OPERATING MODALITIES FOR THE PROPOSED ROAD FUND
IN
THE HASHEMITE KINGDOM OF JORDAN

1. INTRODUCTION ....................................................................................................... 4
2. ESTABLISHMENT OF THE ROAD FUND .................................................................. 5
3. REQUIREMENTS AND REVENUES ........................................................................... 5
4. MANAGING THE ROAD FUND ................................................................................. 7
5. DISBURSEMENT PROCEDURES .............................................................................. 7
6. THE WAY FORWARD ................................................................................................ 8

TABLE OF CONTENTS.......................................................................................... 9
LIST OF ANNEXES ................................................................................................ 10
LIST OF TABLES ....................................................................................................... 11
ABBREVIATIONS AND ACRONYMS ........................................................................ 12

CHAPTER 1 INTRODUCTION ................................................................................ 13
  1.1 Background ........................................................................................................ 13
  1.2 Context/Rationale .............................................................................................. 13
  1.3 Reporting ........................................................................................................... 15

CHAPTER 2 ESTABLISHMENT OF THE FUND ...................................................... 16
  2.1 Legal Options .................................................................................................... 16
  2.2 Existing Legislation ......................................................................................... 16
  2.3 Necessary Legislation ...................................................................................... 18
  2.4 Rules and Regulations .................................................................................... 19

CHAPTER 3 REQUIREMENTS AND REVENUES .................................................. 20
  3.1 Introduction ........................................................................................................ 20
  3.2 Road Network and Responsibilities .................................................................. 20
  3.3 Maintenance and Rehabilitation Needs ............................................................ 21
  3.4 Maintenance and Rehabilitation Allocations from the Consolidated Budget ... 22
  3.5 Existing Charges and Taxes on Vehicle Owners .............................................. 23
  3.6 Road Fund Requirements and Potential Sources of Revenue from User Charges 25
  3.7 Borrowing ........................................................................................................ 28

CHAPTER 4 MANAGING THE FUND .................................................................... 30
  4.1 Purpose of the Road Fund ............................................................................ 30
  4.2 Objectives of the Board .................................................................................. 31
  4.3 Composition of the Board ............................................................................ 32
  4.4 Nomination of Board Members .................................................................... 34
  4.5 Need for Sub-committees ............................................................................ 34
  4.6 Fund Secretariat.............................................................................................. 34

CHAPTER 5 COLLECTION AND DISBURSEMENT PROCEDURES.................. 36
  5.1 Procedures for Collecting Charges ................................................................. 36
5.2 Physical Location of Bank Accounts ................................................. 37
5.3 Procedures for Changing Charges .................................................. 37
5.4 Board Involvement in Maintenance Management ............................. 38
5.5 Transfer of Funds ......................................................................... 39
5.6 Management Procedures ............................................................... 40
5.7 Indicators of Effectiveness ............................................................... 41

CHAPTER 6 THE WAY FORWARD ......................................................... 42
6.1 Brief Summary ............................................................................ 42
6.2 Transition Plan ........................................................................... 42
OPERATING MODALITIES
FOR
THE PROPOSED ROAD FUND
IN
THE HASHEMITE KINGDOM OF JORDAN

Prepared by:
Ole Kr. Sylte, Gicon AS
Piers Vickers, The World Bank

April 1997
EXECUTIVE SUMMARY

1. INTRODUCTION

1.1 As part of the World Bank financed Third Transport project, a seminar with representatives from relevant government ministries and the private sector was held in Amman in May 1996 to discuss possible options for improved maintenance financing. The conclusion of the participants was that it was essential to establish a road maintenance fund managed along commercial lines by a representative board. A committee was subsequently constituted under the chairmanship of the Ministry of Public Works and Housing (MPWH) to explore what might be involved in establishing such a fund and board.

1.2 Allocations for road maintenance currently come from the government's consolidated budget and it is simply not possible to allot sufficient funds for road maintenance given the current financial constraints. It is therefore proposed to establish a road maintenance fund which will fully finance all maintenance activities under the jurisdiction of MPWH, plus potentially other works such as some rehabilitation and road safety improvements up to the level of funding available. The objectives are to ensure that i.) sufficient funds are available for maintenance; ii.) road users participate in the management of the sector to improve decision making and consumer willingness to pay iii.) financial discipline is strengthened to ensure that the public gets value for money; and iv.) the fiscal burden on the government is reduced to manageable proportions. The funding available initially will not be more than what goes to the maintenance and rehabilitation of the sector from the Ministry of Finance (MOF) now. So there will be no new charges for road users to start with and the change has no effect on the consolidated budget.

1.3 Potentially, all the stakeholders in the sector stand to benefit substantially from the proposed new arrangements.

- The MOF will no longer have to budget for a considerable recurrent expenditure and will be secure in the knowledge that funding mechanisms are in place which allow road users to pay more directly and equitably for the damage they do to the roads. A hard budget constraint will also be applied to the “producers”, MPWH and other road agencies which may be supported by the fund, to improve the incentives to carry out work efficiently and in the best interests of the road users at large. Other potential benefits accruing to MOF are that the fund might also be used to finance i.) local government roads, thereby potentially taking on a role in improving equity ii.) new road sector loans (plus conceivably existing loans) and

---

1 The term maintenance is used throughout this document to mean routine, recurrent and resurfacing works and these works are here defined as follows. Routine works are basic activities such as clearing drainage, vegetation control and roadside cleaning. They are not condition dependent. Recurrent works are local repair of roadway and pavement, typically for example patching, and are condition dependent. Resurfacing works are either regravelling an unpaved road or providing either a thin asphalt layer, surface treatment or a seal coat on paved roads. Maintenance does not include rehabilitation which is defined here as strengthening and minor improvement, such as to width, roughness and alignment, of a pavement or roadway. This report states explicitly when both terms apply.
ii.) soft loans or shadow tolls to make good the difference between actual costs and
the loans supportable by revenue on concessioned roads.
- MPWH will have a more secure and adequate flow of funds which will facilitate
  better programming of works, more consistent treatment of contractors and more
  proactive rather than reactive management of the network.
- The consumers, road users, will benefit from the considerable savings in vehicle
  operating costs accruing from better maintained roads. They will also welcome the
  opportunity to have a more direct say in the management of their roads to ensure
  their money is being spent efficiently and effectively for their benefit.

1.4 The Norwegian consulting firm Gicon AS (the Consultant) was commissioned
by the World Bank to assist the committee to look into the operating modalities for the
proposed road fund in Jordan. This paper presents the findings of a mission to Jordan
during the two weeks from February 24 to March 7, 1997. It has been prepared by Mr.
Piers Vickers, seconded from the World Bank, and Mr. Ole Kr. Sylte from the
Consultant. The views expressed and conclusions drawn are those of the authors, and
are not necessarily shared by the Bank nor the Government of Jordan.

2. ESTABLISHMENT OF THE ROAD FUND

2.1 In place of a Finance Act, much of the business of taxation and public spending
in Jordan is governed by general statements in the constitution, the overarching law of
the land. There are also a considerable number of laws already in place which govern
existing charges collected from road users. It appears highly unlikely that a road fund
could be established under any existing legislation, be it financial or other. This report
therefore provides draft legislation and relating regulations for the consideration of the
Council of Ministers to establish a National Road Fund Administration. The draft bill
is based on the laws of Jordan, the local institutional setup and other local factors. It
draws on parts of existing legislation in New Zealand and a bill currently being
considered by the legislature in Malawi.

