



International
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► STRENGTHEN2



AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE
DE DEVELOPPEMENT



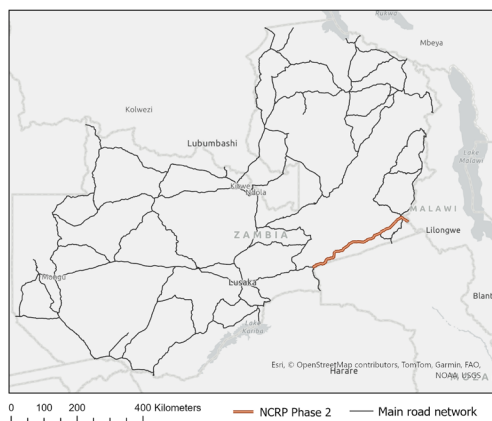
Co-funded by
the European Union

► Employment impact assessment of Phase 2 of the Nacala Road Corridor Project, in Zambia

Background

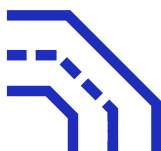
The AfDB supported the rehabilitation of the Nacala Road Corridor Project (NRCP), which forms part of the Great East Road Rehabilitation project, co-financed by the AfDB, EIB and AFD.

This brief outlines the results of the ex-post employment impact assessment of Phase 2 of the project in Zambia, focussing on the road between Luangwa and Mwami. The assessment was carried out as part of **STRENGTHEN2**, a joint initiative of the European Union and the International Labour Organization with the overall objective of leveraging employment impact assessments to promote the creation of more and better jobs in sub-Saharan Africa.



Phase 2 of the NRCP, Luangwa to Mwami (AfDB), Zambia main road network.

Sector



Transport

Source of finance



78.5 million
euros
(Phase 2)

AfDB, Government of Zambia

Between **2010** and **2017**

Objectives



1. Foster regional integration through reliable, efficient and seamless transport infrastructure that improves subregional trade and the global competitiveness of the region.
2. Provide Zambia, Malawi and Mozambique with improved road transport infrastructure to Nacala Port.
3. Improve accessibility of the communities in the project's zone of influence to markets and social services.
4. A total of 1,033 km of road works and two one-stop border posts, with 114.7 km of road rehabilitation and upgrading covered under Phase 2 of the project.

Methodology

Geographic Information Systems (GIS) and remote sensing methods were applied to assess the long-term economic and employment outcomes that the corridor generated. Night-time lights (NTL) satellite imagery was the main dataset used, which provides a measure of light emissions at night and can be applied as a proxy for economic activity. The increase in NTL brightness was compared before and after completion of road rehabilitation, using a difference-in-differences approach whilst controlling for population, conflicts and other variables to analyze the impact of the road rehabilitation.

The change in NTL brightness was used as a proxy for the change in GDP. This was then translated into the change in employment, by applying the elasticities between lights, GDP and employment estimated at the national level. GDP and employment results are expressed at the administrative unit level. The analysis was further conducted at the pixel level, to assess how impacts varied depending on distance from the road.

Results

Increase in night-time light brightness



25% 2 years following completion

Local GDP



12.0%

estimated local increase
2 years following completion

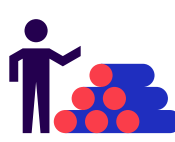
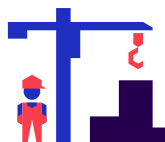
Employment



6.7%

estimated local increase
2 years following completion

13,657 jobs created*
in constituencies within the study area,
2 years following completion



*estimated according to the Labour Force Survey (LFS)
employment figures for the year of project completion

Recommendations

- ▶ Transport corridors have a positive impact on economic development and employment within a 2.5 km distance around roads, for future planning and policy, roads should be constructed or rehabilitated within this distance of target populations to ensure they benefit the most.
- ▶ Positive impacts could be identified 2 years following completion of the programme. This information should be considered in infrastructure planning to factor in the time taken for the long-term effects of economic development from road interventions to be present.
- ▶ Further work applying this methodology should be undertaken to utilise the high spatial and temporal availability of satellite data and use it to measure the long-term impacts of transport interventions, particularly larger schemes such as transport corridors.

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[Full report](#)

