

# Findings

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Good Practice  
Infobrief



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## Eritrea: Road Sector Engineering

The project, an IDA credit of US\$ 6.3 million, begun in 1997 and completed in mid-2002, responded to the key findings of the IDA Participatory Rural Assessment study undertaken in 1994, which identified isolation and lack of road links as substantial constraints to poverty alleviation. It comprised the following components: (i) Infrastructure strengthening studies: (a) a feasibility and environmental impact assessment to determine appropriate design and construction standards of the existing Keren-Barentu-Tessenei road and upgrading of the Barentu-Mendefera road track; to be followed by detailed engineering designs for the agreed civil works; and (b) a national bridge condition and structural strength survey to develop a prioritized program of bridge works to remedy damage and deterioration. (ii) Institutional strengthening: (a) technical assistance and training for personnel of the Road Transport Construction Department (RTCD) in procurement and contract administration organization, systems, and procedures; (b) hands-on training to upgrade mechanics skills, including the procurement of spare parts and equipment repairs and training programs; (c) training of trainers; and (d) construction of a small training facility and workshop within the RTCD compound, including basic workshop equipment and training aids.

### Impact on the ground

- Training was provided to RTCD staff in contract administration, financial analysis, monitoring and evaluation, stores management, and accounting systems. The outcome was the preparation of a contracts administration and procedures manual and establishing contract monitoring procedures. The manual and procedures are being used in the preparation of bidding documents for road construction and maintenance works and for the hiring of consultants.
- Financial management has improved, and a computer-based accounting system is now in use at the RTCD.
- Bridge inventory/visual conditions surveys and strength testing have been completed, with 165 bridges surveyed and a pair/reconstruction program prepared.
- An organizational structure was established for the Ministry of Public Works–Infrastructure Department (MOPW–ID), including definitions of functional responsibility, staffing, and a staff training program. The project resulted in building capacity and setting up the framework for the Ministry to extend the outcome of the project's vision into its future comprehensive strategy for the sector.

- Training was provided in mechanical, electrical and equipment operation to workshop mechanics and electricians, equipment operators, university students, and trainers. Major rehabilitation of 34 pieces of equipment was done. Of significance is the fact that rehabilitation continued and even gained momentum in-house after the departure of the TA consultants. The University of Asmara is working closely with the MoPW-ID to integrate the training program with students' practical training requirements.
- A training facility was constructed, and almost 90 mechanical and 50 electrical classroom sessions were organized by the 3 trainers trained under the project. A total of 7 university engineering students and 51 workshop mechanics have been trained in electrical, mechanical, and equipment operation. This training center is recognized as an important part of the overall vocational training program of the education sector.

### **Lessons learned**

- Flexibility is required in project design when operating in an uncertain environment. The scope of mechanical repair of the equipment had to be considerably altered during implementation to full rehabilitation in view of the findings based on detailed inspection of the equipment.
- Building local capacity through extended support of technical specialists is critical to sustain the reform program.
- When fundamentally new management systems are being introduced, it is useful to build in a long-term service contract as part of the original contract design.
- Policy reforms and capacity building interventions should be accompanied by investment operations to ensure continued leverage in the long-term implementation of the reform agenda.

*This Infobrief has been sourced from Implementation Completion Report no. 25236. For more information, please contact John Riverson: [Jriverson@worldbank.org](mailto:Jriverson@worldbank.org)*

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