2.1.2 Parliament is now in recession until the end of the year and the initial effect of
the legislation is not that far reaching, imposing no extra burden on road users. Hence,
one option is for the proposed bill, after necessary review and revision by the relevant
ministries, to be passed as a temporary law by the Council of Ministers. The law can
then be put before Parliament next year for ratification by the two Houses; possibly
together with the loan agreement for the proposed World Bank assisted Fourth
Transport Project.

3. REQUIREMENTS AND REVENUES

3.1 There is little doubt that insufficient funds are currently being allocated to the
maintenance of the road network in Jordan and that this has been the case for some
years. Moreover, there is certainly a considerable latent rehabilitation burden hidden
under Jordan’s road surfaces, the exact size of which has yet to be verified.

3.2 This study provides an estimate of the requirements to maintain the whole of the
MPWH network which totals JD13.5 to 15.6 million per year. It further provides an
estimate for a rehabilitation programme. This programme is a steady state one, in other
words, it takes no account of any existing backlog merely assuming rehabilitation on
each lane kilometre every 25 years. Using this assumption, steady state rehabilitation of the network requires approximately JD18 million per year.

3.3 Three possible income and expenditure scenarios for the road fund are presented to provide a point of departure for discussion at the seminar and for the Board. All three scenarios include the total maintenance requirements for each year plus: the costs of administering the MPWH programme and the road fund itself; some seed money for a public outreach campaign; and small but growing contributions to the upkeep of municipal roads, road safety and overload control. The first two scenarios do not include any rehabilitation while the last one incorporates a rehabilitation programme growing from JD2 million in the second year to JD10 in the fifth year. The balance of the rehabilitation programme would continue to be financed, as presently, through the consolidated budget.

3.4 It is recommended that the revenues to finance the maintenance programme are initially raised from existing charges. Directing all the fines for overloading and all transit fees into the road fund account would appear to fulfill the twin requirements of being appropriate as road user charges and adding up to what is currently allocated to road maintenance. Furthermore, the first two scenarios illustrate how new charges might be imposed to improve the cost recovery from the trucking industry and increase revenues: the first employing the imposition of a levy on diesel alone of the order of 7 to 17 Fils/litre and the second showing how this diesel levy might be combined with a supplementary annual heavy vehicle fee of JD 250 per heavy vehicle per year.

3.5 The last scenario includes the Road Fund financing a rising portion of the steady state rehabilitation requirements. It shows how the existing surcharge on gasoline could be converted into a per litre levy of the order of 5 to 15 Fils/litre and directed into the fund. The latter would mean a corresponding and equivalent decrease in the level of funding for rehabilitation from the consolidated budget in the first year. Thereafter the levy increases could be effected by corresponding retail price rises so as to bring extra resources to bear. It will, of course, be up to the Board to decide where and how revenues, which are inadequate for the sector now, might be raised in the future.

3.6 There would seem to be a good argument for the World Bank to provide some limited assistance to the Road Fund for the initial few years. This would first ensure that the administration cost of the Fund itself, a new spending item as far as Jordan is concerned, was initially found from external sources. Second, it would help to ease the transition, priming the Fund and demonstrating World Bank confidence in its potential value. For these reasons, this study has included a small loan for technical assistance totaling approximately US$ 1 million from the World Bank over the first three years of the Fund’s life, repayable by the Fund itself.

3.7 Revenues could also be raised from the private sector through the Road Fund taking out loans, a source of income which is within the scope of the draft bill. Such a loan could be used in order to i.) keep user charges lower initially to allow a more gradual increase ii.) finance the backlog, the size of which is unknown iii.) spread payment for the backlog over a longer period. The size of loan which might be realistic would be in the region of $50-125 million, paid out over five years and repayable over 10-12 years. The World Bank could possibly provide a partial risk guarantee for some portion of the amount borrowed. This could guarantee investors against debt service default due to non-performance of governmental obligations or changes in the law. The Bank would cover only the minimum portion of debt service required to ensure financing. However, the Board will need to remain wary of mortgaging the future revenue stream too heavily thereby removing the very responsiveness and flexibility which the proposed new arrangements are trying to achieve.
4. MANAGING THE ROAD FUND

4.1 The purpose of the Road Fund is essentially to provide an adequate and stable flow of funds for road maintenance of classified roads. Concurrently, the fund can enhance the transparency between revenues collected from road users and the spending on the road network and impose a form of surrogate market discipline. Most current road funds were set up primarily to finance maintenance. Some established road funds also finance road rehabilitation, but very few finance new investment. It is recommended that the Road Fund in Jordan should have as its first charge to cover maintenance of the classified network, primarily under the jurisdiction of MPWH, and then to include some portion of the total rehabilitation needs and other road related expenditures as the revenues are increased.

4.2 The National Road Fund Administration (NRFA) will be established as a corporate body, capable of suing and being sued in its corporate name. The operations of the Administration shall be managed and controlled by a Board. The broader objectives of the Board would be to set and revise the Road Fund's objectives; appoint the Secretary of the Road Fund; monitor and evaluate the performance of the Road Fund; recommend adjustments in charging instruments; and provide the interface between the road using public and relevant government ministries. It is recommended that the Board should be responsible to the Ministry of Finance, although an alternative might be to have it responsible to the Ministry of Transport.

4.3 The Board will consist of twelve members including the Chairman; five ex-officio members being nominees of the Ministries of Finance, Public Works and Housing, Transport, Planning, as well as Municipal and Rural Affairs and the Environment; five non-governmental members elected from the Federation of Jordanian Chambers of Commerce, the public transport industry, the trucking industry, the engineering profession and the agricultural community; and finally two other members nominated directly by the Minister to provide some flexibility for the future.

4.4 The government members will be nominated by their Ministers/Principal Secretaries and the non-governmental members will be nominated by the organizations they represent. Members of the Board will be appointed for a period of three years. The first meeting of the Board shall be convened by the Minister of Finance. It shall be chaired by a person nominated as Chairman by the Minister after consultation with the Board and appointed by the Council of Ministers. The members of the Board shall at the first meeting elect a Vice-Chairman from among their members.

4.5 The Board will be assisted by a Secretariat headed by an Executive Secretary. The Secretariat will be responsible for all day to day activities of the Administration and it is recommended that this service might best be performed by a private firm of accountants, paid for by the fund itself. It will liaise closely with the MPWH and the other road agencies, but it is expected that it will have its own office premises separated from the road agencies to emphasise its autonomy from any one ministry.

5. DISBURSEMENT PROCEDURES

5.1 To a large extent, the existing procedures for collecting the user charges would be continued although in due course the Board will need to consider other options for improving collection. Revenues will be deposited directly into the fund account, except where otherwise already provided in law in which case the funds will transit through the Treasury in a manner similar to the existing fuel tax which is earmarked for
the municipalities. It is recommended that the fund open a deposit account at the central bank and have one current account with a commercial bank from which payments, by cheque or electronic transfer, would be drawn.

5.2 The levels of all the road user charges should be stipulated in regulations published in the Government Gazette. The Minister for Finance will be the responsible for seeing that these regulations are published as necessary. The Minister will, on the recommendation of the Board, consider the implications of any proposed changes in the charges in relation to the macroeconomic environment. It is expected that the charges should be changed at most no more than once per year.

