

**Chad: Labour-intensive Road Renewal**

**Ex-post evaluation**

<b>OECD sector</b>	43040/Rural development	
<b>BMZ project ID</b>	2000 65 276	
<b>Project executing agency</b>	Directions Générales: - du Génie Rural (Ministry of Agriculture) - des Routes (Ministry of Public Works and Transportation)	
<b>Consultant</b>	RRI GmbH	
<b>Year of ex-post evaluation report</b>	<b>2009 (sample 2009)</b>	
	<b>Project appraisal (planned)</b>	<b>Ex-post evaluation (actual)</b>
<b>Start of implementation</b>	Q 3 2002	Q 1 2003
<b>Period of implementation</b>	24 months	27 months
<b>Investment costs</b>	EUR 4.64 million	EUR 5.64 million
<b>Counterpart contribution target group</b>	EUR 0.55 million	EUR 0.18 million
<b>Financing, of which Financial Cooperation (FC) funds</b>	EUR 4.09 million	EUR 5.46 million
<b>Other institutions/donors involved</b>	<>	<>
<b>Performance rating</b>	4 - insufficient	
• <b>Relevance</b>	3 - sufficient	
• <b>Effectiveness</b>	4 - insufficient	
• <b>Efficiency</b>	3 - sufficient	
• <b>Overarching developmental impact</b>	3 - sufficient	
• <b>Sustainability</b>	4 - insufficient	

**Brief description, overall objective and project objectives with indicators**

The *overall objective* of the programme implemented in 2003-2005 was the reduction of poverty among the rural population through provisional labour-intensive roadworks and a durable improvement in transport connections. The *programme objective* was to meet the transport needs of the local residents through labour-intensive measures. The *indicators* for measuring programme objective achievement were: (a) all-year-round trafficability on 75% of the final projects after three operating years and (b) a local labour input ratio of at least 25% to building costs.

The target group was the rural population in [West] Mayo - Kebbi in the Southwest of Chad with its estimated 650,000 inhabitants or 13% of the total national population (2002; today about 850,000).

The programme measures comprised: (i.) the establishment and administration of a decentralised reserve fund to finance labour-intensive repair works requested by village communities, (ii.) the professional execution of construction works, largely to remove bottlenecks through the construction of fords, smaller passage structures and ditches and erosion prevention with gabions, dry masonry walls and small stone dams, (iii.) consultancy services in the organisation, management, planning, tendering, awarding, invoicing and payment of construction works as well as building supervision, (iv.) raising awareness in village communities and their mobilisation for participation in individual projects and (v.) training various local actors, such as engineering offices, small-business operators, local animators and village communities for the professional planning, execution, maintenance and supervision of individual projects.

In the study phase, 212 km of suitable roadway was identified in the Mayo-Kebbi region, which formed the basis for the open programme. Altogether, construction or rehabilitation work was carried out on about 300 km of rural roadways in the target region Mayo-Kebbi under the programme. Total programme costs finally amounted to EUR 5.64 million. FC finance of EUR 4.09 million provided for the programme was supplemented by residual funds of EUR 1.38 million from the FC project, Guélengdeng-Bongor-Eré (BMZ ID 1990 65 392).

### **Programme design/major deviations from original planning and main causes**

Owing to limited financial resources and the specified average expenditure of only FCFA 7.5 to 8 million per kilometre of roadway, the programme confined itself to the removal of bottlenecks as planned (particularly the construction of reinforced fords and passage structures), without working on the road surfaces, even where there were no upgraded carriageways.

The population was to be involved in the planning and implementation of the individual projects via user groups, make counterpart contributions of at least 20% and bear responsibility for the maintenance of the infrastructure built via local maintenance funds financed from various sources. The expectation that the target group would be able to replenish the maintenance funds and organise the adequate upkeep of certain stretches of road on its own was largely unrealistic. Makeshift repairs are no longer carried out on many road sections or only sporadically in response to special events (e.g. washing away of earth ramps to a passage structure or complete road blockages). Only where the local maintenance funds have been well financed and effective support still provided by German development cooperation in a successor programme are funds still available in 2009 for maintenance. Altogether, the maintenance approach adopted for the roads must be seen in a critical light. The government evidently takes hardly any responsibility and the local population represented in the maintenance committees cannot cope at all with road maintenance. An added factor is that roads renewal was only carried out sporadically, so that most are not trafficable throughout the year.

