

## Highway rehabilitation and improvement project

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The Malaysia Highway Rehabilitation and Improvement Project, supported by Loan 3145-MA for US\$83.2 million equivalent, was approved in FY90. The loan was closed, fully disbursed, in FY96, one year later than scheduled. The Implementation Completion Report (ICR) was prepared by the East Asia and Pacific Regional Office. The borrower submitted a separate evaluation report but no summary is provided in the ICR.

The overall objective of the project was to preserve and improve the existing federal highway network so that it could safely and adequately cater to rapidly increasing traffic demand. More specifically, project objectives were: (i) to improve maintenance of the federal road network and institutional capacity, with emphasis on improved planning, operations and monitoring; (ii) to improve coordination of highway planning at state and federal levels; (iii) to improve the existing network of national highways and control of truck axle weights; and (iv) to improve road safety. The physical components of the project included rehabilitation and strengthening of 562 km of roads, replacement of 67 bridges, construction of 35 weigh stations, improvement of 56 km of two trunk highways, improvement of hazardous road sections, and installation of pedestrian bridges. Technical assistance and training was included to help implement the project and improve institutional capacity.

A Maintenance Improvement Plan reflected the major project objective to improve federal road maintenance and included road rehabilitation, increase funds for road maintenance and measures to improve maintenance capacity. Road maintenance budget allocations were below targeted levels for the first four years of the project, but were substantially increased in 1994 and 1995, although still not adequate to meet all road maintenance needs. Measures designed to give the Department of Public Works authority over the assignment of its personnel and reinforce state road maintenance district offices with qualified staff were not implemented. Project implementation delays were in part due to staff shortages in the Department of Public Works which could not compete with the higher salaries offered in the booming private sector. The extent to which federal road maintenance improved during the project is difficult to determine because of the lack of reporting by the Borrower and insufficient supervision by the Bank. The periodic maintenance backlog had not been cleared by early 1995 but no further information is available on performance targets for routine and periodic maintenance, contracting out of maintenance and other key performance monitoring indicators. Technical assistance and training to help improve institutional capacity was only partially implemented as planned and a loan covenant to make the Highway Planning Unit responsible for the coordination of investments in highways was not complied with.

There were substantial cost overruns on road rehabilitation and strengthening works, the main physical component of the project. The project was hastily prepared so that cost estimates for this component were not based on detailed engineering designs with the result that costs were substantially underestimated. There was a three year delay in project implementation because of lack of counterpart funding to cover the cost overruns and only 52 percent of roads were rehabilitated under the project (although the government is making good the shortfall by using its own funds to finance the remaining roads). No funds were available under the loan to finance cost overruns because of the Borrower's insistence that contingencies not be included. While some roads rehabilitated later in the project are of satisfactory quality, there are uncertainties about the quality of others built earlier in the project. The road improvement and road safety components were mostly implemented as planned. Weighbridges were also constructed as planned and are being operated, but highway legislation still needs to be modified to have a

real impact on vehicle overloading (similar to the finding in the Project Performance Audit Report [Report No. 7303] for the Third Highway Project [Loan 1376-MA] in 1988).

The Operations Evaluation Department (OED) rates project outcome as marginally unsatisfactory given that: (i) the main objectives to improve road maintenance were only partially completed with some key measures included in the Maintenance Improvement Program not yet implemented; and (ii) only 52 percent of the road rehabilitation component was carried out under the project, after long delays, because of high cost overruns and inadequate planning for contingency financing. The poor monitoring of road maintenance means that there is considerable uncertainty as to whether road maintenance actually did improve during project implementation. Sustainability is rated as uncertain given doubts about future road maintenance, the quality of roads strengthened, and axle overloading. The ICR rates project outcome as satisfactory and sustainability as likely. OED agrees with the ICR's rating of institutional development as modest. OED rates Bank performance as unsatisfactory because of inadequate preparation of the project since it was not ready for implementation and inadequate supervision, including infrequent and short Bank supervision missions, lack of attention to the quality of road works, monitoring of performance indicators and compliance with covenants. The ICR rates Bank performance as satisfactory, except for supervision which is rated unsatisfactory.

The main lessons to be drawn from this project are that: (i) the design of projects should take into account the lessons of previous Bank-financed highway projects in the country and include more upfront measures to be taken by the borrower on key institutional, funding and policy issues to demonstrate borrower's commitment; and (ii) when cost estimates for major civil works components are made before the completion of detailed designs and bids for the first package of works to be financed under the project, the likelihood of large cost overruns is greatly increased; contingencies should be included in such loans unless the government provides guaranteed contingency funding through other sources.

The ICR is rated as unsatisfactory since it contains little information on whether the major objective of the project was achieved and the information provided in the report does not always support the ratings given.

No audit is planned.