5.3 It is recommended that all resurfacing and rehabilitation work which is to be funded from the Road Fund should be carried out by contract and procured on a competitive basis although MPWH will continue to procure civil contracts following the current procedures. Routine maintenance of the classified road network could continue be carried out by MPWH as a force account operation for the foreseeable future. The Board would require that MPWH carry out routine maintenance on the basis of a formal agreement between the two, to include the unit cost per km of various types of road and a specification of the scope and frequency of maintenance activities to be carried out.

5.4 Funds from the Road Fund will be disbursed for goods and services forming part of an approved maintenance and rehabilitation program(s). These programs are to be produced by all road agencies receiving financial support from the Fund. The Road Fund accounts should be subjected to an independent system of auditing and inspection by a firm of auditors selected by the Auditor General. The Secretariat will prepare and submit for audit annual accounts, which will include a statement of income, a balance sheet, and a statement of cash flow, to be published within three months of the end of each financial year. The audit will include a full financial audit and selective technical audit. The Secretariat will prepare on behalf of the Board an annual report within six months of the end of each financial year.

6. THE WAY FORWARD

6.1 The findings and conclusions of the present paper will be presented at a seminar envisaged to be held in Amman in June, 1997, for which a draft programme is included as an Annex. The purpose of the seminar will be, among other issues, to discuss and agree on basic principles and operating modalities of the Road Fund. A further output will be to define what actions need to be taken by whom, and to allocate responsibilities for initiating these actions appropriately. A schedule of events, in the form of a summary of main milestones to be reached in the process towards a functioning Road Fund, has been provided.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Annexes</td>
<td>vii</td>
</tr>
<tr>
<td>List of Tables</td>
<td>viii</td>
</tr>
<tr>
<td>Abbreviations and Acronyms</td>
<td>ix</td>
</tr>
<tr>
<td><strong>Chapter 1</strong> Introduction</td>
<td></td>
</tr>
<tr>
<td>1.1 Background and Context</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Context</td>
<td>1</td>
</tr>
<tr>
<td>1.3 Reporting</td>
<td>3</td>
</tr>
<tr>
<td><strong>Chapter 2</strong> Establishment of the Fund</td>
<td></td>
</tr>
<tr>
<td>2.1 Legal Options</td>
<td>4</td>
</tr>
<tr>
<td>2.2 Existing Legislation</td>
<td>4</td>
</tr>
<tr>
<td>2.3 Necessary Legislation</td>
<td>6</td>
</tr>
<tr>
<td>2.4 Rules and Regulations</td>
<td>7</td>
</tr>
<tr>
<td><strong>Chapter 3</strong> Requirements and Revenues</td>
<td></td>
</tr>
<tr>
<td>3.1 Introduction</td>
<td>8</td>
</tr>
<tr>
<td>3.2 Road Network and Responsibilities</td>
<td>8</td>
</tr>
<tr>
<td>3.3 Maintenance and Rehabilitation Needs</td>
<td>9</td>
</tr>
<tr>
<td>3.4 Maintenance and Rehabilitation Allocations</td>
<td>11</td>
</tr>
<tr>
<td>3.5 Existing Road User Charges and Taxes</td>
<td>11</td>
</tr>
<tr>
<td>3.6 Road Fund Requirements and Potential Sources of Revenue</td>
<td>13</td>
</tr>
<tr>
<td>3.7 Borrowing</td>
<td>16</td>
</tr>
<tr>
<td><strong>Chapter 4</strong> Managing the Resources</td>
<td></td>
</tr>
<tr>
<td>4.1 Purpose of Road Fund</td>
<td>18</td>
</tr>
<tr>
<td>4.2 Objectives of the Board</td>
<td>19</td>
</tr>
<tr>
<td>4.3 Composition of the Board</td>
<td>20</td>
</tr>
<tr>
<td>4.4 Nomination of Board members</td>
<td>21</td>
</tr>
<tr>
<td>4.5 Need for Subcommittees</td>
<td>22</td>
</tr>
<tr>
<td>4.6 Fund Secretariat</td>
<td>22</td>
</tr>
<tr>
<td><strong>Chapter 5</strong> Collection and Disbursement Procedures</td>
<td></td>
</tr>
<tr>
<td>5.1 Procedures for Collecting Charges</td>
<td>24</td>
</tr>
<tr>
<td>5.2 Physical Location of Bank Accounts</td>
<td>25</td>
</tr>
<tr>
<td>5.3 Procedures for Changing Level of Charges</td>
<td>25</td>
</tr>
<tr>
<td>5.4 Board involvement in Maintenance Management</td>
<td>26</td>
</tr>
<tr>
<td>5.5 Transfer of Funds</td>
<td>27</td>
</tr>
<tr>
<td>5.6 Management Procedures</td>
<td>28</td>
</tr>
<tr>
<td>5.7 Indicators of Effectiveness</td>
<td>29</td>
</tr>
<tr>
<td><strong>Chapter 6</strong> The Way Forward</td>
<td></td>
</tr>
<tr>
<td>6.1 Brief summary</td>
<td>30</td>
</tr>
<tr>
<td>6.2 Transition plan</td>
<td>30</td>
</tr>
</tbody>
</table>
# LIST OF ANNEXES

<table>
<thead>
<tr>
<th>Annex</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1</td>
<td>Terms of Reference for this Study</td>
</tr>
<tr>
<td>A.2</td>
<td>Draft National Road Fund Administration Bill</td>
</tr>
<tr>
<td>A.3</td>
<td>Draft Regulations for the Management of the Fund</td>
</tr>
<tr>
<td>A.4</td>
<td>Current Condition of MPWH Network</td>
</tr>
<tr>
<td>A.5</td>
<td>Five Year Expenditure Estimate</td>
</tr>
<tr>
<td>A.6</td>
<td>Gasoline and Diesel Price Construction</td>
</tr>
<tr>
<td>A.7</td>
<td>Three Income and Expenditure Scenarios</td>
</tr>
<tr>
<td>A.8</td>
<td>Draft Letter of Invitation and TOR for the Secretariat</td>
</tr>
<tr>
<td>A.9</td>
<td>Draft Programme for the Proposed Seminar</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Road Network and Responsibilities</td>
<td>8</td>
</tr>
<tr>
<td>3.2</td>
<td>MPWH Proposed Five Year Road Maintenance Plan Budget</td>
<td>9</td>
</tr>
<tr>
<td>3.3</td>
<td>Road Maintenance Allocations</td>
<td>10</td>
</tr>
<tr>
<td>3.4</td>
<td>Existing charges and taxes on vehicle owners</td>
<td>11</td>
</tr>
<tr>
<td>3.5</td>
<td>Annual License Fees</td>
<td>12</td>
</tr>
<tr>
<td>3.6</td>
<td>Diesel Consumption by Sector</td>
<td>15</td>
</tr>
<tr>
<td>6.1</td>
<td>Schedule of Events</td>
<td>30</td>
</tr>
<tr>
<td>A.4.1</td>
<td>Current and Projected Condition of the MPWH Network</td>
<td>A.4.1</td>
</tr>
<tr>
<td>A.5.1</td>
<td>Estimated Unit Costs/Lane Km of Roads Maintained by MPWH</td>
<td>A.5.1</td>
</tr>
<tr>
<td>A.5.2</td>
<td>Projected Length of Network to be Maintained by MPWH</td>
<td>A.5.2</td>
</tr>
<tr>
<td>A.5.3</td>
<td>Projected Length of Network to be Rehabilitated by MPWH</td>
<td>A.5.3</td>
</tr>
<tr>
<td>A.5.4</td>
<td>Estimated Requirements for Expenditure on Maintaining MPWH Roads</td>
<td>A.5.4</td>
</tr>
<tr>
<td>A.5.5</td>
<td>Estimated Requirements for Expenditure on Rehabilitating MPWH Roads</td>
<td>A.5.5</td>
</tr>
<tr>
<td>A.6.1</td>
<td>Price Construction (in part) of Regular Gasoline and Diesel</td>
<td>A.6.1</td>
</tr>
<tr>
<td>A.7.1</td>
<td>Estimated Income and Expenditure For The Road Fund,</td>
<td>A.7.1</td>
</tr>
<tr>
<td></td>
<td>Example of the Imposition of Diesel Levy Only</td>
<td></td>
</tr>
<tr>
<td>A.7.2</td>
<td>Estimated Income and Expenditure For The Road Fund,</td>
<td>A.7.2</td>
</tr>
<tr>
<td></td>
<td>Example of the Imposition of a Diesel Levy and Heavy Vehicle Fee</td>
<td></td>
</tr>
<tr>
<td>A.7.3</td>
<td>Estimated Income and Expenditure For The Road Fund,</td>
<td>A.7.3</td>
</tr>
<tr>
<td></td>
<td>Example of the Imposition of Diesel and Gasoline Levies and Heavy Vehicle Fee</td>
<td></td>
</tr>
</tbody>
</table>
ABBREVIATIONS AND ACRONYMS

