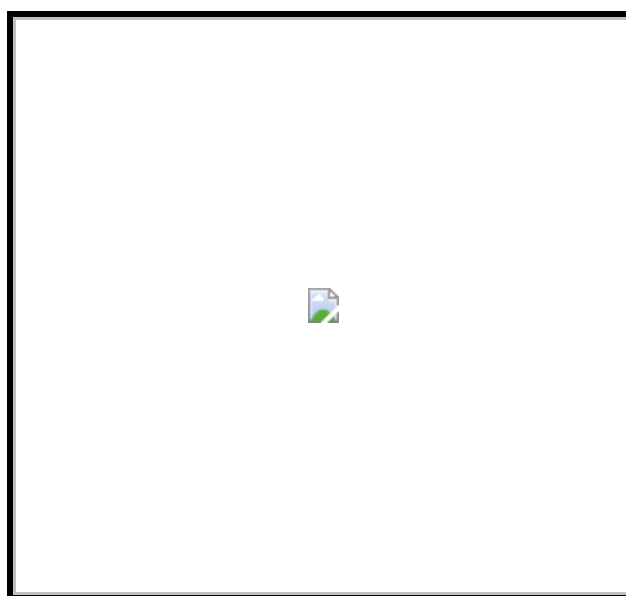


ROAD MAINTENANCE, FUNDS AND FUND MANAGEMENT

This edition of the Bulletin deals with road maintenance, funds and fund management. Among other things, it emphasizes, the need to manage road funds in accordance with clear performance rules which seek to minimize maintenance costs and ensure that the road network is maintained in an appropriate condition. Additional information on this subject, developed in greater detail by ECLAC, can be obtained from Alberto Bull: e-mail abull@eclac.cl

FUND MANAGEMENT BY AN AUTONOMOUS ENTITY

A road fund must be an autonomous entity which collects resources from road users for maintenance purposes. It must use those resources effectively and efficiently, to safeguard the road system and protect the interests of users and of the country as a whole. Unlike the road funds of the past, it is not an account intended to enable the Government to collect money to invest in roads, much less still to use for other purposes.



It is vital that the fund should have the power to manage, directly or through outside contracting, the collection of payments from users and the deposit of that revenue in a bank account, thereby having permanent control over the resources. If collection remains in the hands of the Ministry of Finance, payments into the fund could be delayed; sooner rather than later, pressing higher priority needs will be deemed to exist, and the resources will be used for those needs on a temporary or permanent basis. It is, however, for the State to establish the appropriate legislation.

Autonomy is essential to ensure that decisions concerning expenditure are based on clear and transparent criteria, in accordance with the objectives of the fund and the policies laid down by the competent government bodies. In this way, it will be possible to minimize the various types of influence which may be exerted to divert resources for other purposes. That autonomy brings with it the responsibility, which the fund must undertake, to maintain the road network in good condition.

The board of directors of the fund must consist of representatives of the appropriate highway-related public- and private-sector interests. Not only must its private-sector members broadly include the various groups of direct users (road haulage firms and motorists) and indirect users (producers and merchants), they must be legitimate representatives of those groups. Also, it would be appropriate for the board to be empowered to elect its own chairman.



Since fuel is consumed on all roads (trunk roads, rural roads and urban streets), they should all receive resources from the fund. However, in respect of roads with very light traffic, the monetary receipts "collected" for travelling on them will obviously be insufficient to cover maintenance costs;

the resources allocated to them from the fund should therefore be supplemented by revenue from other sources, such as money collected from users and neighbouring properties, municipal funds, or State grants.



ENSURING THE EFFECTIVENESS AND EFFICIENCY OF EXPENDITURE

To ensure the effectiveness and efficiency of expenditure, the fund must be managed in accordance with business standards and must be publicly accountable for the use of its resources and the results achieved.

Applying business standards to road maintenance means achieving the optimum ratio between transport costs and payments by users for infrastructure. In other words, the fund must be managed in accordance with clear performance rules, for the purpose of minimizing maintenance costs in a way that is consistent with ensuring that the road network is kept in an appropriate condition. In that regard, the condition in which the various roads should be maintained must be carefully analysed and must be reflected in objective levels of maintenance. There is no reason why the fund itself should carry out the maintenance, but it must supervise the work to ensure that the agreed goals are fulfilled.

To avoid inflationary effects, maintenance tariffs must be introduced gradually over a period of several years, while at the same time the condition of the roads is improved. Ideally, users should notice reductions in operating costs equal to or greater than the tariffs they are paying. The fund may consequently be unable to take care of the entire road network immediately, but this should be achieved within a reasonable period.

The fund should have a good system for budgeting its revenue according to needs, so that sufficient and timely funding is received. It would be very harmful for resources to be habitually insufficient or excessive, and the latter case would encourage the diversion of funds. There should therefore be a way of varying the tariffs paid by users, depending on requirements, to avoid deficits or surpluses.

There should be concern at all times for reducing unit maintenance costs; there are many possibilities for making improvements in this area by introducing and strengthening competition among the firms providing services and by improving the technologies utilized.