## Key results of impact analysis and performance rating

*Relevance:* During planning, the programme was fully in line with national development goals. Improving transport facilities is also accorded high priority in Chad's poverty reduction strategy. The developmental relevance for the Chad Government is corroborated by the increases in national budget allocations for road construction and maintenance, which though still inadequate are considerable in comparison with other sectors. This additional national funding is almost solely invested in road construction, however. The results chain is basically plausible and of developmental relevance: job creation and improved transport facilities in rural areas for poverty reduction and the improvement in the conditions of life of the predominantly poor target population. In view of the deteriorating economic and political conditions in the rural South of Chad (including the decline in cotton plantation and the priority attached to petroleum production), no major development progress can, however, be made with infrastructure measures alone. This is one reason why the assumptions of the feasibility study that road improvements were a top priority among the local population and they were therefore very willing to contribute towards the costs of road maintenance, were unrealistic. The majority of the local population is largely uninterested in paying mandatory costs for road repair. Accounting for both aspects, we still assess **relevance as sufficient (Subrating 3)**. Due to the implications for durable use, the analysis of the priority issue as seen by the population will be dealt with in the assessment of sustainability.

*Effectiveness:* The programme is likely to have fallen just short of the target of allocating 25% of the investment capital to pay local labour (indicator for programme objective). At 26%, total wages (including the skilled personnel in the companies) turned out to be in line with the programme appraisal overall. In practice, though, this ratio was somewhat less, since total wages also comprised the services of external entrepreneurs and their skilled personnel. Instead of the planned 20%, only 8% was contributed in the form of (partly) paid labour by the local population (a major component of the implementation approach).

The second target of guaranteeing all-year trafficability on the roads (indicator 75% after three years) was missed by a large margin, at well under 50% (based on a survey of over 50% of the roads). A strong economic indicator for the second target would have been the accessibility of 75% of the connected villages during harvest time. This indicator would, however, only have verified positive results for cotton, not, however, for maize and millet, which ripen towards the end of the rainy season. This would presumably not have had any significant income or growth impacts, since cotton production has been in marked decline in Chad over the last few years. Effectiveness in relation to the first indicator is rated as 3 and to the second indicator as a clear 4, which together yield a **subrating of insufficient (4)**.

*Efficiency:* The specifications on average maximum costs per km of roadway were on the one hand helpful as a yardstick for the type of construction work. On the other, they have also resulted (i.) in the random definition of rehabilitated road lengths in some cases (to obtain sections without construction works and hence without costs so as to cover more expensive constructions in other segments) and (ii.) the incomplete construction of necessary structures

due to the need to perform some very expensive construction works, so that bottlenecks remained, preventing all-year trafficability on specific roads.

No comparative data is available for assessing the specific costs, operational efficiency and cost-effectiveness of the programme, since except for an unfavourably assessed precursor programme in another region of Chad there is no baseline. We may, however, assume that thanks to management by an international consultant, the reserve fund for construction works was put to very efficient use by national standards and that the programme was largely implemented as planned. Efficiency in construction works is therefore accorded the Subrating 2. On the other hand, as the construction measures were too sporadic (with no account taken of road surface), the allocative efficiency of the programme must rate as insufficient. Altogether, efficiency can only be assessed as **sufficient (Subrating 3)**.

*Overarching developmental impacts:* No indicators were defined for the achievement of the overall objective, Reduction of poverty among the rural population through provisional labour-intensive roadworks and durable improvement of transport connections. Temporary and also limited beneficial medium-term income effects have been achieved through the implementation of the construction and subsequent maintenance works. Whether the increased income from local wage labour has been invested in improving the conditions of life for the families cannot be empirically verified, as is the case in almost all development cooperation programmes. Based on general experience from Mayo-Kebbi, we may, however, assume that a significant amount of the wages of the many women employed was (and is) spent on food, health and water supply as well as the school education of the children.

The anticipated economic and social effects of better accessibility of rural areas for poverty reduction and improved conditions of life have not materialised as expected due the actual small improvements in all-year trafficability and the concurrent deterioration in the economic and political climate.