CVDB Cities and Village Development Bank
GOJ Government of Jordan
HFA Halcrow Fox and Associates
ICB International Competitive Bidding
IRI International Roughness Index
JPRC Jordan Gasoline Refinery Company
JSC Joint services Committee
MGA Municipality of Greater Amman
MOA Ministry of Agriculture
MOF Ministry of Finance
MOI Ministry of Interior
MOP Ministry of Planning
MOMRAE Ministry of Municipalities and Rural Affairs and the Environment
MPWH Ministry of Public Works and Housing
MOT Ministry of Transport
RMMS Road Maintenance Management System
TOR Terms of Reference
vpd vehicles per day

Currency and Equivalent Units
(As of March 1, 1997)
Currency Unit is the Jordanian Dinars (JD)
US$ 1.00 = JD 0.673
1 JD = 1000 Fils

Government of Jordan Fiscal Year
January 1 - December 31
CHAPTER 1 INTRODUCTION

1.1 Background

1.1.1 The Government of Jordan (GOJ) recognizes that maintenance of the classified road network has been inadequate in the past. Previous reports by the consultants Halcrow Fox and Norconsult recommended the establishment of a road fund as the best way to improve the present financing arrangements. Under the World Bank’s Third Transport project, the GOJ agreed to allocate sufficient funds for road maintenance. The establishment of a road fund will thus be addressing road maintenance funding and cost recovery conditionalities under the Third Transport Project.

1.1.2 A seminar was held in Amman in May 1996 to discuss possible options for improved maintenance financing. The seminar was attended by a wide range of interest groups, including the then Ministers of Public Works and Housing and Transport, staff from key government ministries, road transport operators, as well as representatives from the Chamber of Commerce and the Municipality of Greater Amman. The workshop concluded that:

It is essential to establish a road fund. The fund should concentrate on regular maintenance and rehabilitation, while no more than 5-10% should be spent on new works. Funds to eliminate the backlog of maintenance should come from the government, together with bilateral and multi-lateral donors.

1.1.3 A steering committee was subsequently established under the chairmanship of the Ministry of Public Works and Housing (MPWH) to explore what might be involved in establishing a road fund. The committee includes representatives from the Ministries of Finance (Budget Department), Planning, Transport, and Municipal and Rural Affairs and the Environment.

1.2 Context/Rationale

1.2.1 Allocations for road maintenance currently come from the government's consolidated budget. However, the Ministry of Finance (MOF) is under pressure to increase allocations in all sectors. Given the growing competition for resources from the government's budget, it is impossible to allocate sufficient funds for road maintenance from the consolidated budget. It is therefore proposed to establish a road maintenance fund. This will fully finance all maintenance activities under the jurisdiction of MPWH, plus some rehabilitation works up to the level of funding available. The objectives are to: i.) ensure that sufficient funds are available for maintenance; ii.) strengthen financial discipline to ensure that the public gets value for money; iii.) road users participate in the management of the sector to improve decision

The term maintenance is used throughout this document to mean routine, recurrent and resurfacing works and these works are here defined as follows. Routine works are basic activities such as clearing drainage, vegetation control and roadside cleaning. They are not condition dependent. Recurrent works are local repair of roadway and pavement, typically for example patching, and are condition dependent. Resurfacing works are either regravelling an unpaved road or providing either a thin asphalt layer, surface treatment or a seal coat on paved roads. Maintenance does not include rehabilitation which is defined here as strengthening and minor improvement, such as to width, roughness and alignment, of a pavement or roadway. This report states explicitly when both terms apply.

Who were their Excellencies Samir Kawar (acting) and Nasser Lozi at the time.
making and consumer willingness to pay; and iv.) reduce the fiscal burden on the government to manageable proportions. The funding available initially will not be more than what goes to the sector from the MOF now. So there will be no new charges for road users to start with and the change has no effect on the budget. The legislation being proposed will, however, allow a representative management board of the fund to recommend to the Minister for Finance how extra revenues can be raised in the future to meet the expected funding shortfall.

1.2.2 Potentially, all the stakeholders in the sector stand to benefit substantially from the proposed new arrangements. First of all, it would mean that road users pay for the services they get from the road network, just as consumers pay for services from other public utilities. In other words, those who benefit from having good roads will also be required to pay for that benefit by resourcing the maintenance of the roads; a financing system that corresponds well with established principles of benefit taxation.

1.2.3 The road users, and especially those in the trucking industry, are heavily dependent on good roads to sustain a healthy profit margin. Poor roads resulting from inadequate maintenance cost the road users large sums of money every year, certainly far more than is commonly realized. The direct impact that inferior maintenance has on transport cost is rooted in the poorer driving conditions that result from it. Road roughness in particular (i.e. a course, uneven, rutted or potholed road surface), has a direct impact on vehicle operating costs. To illustrate this, a reduction of average road roughness on the classified road network by about twenty per cent, from an International Roughness Index (IRI) of 5 m/km to IRI of 4 m/km, would represent a potential annual saving in total vehicle operating costs in Jordan of the order of JD 250 million - or more than twenty times the current allocation for maintenance. A reduction of ten to twenty per cent on average roughness, measured as IRI m/km, would be well within the scope of improved maintenance. Better maintained roads then will save road users money in vehicle operating costs.

1.2.4 The situation for the MPWH as the responsible ministry would be improved through a dedicated road fund. A stable funding basis would allow more consistent planning and efficient execution of maintenance. Management of the network could be more proactive and less reactive. It is critical to have assurance of funding in advance, particularly when maintenance is done by contract, to provide a stable environment for bidding and contract commitments. A road fund can grant such an assurance for funding even when the general budget situation is fragile. The greater certainty of funding may also enable more effective competitive bidding through the building up of a competent and specialized contracting industry. Assured and stable funding plus a commitment to use the private construction industry are the best incentives for a healthy and competitive environment. This should in turn bring down actual unit maintenance and rehabilitation costs.

