

PPTA REPORT – EXECUTIVE SUMMARY FOR THE MULTI TRANCHE FINANCING FACILITY (MFF LOAN).

The road sector is failing the people of Papua New Guinea. In the Highlands, roads are deteriorating and traffic levels are falling as the cost of travel increases and reliability falls. The Highlands is home to some 40% of the population and much of the country's actual and potential economic activity. These people survive mostly on subsistence agriculture with limited access to health facilities, schools or markets. Poor economic performance and failure of the Government to provide facilities contribute to regional unrest and tribal tensions.

Improving the roads would help. Studies elsewhere in PNG have shown that improved roads can increase incomes, school attendance and use of health clinics. Roads improve access to markets and encourage planting of cash crops. They provide access to facilities for both the public and for the professionals needed to run them.

Instead, the road system has got worse. Two reasons have been lack of money and poor use of what money is available. In recent years, the Government has been short of funds. But cutting funds for maintenance can be poor economy. The cost to road users of poor roads, in terms of higher fuel and vehicle costs, will almost certainly exceed the saving in road agency costs. What money there is, is being spent on major rehabilitation works. The apparent urgency of major repairs takes money away from the routine maintenance and minor works that would have prevented the problem. Without routine maintenance, money spent on road upgrading is simply wasted. Within five years the road condition will have deteriorated again. A good routine and periodic maintenance program can keep a road in very good condition for many years.

What is to be done? We recommend a comprehensive integrated program.

Investment in Roads

Clearly there is a need for major rehabilitation of the Highlands Region roads.

We have identified about 2,500 km of road that could be described as national and key provincial roads that together form a core network for the region. Of these, about 1,100 are in maintainable condition – or will be by sometime in 2009, while the remaining 1,400 require significant rehabilitation.

Getting all 2,500 km into maintainable condition will cost an estimated \$800 million. ADB has been discussing a multi-tranche financing facility to get all 2,500 km up to standard over a period of ten years. About 220 km of the roads requiring upgrade are proposed for inclusion in the first tranche. We have been concentrating on these roads, shown in the following table.

	Length (km)	Upgrade cost (million Kina)	Economic IRR
Laiagam Porgera	65	51.2	24.7
Kandep Mendi	50	32.1	20.5
Nipa Margarima	26	26.8	16.7
Margarima Ambua	41	28.6	22.2

Tari Koroba	39	30.6	25.7
	221	196.4	22.7

Contracts for these roads will cover both upgrade and maintenance. The other 1,100 km are not forgotten. These 'maintenance only' roads will be included in the contract packages so that all the core roads are maintained. 370 km are included in tranche 1.

	Length (km)	Upgrade cost (million Kina)	Economic IRR
Ambua Tari	22	10.6	30.2
Hagen Mendi	90	31.1	24.3
Wabag Kandep	96	32.5	48.4
Kissenpoi Kagua	44	27.8	50.4
Mendi Nipa	58	13.4	28.2
Togoba Wapenamunda	58	21.1	68.7
	368	136.5	36.1

An Agency Responsible for Maintenance

PNG has a Department of Works that has traditionally been responsible for both network management and physical works. The two roles apparently worked adequately last century, but the financial constraints early this century have demonstrated the weakness of this model. It is almost inevitable in a unitary organization of this kind that the best people are placed where the most money is spent, and these people run the organization. So the needs of the spending departments take priority over the planning departments and construction and rehabilitation takes priority over maintenance.

In 2003, parliament voted to establish a National Road Authority with the specific functions of a network manager. After a slow start, this organization is now becoming operational. It has a CEO, a predominantly private sector board, and appointments to key positions are under way. This is the organization we propose is responsible for maintenance of the core network. We think it is important that, at least initially, its role is limited to funding and maintaining the network, leaving network upgrades to DOW. Thus the tranche 1 upgrades will be undertaken by DOW, and the upgraded road will be handed over to NRA for maintenance.