There are no discernible *adverse side effects* or *unexpected beneficial effects* (not anticipated at programme appraisal). As the effects can only be verified hypothetically and are of limited duration, the overarching developmental impacts are judged as **sufficient (Subrating 3)**.

*Sustainability:* In a realistic assessment of sustainability, the progress report on the decentralised rural development priority in 2006 estimates that the maintenance of the roads is not assured. Insufficient payments have been made into FLEP. In the course of Phase 2 of the decentralisation programme (the cooperation programme PRODALKA involving FDD), provisions were made for additional awareness measures and increased income via toll charges and transport taxes on marketable products.

The unassured sustainability of the measures has also proved to be a clear weakpoint of the programme in the evaluation. Although the current upkeep of the roads near the construction works is still good to satisfactory more than four years after completion, most of the excluded road segments (road surfaces) are near to inadequate and in many cases unsatisfactory. Due to

its finances and inadequate preparations, the executing agency (Direction Générale des Routes as successor to the Génie Rural) cannot guarantee proper road maintenance or sustainability any more than the local population, who are financially and technically (road surface) quite incapable of coping with the programme's operational scheme. Sustainability does not therefore merit a better assessment than **insufficient (Subrating 4)**.

**Performance rating:** Due to insufficient effectiveness and marginal sufficiency at best in the other DAC criteria except for sustainability, which is rated as insufficient, we assess overall performance as **insufficient (Rating 4)**.

### **General conclusions**

In view of the limited budget in Chad for road maintenance, as known to all actors, the general question needs to be asked of whether technically similar measures to this road construction programme, which assigned large or full responsibility for the maintenance of even major transregional roads with, in some cases, quite technically challenging reinforced fords, to the (poor) local population, are at all feasible.

Another general conclusion is that even when confining road renewal to eliminating the largest bottlenecks, an integral approach is needed to assure the general trafficability of the roads, i.e. all bottlenecks to road trafficability must be eliminated.

### **Notes on the methods used to evaluate project success (project rating)**

Projects are evaluated on a six-point scale, the criteria being relevance, effectiveness (outcome), “overarching developmental impact” and efficiency. The ratings are also used to arrive at a final assessment of a project's overall developmental efficacy. The scale is as follows:

- 1 Very good rating that clearly exceeds expectations
- 2 Good rating fully in line with expectations and without any significant shortcomings
- 3 Satisfactory rating – project falls short of expectations but the positive results dominate
- 4 Unsatisfactory rating – significantly below expectations, with negative results dominating despite discernible positive results
- 5 Clearly inadequate rating – despite some positive partial results the negative results clearly dominate
- 6 The project has no positive results or the situation has actually deteriorated

A rating of 1 to 3 is a positive assessment and indicates a successful project while a rating of 4 to 6 is a negative assessment and indicates a project which has no sufficiently positive results.

**Sustainability is evaluated according to the following four-point scale:**

Sustainability level 1 (very good sustainability)

The developmental efficacy of the project (positive to date) is very likely to continue undiminished or even increase.

Sustainability level 2 (good sustainability)

The developmental efficacy of the project (positive to date) is very likely to decline only minimally but remain positive overall. (This is what can normally be expected.)

Sustainability level 3 (satisfactory sustainability)

The developmental efficacy of the project (positive to date) is very likely to decline significantly but remain positive overall. This rating is also assigned if the sustainability of a project is considered inadequate up to the time of the ex post evaluation but is very likely to evolve positively so that the project will ultimately achieve positive developmental efficacy.

Sustainability level 4 (inadequate sustainability)

The developmental efficacy of the project is inadequate up to the time of the ex post evaluation and an improvement is very unlikely. This rating is also assigned if the sustainability that has been positively evaluated to date is very likely to deteriorate severely and no longer meet the level 3 criteria.

The overall rating on the six-point scale is compiled from a weighting of all five individual criteria as appropriate to the project in question. A rating of 1 to 3 indicates a “successful” project while a rating of 4 to 6 indicates an “unsuccessful” project. In using (with a project-specific weighting) the five key factors to form an overall rating, it should be noted that a project can generally only be considered developmentally “successful” if the achievement of the project objective (“effectiveness”), the impact on the overall objective (“overarching developmental impact”) and the sustainability are considered at least “satisfactory” (rating 3).