1.2.5 Finally, the MOF will no longer have to budget for a considerable recurrent expenditure item and will be secure in the knowledge that road users are paying more directly and equitably for the damage they do to the roads. The Fund might also possibly be used to finance i.) local government roads, thereby potentially taking on a role in improving equity ii.) new and even existing road sector loans, thereby reducing the fiscal burden further iii.) and concession schemes by providing shadow tolls or soft loans to make up the difference between the actual costs and the loan supportable by revenue.
1.3 Reporting

1.3.1 The Norwegian consulting firm Gicon AS (the Consultant) was commissioned by the World Bank to assist the Committee to look into the operating modalities for the proposed road fund in Jordan. The Terms of Reference for a "Paper to Set Out the Operating Modalities for a Proposed Road Fund" are available in Annex A.1. They include clear and specific questions on issues that need to be discussed and clarified. The contents of the paper therefore are structured in accordance with the numbering of tasks in the TOR. Chapter 2 attempts to deal with tasks 6, 7, 8, 17(b) and 24 on the legal establishment of the fund. Chapter 3 deals with requirements and revenues, covering tasks 1 to 5, and 9; while Chapter 4 on managing the resources covers tasks 10 to 15. Finally Chapter 5 on disbursement procedures covers tasks 16 to 23.

1.3.2 This Paper presents the findings of a mission to Jordan during the two weeks from February 24 to March 7, 1997. It has been prepared by Mr. Piers Vickers, seconded from the World Bank, and Mr. Ole Kr. Sylte from the Consultant. The views expressed and conclusions drawn are those of the authors, and are not necessarily shared by the World Bank nor the government.

1.3.3 The basic information needed for this Paper was obtained from the government offices visited in Amman and through discussions with government officials as well as representatives from the private sector. The mission was cordially received in all offices visited and the mission members would like to thank everybody met for the valuable assistance and guidance received; most especially the MPWH for all practical help and for the hospitality extended during the mission’s stay.
CHAPTER 2 ESTABLISHMENT OF THE FUND

2.1  Legal Options

2.1.1  A firm legal basis for a road fund and its board have been shown through experience to be a vital ingredient in the success of any such fund. There are two main legal options. The first is to employ existing legislation, either relating to financial or to traffic/road law. This has two main advantages - it is comparatively straightforward and quick to implement and secondly some experience can be gained prior to setting down more permanent procedures under a new law. For these reasons it is often the preferred option. When existing legislation does not provide for the establishment of a fund, or at least would not provide adequately, the second option is to pass a new law. While this ought to provide for the most solid foundation, passing new legislation can be time consuming. Furthermore, the bill will have to be written prior to the concerned agencies having any experience in the management of a road fund and will have to anticipate likely problems. Loopholes inadvertently written into the law requiring subsequent amendments are therefore more likely.

2.2  Existing Legislation

2.2.1  Jordan does not have a Finance Act as such. There is an axiom, a document carrying the weight of a law but which does not need to pass through Parliament, which governs in general terms the business of the Ministry of Finance. This does not provide the Minister with powers to establish a special account. There is also a law regulating the budgeting process, Law No. 39 of 1962, which is a short document outlining the procedures for preparing and passing the annual budget. The annual budget is prepared as a draft law from August to October by the Budget Department of the MOF. It is put before and debated in Parliament in November and December and comes into effect as the first law of each year on January 1. Neither Law No 39 of 1962 nor the annual budget provide for the establishment of a special account.

2.2.2  In place of a Finance Act, much of the business of taxation and public spending in Jordan is governed by general statements in the constitution, the overarching law of the land. Two articles of the constitution at least are pertinent here. The first is Article 111. This states that:

\[\text{No tax or duty may be imposed except by law. Taxes and duties shall not include the various kinds of fees which the Treasury charges in respect of services rendered to members of the public by government departments or in consideration of benefits occurring to them from the State domain. In imposing taxes, the Government shall be guided by the principles of progressive taxation coupled with attainment of equality and social justice, provided that taxation shall not exceed the capacity of tax payers or the State’s requirements for funds.}\]

The question then arises of whether the proposed road user charges would constitute a tax or a fee under Jordanian law. This is clearly a matter of interpretation. The legal department in the MOF could not say unequivocally either way at this stage, but recommended that, in the face of such uncertainty, a new law was far preferable.

---

Unofficial translation made by the legal adviser to the MPWH.
2.2.3 The second is Article 115. This states that:

*All receipts from taxes and other sources of government revenue shall be paid into the Treasury and shall be included in the government budget, save where otherwise provided by law. No parts of the funds of the Treasury may be appropriated or expended for any purpose whatever except under the law.*

This also raises the question of whether road user charges destined for the road fund still constitute government revenue - again perhaps a matter of interpretation rather than fact. If it does, then clearly a new law will certainly be required if revenues from road users are to be paid direct into a special account rather than transiting first through the Treasury. One option which can be employed in the latter case is that the deposit into the consolidated fund can be a paper transaction only, as happens in a number of other road funds. The actual cash goes directly into the road fund bank account.

2.2.4 Overall, the existing financial legislation appears not to provide for the establishment of any special account. Moreover, some articles of the Constitution would indicate that any new revenue source, a fuel levy for example, would require the backing of a new law.

2.2.5 Other laws which were also explored to see if they provided for the establishment of a road fund included the Ministry of Transport Law of 1971 and the Road Law, No. 24 of 1986. Only the latter holds relevant articles. The first is Article 29. This states that any revenues collected from the provision of road transport services will be paid to the Ministry of Finance; and will be used to finance the maintenance of those roads. This spending will be based on a plan presented by MPWH to the Council of Ministers. The latter will endorse the plan through the issuing of a regulation which will include the method of transferring the revenues to the MPWH. It is understood that this article was intended to cover the imposition of toll roads. Currently it is being used only to collect a fee from foreign diesel powered vehicles at the border. This fee is designed to make up for the difference between subsidised Jordanian and neighboring countries’ higher diesel prices (see Section 3.5 below). The second is Article 33, which states that the Council of Ministers shall, on the request of the Minister for Public Works, direct the enacting by regulation of any actions necessary for the implementation of this (the Road) law, including imposing and collecting any fees given approval under this law. Ambiguities in both the linguistic translation and broader interpretation of these articles, particularly the phrase road transport services, means that this report is unable to discount the possibility of using this law to establish a road fund.

2.2.6 A previous report on road transport policy and institutional issues produced for the Ministry of Planning in 1995 by Halcrow Fox, suggested that the existing fuel tax on gasoline provided a precedent for the establishment of a special account. Indeed, this is an interesting case. However, it does not really provide a precedent as suggested. In fact, this fuel tax was put in place by a law, the Law on Councils, No. 29 of 1955. This imposed a per liter tax on gasoline and kerosene (Article 49), along with a certain percentage of vehicle license fees (Article 50). These were to be collected by the appropriate agencies, channeled through the Treasury but allocated to the municipalities and villages for their exclusive use. Municipalities are free to use this source for spending in any sector. The bulk of this spending is likely to be made up by road works

---

5 Revenues from highway traffic services are collected in accordance with Resolution No. 43 of 1977 on traffic fees, Resolution No. 57 of 1977 on charges for traffic services and Traffic Law No. 24 of 1986 and its amendments.
and the provision of waste disposal/environmental services. The law was amended in 1989 and 1994, one purpose of which was presumably to increase the rates. These now stand, according to the law, at 2.2 Fils/litre on gasoline, 1.1 Fils/litre on kerosene and 35% of total annual license fee receipts. The revenue is allocated to the municipalities and villages through the Cities and Villages Development Bank, affiliated with the Ministry of Municipalities, Rural Affairs and the Environment, according to a formula developed and endorsed by Parliament.