NRA is a new organization and will need assistance to become fully functional. This is a challenge, but it is also an opportunity to start with the right people, systems and approach. It will need to develop appropriate road condition monitoring and management information systems. It would make only limited use of RAMS, which is more suited to programming rehabilitation than routine maintenance, but would provide a rich source of data to keep RAMS up to date.

Incentives for Contractors

One of the problems with some Highland roads is that they were not built properly in the first place. Wapenamunda to Wabag is a prime example. The conventional construction contract puts the contractor and the department in opposition. The contractor makes money by using as

little and as cheap material as he can. The department has to supervise the work at all times to ensure that specifications are met. Sometimes the contractor may provide incentives for the supervisor to accept what he shouldn't.

We propose that all contracts are performance based contracts (PBC). Under PBC, contractors are paid not for *inputs* (hours worked, material used) or *outputs* (potholes fixed, km road sealed) but for the desired *outcome* – the road in a specified condition. Tenderers will be paid a fixed monthly fee in return for keeping the road to the standard. Failure to meet the standard incurs penalties. The incentive for the contractor is to maintain the road to the required standard as efficiently as possible. It is up to the contractor to determine the best way to do it. NRA will need to monitor the contractor's performance, and the aid of the public will be sought to report if the road condition deteriorates. PBC contracts are typically for quite long periods – we propose ten years.

We will make the same contractor responsible for both the reconstruction and the maintenance. That way the contractor knows that if he skimps on the construction, it is he who will pay the price in higher maintenance costs for the next ten years. Contractors will have a long term perspective and will be expected to develop a close relationship with the communities along their roads. They will be expected, but not required, to use local labour as much as possible. Other functions that could form part of the contracts (although we have not worked these through in detail) include enforcement of overloading and payment of fees; and providing emergency accident response and ambulance services.

Local contractors are unlikely to already have the skills for PBC. We expect the contracts to be awarded to joint ventures between local and international firms. The contracts need to be reasonably big and long term to get all the potential benefits and to interest the sort of international companies that would benefit PNG. We are proposing contract packages in tranche 1 between 160 km and 230 km in size with values (over ten years) of up to K130 million.

We propose that if the proposed program is agreed, a workshop and 'road show' be undertaken to bring potential international contractors to PNG and introduce them to the program, the proposed approach and local contractors. The workshop would be advertised through engineering organizations and the ADB website. The workshop could also cover ADB and PNG requirements for resettlement and environmental management.

Maintenance Funded by Road Users

Road users pay various taxes and levies on vehicles, parts, fuel etc. as well as driver and vehicle licence fees. But currently this all goes into central or (in the case of licence fees) provincial government funds and is spent via the budget on roads or hospitals or whatever according to government priorities. The exception is a four toia/litre levy on diesel that goes to the NRA.

A common experience with funding through the government budget is that there is never enough money. Governments want to reduce or hold the level of general taxation, and other sectors (education, health, etc) have rival claims for the money collected. Typically users

express a willingness to pay more to get more roads, but there is no easy mechanism whereby this can be achieved. This has certainly been the case in PNG. Hence we support the policy stated in the National Transport Development Plan (NTDP), which is to raise funds for NRA directly from road users, through cost recovery. This provides NRA with a 'commercial' focus. It should not be regarded as taking expenditure 'off budget' rather, the road fund should be seen as money collected from road users to be spent for road users.

One of the preferred road charging systems worldwide are fuel levies, because the charge can be seen as related to road use, while collection can be based on quantities distributed by fuel wholesalers, minimizing administrative costs. Fuel levies can closely reflect the road use of light vehicles. However wear caused by heavy vehicles is disproportionate to the fuel used. Normally fuel levies are supplemented with other charges for heavy vehicles. If the government does not want to increase fuel prices in the current environment, but could provide more support from the consolidated fund, one way would be to divert the existing six toia diesel and petrol levies to NRA in full.

