,300 ha) was only slightly less than the appraisal estimate of 14,500 ha. The distribution and anticipated yields of new crops are also close to estimates. About 9,200 ha were replanted with oil palm, 2,800 ha with high-yielding clones of rubber, and 2,500 with other crops. The crops appear to be in good condition. An estimated 5,000 ha of oil palm abandoned because of waterlogging have been replanted and another 15,000 ha affected by flooding rehabilitated. Improved water control has raised yields on some 10,000 ha of smallholder rubber and other crops by an estimated 10 percent. A project-funded study of peat soils in the region is being used to improve soil and water management. Improvements to roads and bridges have led to increased traffic, shortened travel times, reduced transport costs for produce, and increased access to employment and services for area residents. Flood damage in the area has been reduced, and potable water supplies have increased. The ICR reestimates the economic rate of return to 13 percent from 14 percent at appraisal.

Preproject household incomes were relatively low because of difficult growing conditions and the fact that most farmers are smallholders. A survey carried out in 1996 of a sample of nearly 600 households shows that agricultural incomes have doubled since the project was initiated to about RM4,300 (US\$1,700) per year. More dramatically, household incomes have increased by more than 400 percent and now average RM 11,500 (US\$4,600) per year. While the general economy has been buoyant,

a significant part of the increase reflects the off-farm employment opportunities which have become accessible to most rural households as a result of the improved road network.

The Operations Evaluation Department agrees with the ICR ratings for project outcome (satisfactory), sustainability (likely), and Bank performance (satisfactory) but rates institutional development impact as negligible rather than modest. The project had no significant institutional objectives and the principal implementing agency (DID) had difficulty finding qualified staff, particularly engineers, because of high local demand.

The principal lesson from the project is that in a rapidly developing country such as Malaysia, attracting competent technical staff to the public sector will become increasingly difficult and that greater emphasis should therefore be placed on involving the private sector in implementation. The experience of the project also underlines the importance of initiating land acquisitions for construction-oriented projects before the projects become effective.

The ICR is satisfactory. No audit is planned.