2.2.7 The reason why the tax is so relevant to the establishment of a road fund is not that the levy itself might be a candidate for use as a road user charge; rather that the proposed road fund could operate under a similar mechanism. Revenue from the current fuel tax does not form part of the budget and is not recorded in the annual budget law, only in the individual accounts of the receiving municipalities or villages. Therefore, it is protected from the pressures of the annual budget squeeze. However, interestingly, the lawmakers at the time saw fit to continue to channel the revenue through the Treasury, albeit as an extra budgetary item. Furthermore, the actual rates were also written down in the law itself rather than leave this to subsequent regulations, regulations which might be updated more simply. The fuel tax example then would appear to show that the road fund could be made an extra budgetary item through the passing of new legislation. However, it does not provide a precedent for the revenues bypassing the Treasury altogether.

2.2.8 To conclude this Section, it appears highly unlikely that a road fund could be established under any existing legislation, be it financial or other. However, the steering committee for the establishment of the fund will have to consider whether the slim opportunities alluded to above are worth pursuing further. This would probably best be done through the senior legal adviser to the Council of Ministers, (with whom the team for this study was unable to meet), to obtain an unequivocal answer either way.

2.3 Necessary Legislation

2.3.1 In the light of the findings presented in the section above, a draft bill for the consideration of the Ministers of Finance, Planning, Transport and Public Works is attached at Annex A.2. This is based on legislation currently going before Parliament in Malawi and legislation already in place in New Zealand. The bill provides for the establishment of a national road fund administration under the ultimate jurisdiction of the Minister for Finance. The bill sets down in as short and flexible a way as possible, the purpose of the fund; from where the fund is to derive its revenues; the composition and nomination of the road fund board; the general duties of the board’s executive secretary and the secretariat; the preparation and review of road agencies’ annual road maintenance programmes; and general accounting procedures.

2.3.2 One issue which will require resolving prior to the presentation of the bill before Parliament is whether the revenues from existing sources can be deposited directly into the road fund account without passing through the Treasury. This is the preferred modus operandi as it makes the relationship between charges and expenditure on roads even more transparent and protects the fund from income instability. However, likely revenues for the road fund are already collected under existing laws which might conflict with any new law passed. Annual license fees are currently

---

6 There appears to be some discrepancy here however, as the Ministry of Energy records show that 4 Fils/litre is raised on gasoline, 2 for the villages and 2 for the municipalities.

7 Interim Law No 2 of 1989 on vehicle axle loads also relates here.
collected in accordance with regulation No 35 of 1995 under Traffic Law No 14 of 1984, while transit fees are collected under Customs Law No 16 of 1983 (currently going through amendments in Parliament as part of the Government of Jordan/IMF scheme to improve investment in Jordan). Fines for vehicle overloads are collected in accordance with Traffic Law No. 14 of 1984 and Interim Law No. 2 of 1989 on vehicle axle loads. All these state that revenues should be deposited with the Treasury.

2.3.3 It is unclear whether the new act would be allowed to override these or whether they would require amendment to avoid direct conflict. If it is not, one possible solution is for the road fund administration act to state that revenues are to be deposited directly into the road fund, except where otherwise already provided by law. In this case, revenues are to be paid to the Treasury which is in turn to transfer the whole amount owed at the earliest opportunity. This could be a paper transaction in reality as already suggested above. The draft bill includes this caveat in Article 9.

2.3.4 Given that Parliament is now in recession until the end of the year and the initial effect of the legislation is not that far reaching with no extra burden on road users, one option is for the proposed bill, after necessary review and revision by the relevant ministries, to be passed as a temporary law by the Council of Ministers. The law can then be put before Parliament next year for ratification by the two Houses, possibly together with the loan agreement for the proposed Fourth Transport Project.

2.4 Rules and Regulations

2.4.1 A final article in the draft road fund administration bill stipulates that detailed financial procedures and the level of the tariff are to be published in the Government Gazette as regulations by the Minister for Finance as necessary. A draft copy of the first such regulation is attached at Annex A.3.

2.4.2 The existing transfer to the villages and municipalities of the fuel tax and a portion of the license fees would appear to provide a precedent for the receipts into the road fund and its expenditures to be ex budget, whether the charges are first paid into the Treasury or not. The MOF would simply receive the Annual Report, including the audited accounts, which would also be available as a public document the same as any commercial public limited company. However, if the MOF decide that the fund does have to be documented in the budget, all the receipts could be included in the “Other Receipts” line in the miscellaneous revenues chapter with a note provided to show the total amount received into the Road Fund. Equally, the expenditures could be shown as an extra line item under the Chapter 41/1 of MOF, Current Expenditures, Programme E, Subsidies for Special Agencies.

---

8 Neither are included in the Budget law, with the line item for license fee revenues including only 65% of total receipts, the rest going to the municipalities.
CHAPTER 3 REQUIREMENTS AND REVENUES

3.1 Introduction

3.1.1 Due to a number of factors it has proved particularly difficult to project forward the potential maintenance and rehabilitation requirements of both the MPWH and other road agencies. These factors include the lack of a sufficiently detailed survey from which the residual life and deflection of the network can be determined; and the sensitivity of the projections to future road usage, itself dependent on external factors such as economic growth and regional stability. Hence, projections on needs and revenues have been kept as simple as possible by ignoring inflation and any speculation on potential growth. Neither has this report attempted to estimate the size of the backlog.

3.2 Road Network and Responsibilities

3.2.1 The length of the network and the responsible agencies are shown in Table 3.1 below.

<table>
<thead>
<tr>
<th>Road classification</th>
<th>Responsibility</th>
<th>Length (kms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>MPWH</td>
<td>2843</td>
</tr>
<tr>
<td>Secondary</td>
<td>MPWH</td>
<td>2116</td>
</tr>
<tr>
<td>Village</td>
<td>MPWH</td>
<td>2082</td>
</tr>
<tr>
<td>Roads in Amman</td>
<td>MGA</td>
<td>2140</td>
</tr>
<tr>
<td>Municipal</td>
<td>Municipalities</td>
<td>&gt;3000 9</td>
</tr>
<tr>
<td>Rural</td>
<td>Jordan Valley Authority/MOA</td>
<td>n/k</td>
</tr>
<tr>
<td>Rural</td>
<td>Village council/JSC</td>
<td>n/k</td>
</tr>
</tbody>
</table>

Sources: MPWH, MGA

3.2.2 MPWH are responsible for perhaps the majority of the total network. They have recently undertaken a thorough visual survey of the roads under their jurisdiction and the total length of 7,401 kms is surely an accurate figure. The classified road network has been subject to very considerable expansion over the last few decades and has more than doubled since 1970. The condition of this network is shown in Table A.4.1 in Annex A.4. Overall, the survey found that the primary and secondary roads at least were currently in reasonable condition from a visual perspective although more thorough structural survey may well support a less optimistic view.

3.2.3 Likewise, the Municipality of Greater Amman also has a fairly detailed inventory of the roads under its jurisdiction. Among these roads are some of the highest trafficked roads in Jordan with more than 50,000 vehicles per day. No survey has been carried out to establish the overall condition of the Amman road network, but it was reported to be reasonable. This was also the mission's own impression from the few vehicle trips made within the city.

9 An estimated figure. The city of Irbid, the second city of Jordan, alone is responsible for 700 kms of paved municipal roads.