Users, and the general public, are entitled to receive information concerning the results of the fund's activities. There should be a complete and transparent system of information regarding maintenance policies, established objectives, concrete results achieved and the costs involved, including reports on the condition of the roads, the asset value of the road network, maintenance expenditure and unit costs, etc., so that the return on resources and the quality of services performed can be established. Obviously, results must be subject to verification; an important role in that respect will be played by financial and technical auditing to evaluate the use of resources and assess the degree to which the fund's concrete goals are achieved.

How to check whether a road is in good condition?

The condition of a road can be checked in accordance with certain characteristics. The following are some of the parameters for a road in good condition:

- The IRI figure (the IRI, or International Roughness Index, measures the regularity of the road surface) should be less than 3 metres per kilometre for asphalt roads.
- Potholes repaired within 24 hours.
- No depressions or bumps of more than 12 millimetres.
- Cracks should be sealed.
- Shoulders and embankments should be wellmade.
- There should be an efficient drainage system to drain water from the road surface.
- Surrounding vegetation should not exceed 15 centimetres in height.
- The road should be fully signposted, and the signs should be visible.
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MANAGEMENT OF MAINTENANCE

One way of improving the efficiency of maintenance activities is the use of contracts to achieve a given condition for a particular set of roads. The contractor's task is to keep the roads for which he is responsible in a pre-established (good) condition, in return for which he receives a fixed periodic fee determined by tender, regardless of the volume of works actually carried out. This type of contract is known as maintenance by level of service or by standard. Since road maintenance management companies are not paid on a unit-price basis or for specific works performed, they have a strong incentive to plan and execute maintenance works at the lowest possible cost,

triggering incentives for the introduction of technological advances and breaking new ground in road maintenance management.

It is essential to have a well-qualified and highly competitive market and to establish appropriate criteria for road conditions, as well as to supervise strictly adherence to levels of service. Until now little experience has been gained in this field, but savings of more than 50% in the cost of road maintenance can be expected, in comparison with maintenance projects managed directly by government bodies. This has been achieved in Australia, where a contract worth 150 million Australian dollars was awarded in 1995 for the maintenance of a group of roads in a pre-established condition for 10 years.

Argentina has pioneered this process in Latin America. Contracts for nearly 10,000 kilometres of its trunk road network follow the maintenance-by-results philosophy, after the necessary initial rehabilitation. Other countries of the region have followed suit or are in the process of doing so. This is the case in Chile, Colombia, Guatemala, Paraguay, Peru and Uruguay, as well as in Brazil at the federal level and in certain states.

USER PARTICIPATION

Users pay for a service, and this entitles them to participate in the protection of their rights, which essentially consist of receiving a service corresponding to the charges that they have to pay. The continued existence of the fund depends on the level of support it receives from users, and that support can be achieved only if they are given a significant role.

As soon as its activities begin, the fund must promote increasing commitment from users at different levels, thereby obtaining greater support and strength. One basic approach to this is to involve users in the board of the fund, with the right to speak and even to vote. This involvement can contribute to improved orientation of expenditure, since the users have frequent opportunities to inspect the roads, and the results achieved are important to them.

Participation by direct and indirect users can be extended further by including them as members of technical committees and regional and local advisory councils, helping to guide the management of the fund. This also leads to broader-based participation and to improved acceptance of the system.

In addition, since users contribute financially, effective mechanisms should be available to them to complain about any unsatisfactory service and have any errors corrected. For this purpose, it would be useful to have telephone lines open throughout the day, and offices to receive suggestions and complaints.

Examples of road funds Zambia National Roads Board

- Resources are used for road rehabilitation and maintenance.
- Design, supervision and works are carried out by private contractors.
- The board of the fund has executive functions, and is composed of five ex-officio members representing government ministries (the Ministries of Finance, Works and Supply, Transport and Communications, Local Government, and Planning) and seven members representing the private sector (Chamber of Commerce, Road Transport

Association, Automobile Association, farmers, Institute of Transport, Copperbelt University). All Board members are nominated by the organizations which they represent. Only the private-sector members have the right to vote.

Land Transport Fund, New Zealand

- The Fund finances investment in the national road network and in half of the country's local roads. Maintenance has top priority and road construction and improvement works are selected on the basis of cost-effectiveness.
- Design, works and supervision are carried out by contractors.
- The board of the Fund has executive functions and is composed of five members chosen for their experience of land transport, who are appointed by the Governor-General on the basis of recommendations by the Government. The board has a staff of 37.

Road Fund of Guatemala

- Resources are used for maintenance and for a few improvements of the basic road network.
- Design, supervision and works are carried out by private contractors.
- The board determines the approach taken by the fund; it is composed of six members, three from the public sector - the Ministers or Vice-Ministers for Transport and Finance, and the Director of Department of Roads - and three from the private sector - representatives of haulage firms, farmers, and the Cámara de la Construcción (chamber of the construction industry).

Other road funds in Latin America and the Caribbean

Legislation exists for a fund in **Honduras**, but it has not yet been implemented. There are draft laws for the creation of road funds in **Costa Rica** and **Haiti**. In **Bolivia** and **Colombia**, the preliminary draft laws have been prepared and the issue is being examined at government level.

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