Annual licence fees could be used to increase the contribution from heavy vehicles. The National Executive Council (NEC) approved a range of fees for each category of trucks in 2005 and NRA is currently discussing this with the Motor Vehicles Insurance Ltd. Annual fees are collected by provincial governments. Because they do not reflect the amount of use, they are more suited to paying for 'access' costs – local and district roads where costs are less use-dependent. We recommend that these continue to be collected and used locally.

We propose that heavy vehicles using the main highway network pay through a new heavy vehicle fee. The fee would depend on the distance, load and axle configuration. Any vehicle travelling regularly on the highlands network would be required to pay a fee in advance. Most trucks belong to a small number of large companies. They would pay their fees in the form of a weekly or monthly 'permit' which would allow unlimited use for the period purchased. 'One-off' purchases by smaller operators would be made at a local garage or over the internet. Enforcement would be contracted out, with government set penalties, but with the enforcement agency retaining the fine. The road maintenance contractor would be a good choice as enforcement agent. Local councils are another possibility.

Funding for Improvements

We propose that the road fund – and the fees that support it – be for maintenance only. This will ensure that the fees do not have to be too high. New roads or major upgrades would continue to be decided based on national priorities and be funded from the national budget with or without assistance from donors. There is a feeling in some quarters that with the proposed new gas exports, the government will not need to borrow as much from the likes of ADB. While it may not need to borrow from ADB, it does need something like the proposed program. If indeed PNG is in the lucky situation of not needing to borrow the full amount, then options to consider include:

- A higher government percentage contribution
- A wider program (ie not limited to the Highlands)
- A parallel program to fund other roads.

Social and Environmental Impacts

Social and environmental assessments are an important component of any TA and have been undertaken for the subprojects. Issues addressed included potential impacts on physical, ecological and socioeconomic resources, and any significant resettlement. Possible interactions between the proposed road improvements and commercial and Government of PNG initiatives were also investigated. Summary appendices for social and poverty impact, resettlement and environmental impact are included with the report, while detailed the Poverty and Social Assessment, resettlement framework and individual reports and Initial Environmental Examinations (IEE) for the individual roads are available separately.

Social impacts are expected to be small and generally positive, with only limited impact on adjacent land or crops. The environmental impacts are small and mitigatable.

Consultation

An extensive program of consultation has taken place. At the inception stage, a stakeholder analysis was carried out to identify the primary and secondary stakeholders; their interests in the proposed project, their perceptions of current problems related to road accessibility, mobility and transport services and, the resources they could bring to the achievement of the goals and objectives of the project. Meetings have been held at the national level with Department of Works, Department of Transport, National Roads Authority, Department of National Planning and Monitoring, Department of Land and Physical Planning, Department of Community Development, Department of Environment and Conservation, National Aids Council and National Council of Women; Lae Chamber of Commerce; relevant development partners and international organizations such as Australian Aid for International Development (AusAID), UNDP, UNICEF, WHO, Population Services International, CARE Australia; and consultants engaged in ADB, AusAID and other donor-funded projects relevant to the Program.

Provincial and district authorities in Enga and Southern Highlands provinces have been actively consulted including provincial and district administrators; national and provincial works departments; provincial community development, health and education advisors; provincial AIDS Councils; and, provincial and district women's networks. Other regional stakeholders met include civil work contractors, trucking companies and representatives of major development enclaves in the Highlands region, i.e. Porgera JV and Oil Search. The provincial, district and regional stakeholders participated in consultation workshops held in Wabag and Mendi along with other local stakeholders including representatives of the community sector (local NGOs, health institutions, radio stations, etc.) and the private sector (local business houses, bus/truck drivers, etc.). A further workshop was run in Tari due to problems people from that area had in getting to Mendi. Along each road section, the views of the local population have been sought through surveys of households, market sellers, trade store owners, road users and vehicle operators, as well a program of community consultations and focus groups.

The reaction to the project has been overwhelmingly positive.