10 JSC are Joint Services Committees, which consist of representatives from a number of village councils who come together to provide services thereby enjoying some economies of scale.
3.2.4 Thereafter, it becomes difficult even to quantify the road network. Municipalities are responsible for the roads within their jurisdiction, unless they are links included in the classified road network. The Ministry of Municipal and Rural Affairs and the Environment has recently written to all the municipalities requesting information on the length of their networks, but the aggregated data may not be available for some time yet.

3.3 Maintenance and Rehabilitation Needs

3.3.1 There is little doubt that insufficient funds are currently being allocated to the maintenance of the road network in Jordan and that this has been the case for some years. Moreover, due to age of the network, much of which is drawing near to its design life; absence of regular maintenance; and the short term fixits often employed in the face of budgetary shortages\(^\text{11}\), there is certainly a considerable latent burden hidden under Jordan’s road surfaces. However, although MPWH have tried to estimate the size of the burden, this is a very inexact process due to the lack of any thorough condition survey on which residual life and roughness can be estimated. To compound matters, there is no information on the condition of those roads outside the jurisdiction of the MPWH.

3.3.2 There have been a number of recent estimates of the maintenance and rehabilitation needs. First, the MPWH has recently compiled its own estimate of the requirements for the next five years based on the visual survey. Their projection is shown in Table 3.2 below.

Table 3.2 MPWH Proposed Five Year Road Maintenance Plan Budget, Million JDs

<table>
<thead>
<tr>
<th>Year</th>
<th>Portion of Rehabilitation needs</th>
<th>Inflation Factor %</th>
<th>Budget for Rehabilitation</th>
<th>Budget for Routine Maintenance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>15</td>
<td>5</td>
<td>15.75</td>
<td>6.00</td>
<td>21.75</td>
</tr>
<tr>
<td>1999</td>
<td>15</td>
<td>10</td>
<td>16.50</td>
<td>6.60</td>
<td>23.10</td>
</tr>
<tr>
<td>2000</td>
<td>15</td>
<td>15</td>
<td>17.25</td>
<td>6.90</td>
<td>24.15</td>
</tr>
<tr>
<td>2001</td>
<td>16</td>
<td>20</td>
<td>19.20</td>
<td>7.20</td>
<td>26.40</td>
</tr>
<tr>
<td>2002</td>
<td>16</td>
<td>25</td>
<td>20.00</td>
<td>7.50</td>
<td>27.50</td>
</tr>
<tr>
<td>Total</td>
<td>77(^\text{12})</td>
<td></td>
<td>88.70</td>
<td>34.20</td>
<td>122.90</td>
</tr>
</tbody>
</table>

Source: MPWH

3.3.3 Halcrow Fox and Associate (HFA) made an estimate of funding needs as part of the Road Transport Policy and Institutional Issues Study (Final Report of March 1995) and concluded that about JD 13 million would be required in 2003 for maintenance and rehabilitation. Norconsult International AS reviewed the HFA estimates in May 1996 (Working Paper) and found that the needs were underestimated by HFA, especially for resurfacing and rehabilitation. Norconsult's conclusion was that about JD 19 million would be needed for maintenance and a further JD 6 million for strengthening and reconstruction.

3.3.4 Broad estimates of the maintenance and rehabilitation needs of the MPWH network alone are constructed in this report in Tables A.5.1 to A.5.5 of Annex A.5.

\(^{11}\) Cheaper designs are achieved by reducing the design life to well below what would normally be recommended.

\(^{12}\) The size of the backlog as estimated by MPWH.
The purpose of these estimates is to provide a preliminary plan for the next five years, and to help justify the establishment of a road fund together with a certain level of initial funding. Note, that these estimates are based on an incomplete knowledge of the structural state of the network and will most certainly require revision as survey information improves. Table A.5.1 gives the unit costs per lane kilometre for routine, recurrent, resurfacing and rehabilitation on different types of roads based on MPWH best estimates. The costs of recurrent maintenance alone are assumed to be dependent on the condition of the road. Table A.5.2 then projects how many lane kilometres will be subjected to the different maintenance activities. It assumes that all roads will be maintained on a routine basis, recurrent works will not be carried out on condition 1 (failed) and 50% of condition 2 (poor), and resurfacing is conducted approximately every ten years. In Table A.5.3, the number of lane kilometres subjected to rehabilitation is estimated based on the assumption that each lane kilometre will be rehabilitated every 25 years. No account is taken for any existing backlog, as this has yet to be quantified. The number of lane kilometres requiring rehabilitation each year are further divided into two portions, one possibly to be financed by the Road Fund and one through the existing mechanism, i.e. the consolidated budget. This division is arbitrary.

3.3.5 The total resulting needs (Table A.5.1 multiplied by Tables A.5.2 and A.5.3) are shown in Tables A.5.4 and A.5.5 for maintenance and rehabilitation respectively. The costs to maintain the network are between JD 13 to 15 million per year and rehabilitation approximately a further JD 18 per year. Once more detailed figures for the condition of the network are available the estimate for rehabilitation in particular may be found to be conservative.

3.4 Maintenance and Rehabilitation Allocations from the Consolidated Budget

3.4.1 Although MPWH are able to supply some figures for the expenditure on routine maintenance and resurfacing for the last few years, it is unclear what proportion of labour costs exactly these figures include in relation to the routine works which are done by force account. The budget law of 1996 shows an estimated expenditure on salaries, wages and maintenance and repairs (under chapter 58/2, Program B, Project 2) for the year 1996 only but not for the previous two years. Moreover, salaries are also included in the current expenditures, Program B (roads). Estimating current allocations for road maintenance is therefore not as straightforward as it might seem, but Table 3.3 below represents one such estimate. Given a length of the classified network of 7,041 km, the all inclusive allocations in recent years for maintenance have been about JD 1,300 ($2,000) per km and year.

<table>
<thead>
<tr>
<th>Table 3.3 Road Maintenance Allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine</td>
</tr>
<tr>
<td>Periodic</td>
</tr>
<tr>
<td>Salaries and wages</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

13 These figures are actually entered under the capital expenditures rather than current expenditures in the budget
14 e denotes estimated figure
3.4.2 Estimating present annual expenditures on rehabilitation is also rather difficult. The figures from the Budget Law for 1996 - Programmes “Technical and Works Directorate and Centre” and “Roads, Construction of the Roads” - indicate that capital expenditures in the roads sector have been in the region of JD32 million per year for the last three years. This does not include a further JD11 million financed by foreign loans and grants allocated through the Ministry of Panning. It is not possible to determine what portion of these total annual expenditures are rehabilitation and which new construction. Indeed, many sub-projects probably include a bit of both types of works and no clear distinction is possible. However, the figures do demonstrate that if the GOJ were to decide to finance some of the rehabilitation needs through the Road Fund, then it would be justified to direct some portion of existing user charges to the Fund and reduce the contribution from the consolidated budget accordingly (see Section 3.6 below).

3.5 Existing Charges and Taxes on Vehicle Owners

3.5.1 There are two important but somewhat opposing factors which will influence the ability of the proposed road fund to raise extra revenue in the future for the conservation of the road network from the users. First, vehicle owners are already subjected to high levels of general taxation and charging. Table 3.4 below provides a conservative estimate of the revenue collected from vehicle owners and deposited into the consolidated account.

