Nepal – Expansion of Malekhu-Dhading Besi Highway

Ex-post evaluation

OECD sector	Road Transport / 21020	
BMZ project ID	1996 66 546	
Project-executing agency	Department of Roads	
Consultant	ITECO (Switzerland) with ITECO (Nepal)	
Year of ex-post evaluation	**2004**	
	Project appraisal (planned)	**Ex-post evaluation (actual)**
Start of implementation	4th quarter 1997	4th quarter 1998
Period of implementation	33 months	33 months
Investment costs	EUR 5.1 million	EUR 8.2 million
Counterpart contribution	EUR 0.5 million	EUR 1.1 million
Financing, of which Financial Cooperation (FC) funds	EUR 4.6 million	EUR 7.1 million
Other institutions/donors involved	N/A	N/A
Performance rating	3	
• Significance / relevance	3	
• Effectiveness	2	
• Efficiency	4	

Brief Description, Overall Objective and Project Objectives with Indicators

Overall objective: To contribute towards increasing the economic activities of the region and to improve the marketing of agricultural products (no indicators specified)

Project objective: To contribute to the development of the Dhading district by improving the connection between the district capital and the national highway network. Indicator: average daily number of vehicles over the year as forecast; maintenance concept implemented as scheduled

Conception of the Project / Principal Deviations from the original Project Planning and their main Causes

Upgrade of the approximately 17.5 kilometre section of the Prithi Highway, one of the main national highways running from east to west (from/to the national capital of Kathmandu, located 70 kilometres away) in a double-layer bituminous surface with a lane width of 3.5 metres plus a one-metre-wide shoulder on each side, construction of a new steelwork bridge of 60 metres in length on the highway. At the time of project appraisal it was known that the existing provisional bridge on the connection to the Prithi Highway crossing the Trishuli River did not have sufficient load-bearing capacity and stability.

Changes in project conception:

- Instead of implementing a requirement for securing the financing of necessary construction measures on the Trishuli bridge the Project included the construction of a new bridge (carrying capacity of 30 tonnes, like the highway) (increase of the original financial contribution by EUR 1.6 million).

- Construction of a further, smaller bridge to replace the planned passage because it would not have been passable on many days in the year (during the monsoon season).

- To prevent washouts during the monsoon season the shoulders were bituminated as well. The surface treatment was technically improved.

- To improve transport safety and to protect waiting passengers, eight roofed-over bus stops with parking bays were built.

- A management support measure scheduled by the Nepalese building contractor proved not to be necessary.

Key Results of the Impact Analysis and Performance Rating

The project objective of providing efficient all-year transport links to connect district cities and their hinterland with the national road network and thus generally enabling the population to participate in political and social life and connecting the regional economy with the national economy in the sense of putting idle resources to use and improving the division of labour continues to be a priority. It is reflected in the current papers on poverty reduction and improved social services in the meaning of the Millenium Development Goals (MDG). The project has fully succeeded in providing this connection. The road is generally being used as was expected. The maintenance concept has been successfully implemented. Basic alternatives to the approach for developing the central one-third of the district, mainly by building an all-year road from Malekhu, do not and did not exist (effectiveness rating 2).

However, it cannot be overlooked that the development of the economy, particularly the aspect of mobilising own (agricultural) resources to make use of new market access opportunities, does not appear to respond very quickly to the improvements. Given the nutritional deficits, large portions of even a growing agricultural production in the catchment area are needed for subsistence and for regional consumption. On the other hand, local authorities claim that regional imports have increased as a result of the reduced transport costs, of which vendors are taking advantage, and because of the income effects of cheaper passenger transport (reduction of bus fares by 45%) into the district (cheaper regional consumer goods imports, including food, and farm inputs). The offer of social services has been improved throughout the district (schools and health posts), and the staffing with qualified personnel has brought substantial improvements of more than 50% in the last five years (relevance/significance: 3).

Given the considerably higher project costs, the use of the road has to exceed the estimates made at the time of project appraisal to ensure its economic efficiency. Evidently, this was the case after the road was opened. It must be feared, however, that the extremely critical political circumstances will permit only moderate subsequent growth. It is hard to determine to what extent the improved local transport conditions will activate the agricultural production. Given the altogether little damage being caused to the road - particularly the rare high, damaging axle loads - and the maintenance improvements already achieved and still planned, the sustainability of the effects appears to be ensured, so returns can be expected to accrue throughout the entire planning horizon (approx. 20 years from the beginning of construction). We currently expect the internal rate of return of the project to be rather below 5% because agricultural production increases are lower than expected, unless the regional development experiences a

considerably later upswing. This cannot be estimated at this time. The efficiency of the project is therefore not satisfactory (4).

Overall, the author assigns the project satisfactory development effectiveness.

However, the author recommends to have a local expert perform a socio-economic impact study, including a current traffic analysis, to complement the available information and to secure and empirically round off the present assessment. In the GTZ project in the area of "green roads" his surveys have produced extremely interesting results at a comparatively very low effort. It is estimated that not more than EUR 3,000 would be needed. Draft ToR are attached. Such a study could be available by the beginning of May of this year.

General Conclusions applicable to other Projects

(a) It is a favourable circumstance for the use of the road (and, thus, for the extent of the socio-economic effects) that Dhading Besi is connected with its hinterland by six district roads whose existence is owed to the formation of a district development committee, the implementation of a "green roads concept" with inclusion of the target groups in road maintenance, and to the financing of maintenance measures through toll fares which remain within the district. With a view to the general regional impact - and with regard to the achievement of the MDGs – it has proven true that for the development of smaller towns in countries with the socio-economic profile of Nepal it is wise to have such development measures in the hinterland (roughly 500 km²) through dirt roads maintained under regional/local responsibility always precede costly bituminous upgrading projects. At the latest, they should be implemented simultaneously. The indispensable institutional regional/local framework for the maintenance of the dirt roads that remain under local responsibility, however, can hardly be managed without many years of complementary technical assistance (for instance through competent and stable NGOs or TC institutions) and without propitious general national conditions.

(b) It should be reconsidered whether in specific constellations with regard to the available transport means (here: small lorries, pick-ups, buses, some of which of medium size (30 seats), few heavy lorries, no articulated lorries or similar) and also when an only medium transport load is forecast it would not be wise to reduce the design parameters even against the wish of the project-executing agencies (to less than 30 tonnes for the road - not for the bridges -, reduced number of axle load categories on which to base the design) in order to significantly reduce investment costs. This would make such projects more efficient for developing smaller district towns at the end of a bituminous road connection and would release funds to allow not three but perhaps four or even five towns to be connected to the national road network.

Legend

Developmentally successful: Ratings 1 to 3	
Rating 1	Very high or high degree of developmental effectiveness
Rating 2	Satisfactory developmental effectiveness
Rating 3	Overall sufficient degree of developmental effectiveness
Developmental failures: Ratings 4 to 6	
Rating 4	Overall slightly insufficient degree of developmental effectiveness
Rating 5	Clearly insufficient degree of developmental effectiveness
Rating 6	The project is a total failure

Criteria for the Evaluation of Project Success

The evaluation of a project's "developmental effectiveness" and its classification during the ex-post evaluation into one of the performance categories described in more detail below concentrate on the following fundamental questions:

- Are the **project objectives** reached to a sufficient degree (aspect of project **effectiveness**)?
- Does the project generate sufficient **significant developmental effects** (project **relevance** and **significance** measured by the achievement of the overall development-policy objective defined beforehand and its effects in political, institutional, socio-economic and socio-cultural as well as ecological terms)?
- Are the **funds/expenses** that were and are being employed/incurred to reach the objectives **appropriate** and how can the project's microeconomic and macroeconomic impact be measured (aspect of **efficiency** of the project conception)?
- To the extent that undesired **(side) effects** occur**,** are these tolerable?

We do not treat **sustainability**, a key aspect to consider for project evaluation, as a separate category of evaluation but instead as a cross-cutting element of all four fundamental questions on project success. A project is sustainable if the project-executing agency and/or the target group are able to continue to use the project facilities that have been built for a period of time that is, overall, adequate in economic terms, or to carry on with the project activities on their own and generate positive results after the financial, organisational and/or technical support has come to an end.