Table 3.4 Existing Charges and Taxes on Vehicle Owners, JDs actual

<table>
<thead>
<tr>
<th>Charge/Tax Type</th>
<th>1994</th>
<th>1995</th>
<th>1996</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit Fees</td>
<td>8,478,365</td>
<td>8,922,880</td>
<td>9,351,617</td>
<td>8,917,620</td>
</tr>
<tr>
<td>Overloading Fines</td>
<td>6,729,000</td>
<td>5,000,000e</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Licensing Fees</td>
<td>13,194,630</td>
<td>14,686,591</td>
<td>18,192,648</td>
<td>15,357,950</td>
</tr>
<tr>
<td>Registration Fees</td>
<td>6,326,691</td>
<td>7,322,288</td>
<td>9,509,511</td>
<td>7,719,500</td>
</tr>
<tr>
<td>Plates Utilisation</td>
<td>5,220,000</td>
<td>5,279,690</td>
<td>6,001,705</td>
<td>5,500,500</td>
</tr>
<tr>
<td>Driving License Fees</td>
<td>1,157,747</td>
<td>2,933,421</td>
<td>4,574,125</td>
<td>2,888,400</td>
</tr>
<tr>
<td>Fuel Tax (gasoline only) e</td>
<td>2,404,744</td>
<td>2,558,284</td>
<td>n/k</td>
<td>2,481,514</td>
</tr>
<tr>
<td>Sales Tax (10%) e</td>
<td>10,000,000</td>
<td>10,000,000</td>
<td>10,000,000</td>
<td>10,000,000</td>
</tr>
<tr>
<td>Highway Traffic Services</td>
<td>8,486,000</td>
<td>8,933,000</td>
<td>11,200,000</td>
<td>9,540,700</td>
</tr>
<tr>
<td>Customs Duties</td>
<td>n/k</td>
<td>n/k</td>
<td>n/k</td>
<td>n/k</td>
</tr>
<tr>
<td>Unofficial gasoline surcharge</td>
<td>n/k</td>
<td>n/k</td>
<td>n/k</td>
<td>n/k</td>
</tr>
<tr>
<td>Total</td>
<td>61,997,177</td>
<td>65,636,154</td>
<td>72,829,606</td>
<td>67,649,184</td>
</tr>
</tbody>
</table>

Sources: Customs Department, Vehicle Licensing Department, Budget Law of 1996

This does not include the unofficial gasoline surcharge which is the difference between the border and the retail prices, about 100 Fils/litre - a sum of perhaps a further JD 60

---

15 e means estimated

16 Sales tax estimates from 10,000 unit imports @ JD 10,000 each all paying 10%

17 This is a charge levied under the Road Act of 1986 (see section 2.2) designed to cover toll roads, but now used by the Customs Department to collect fees from foreign trucks leaving Jordan. The charge is levied to make up for the difference in price between Jordanian and neighbouring country prices for diesel.
million. A high level of taxation might be expected on the non-essential good of motor transport in a middle income country such as Jordan. However, the result is that the willingness to pay further, albeit directly for the upkeep of the road network, is very much curtailed. This is most especially true for car owners.

3.5.2 The second factor which operates in an opposite manner, is that there are a relatively large number of vehicles with high utilisation rates for the size of the road network. Consequently, a comparatively small increases in unit user charges can have a significant impact on revenue without hitting individual users too hard. The next section demonstrates this further.

3.5.3 Various studies have addressed the issue of cost recovery of the road sector and if different types of vehicles currently carry their fair share of the damage imposed on the road. The HFA study found that present road user charges are neither closely linked to the use made of the roads, nor equitably distributed between different road users and the variable damage they do the roads. The study found that in order to ensure equitable cost recovery from road users, the price on each heavy goods vehicles would be between JD 2,000 and JD 3,000 per year, based on an estimated expenditure of about JD 100 million for construction and maintenance, including about 20 per cent administration cost.

3.5.4 In comparison to the above estimate, the present charges are very low. For example the annual license fee structure, shown below in Table 3.5, does not adequately recover charges from different types of vehicles according to the level of damage they cause. This is compounded by the subsidy on diesel and the surcharging of gasoline. It is clear that heavy vehicles at present do not cover their marginal cost. The additional two user fees, heavy vehicle fee and diesel levy, recommended below in Section 3.6, would contribute to an improved structure of road user charges, to reflect better the true costs involved.

Table 3.5 Annual License Fees, in JDs

<table>
<thead>
<tr>
<th>Type of Vehicle</th>
<th>Type of Engine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gasoline</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>35</td>
</tr>
<tr>
<td>Private car</td>
<td>20-240</td>
</tr>
<tr>
<td></td>
<td>20-90</td>
</tr>
<tr>
<td>Public cars</td>
<td>20-30</td>
</tr>
<tr>
<td>Buses</td>
<td>45-55</td>
</tr>
<tr>
<td>Truck (3 t)</td>
<td>35</td>
</tr>
<tr>
<td>Truck (10t)</td>
<td>49</td>
</tr>
<tr>
<td>Truck (15t)</td>
<td>59</td>
</tr>
<tr>
<td>Agricultural tractor</td>
<td>40</td>
</tr>
<tr>
<td>Non agricultural. tractor</td>
<td>30</td>
</tr>
<tr>
<td>Trailer and semi- trailer</td>
<td>4/t</td>
</tr>
</tbody>
</table>

Source: Vehicle Licensing Department, Ministry of Interior

3.5.5 Both the Vehicle Licensing Department and the Customs Department indicated that, to the best of their knowledge, no significant avoidance or evasion of payment of

---

18 See section 3.6.4 below.
19 According to Regulation No. 35 of 1995
20 By engine size.
21 Diesel engine cars are not allowed simply for private use.
transit and license charges was occurring. However, no study had been conducted to confirm this. Given the lack of detailed data, it is impossible for this study to quantify any such losses and therefore to speculate if extra revenue might accrue with improved collection procedures. As such, the revenues from these sources should not be expected to rise apart from through higher unit charges, or increased traffic or a rising vehicle stock.

3.6 Road Fund Requirements and Potential Sources of Revenue from User Charges

3.6.1 It is important to make a distinction between the requirements to keep the road sector in a stable long term condition as a whole and the requirements for the Road Fund as one, albeit very significant, part of the potential financing plan. Three income and expenditure scenarios for the Road Fund are shown in Annex A.7. The construction of these three financing plans is explained below.

3.6.2 It has been shown that the total needs to keep the MPWH network stable is about JD 31 (13 + 18) million per year. However, it is not proposed that the Road Fund should try to finance this whole amount straight away. What is proposed is that the Road Fund should, as a minimum, certainly finance the maintenance requirements for the MPWH network estimated in Section 3.4 above. In addition to this it will also have to provide for the administrative cost of the fund itself and the repayment of any new loans which it takes out. It might further be reasonably expected to support:

i.) the administrative costs of the roads maintenance section of MPWH;
ii.) an outreach programme to inform the public of the work of the board (see section 4.2.6 below);
iii.) policing and axle load enforcement costs;
iv.) a portion of the costs of maintaining the local government road network; and
v.) physical road safety improvements.

Estimates for all these additional expenditures are included in all three income and expenditure scenarios presented in Annex A.7.

3.6.3 There are several broad options for raising the revenue for the Road Fund: first, use some portion of the existing road user charges outlined in the Section 3.5; second, put an entirely new set of charges in place; or finally, have a mixture of old and new. Whatever is chosen, the main principle is no extra abstraction of general government revenue for the Road Fund than is already allocated to road maintenance and rehabilitation through the budget.

3.6.4 It is difficult to see how the first option could fulfill fully the role of fee for service as, apart from the fuel tax for the municipalities which this study regarded as immutable, there are no existing formal charges on fuel, the most equitable and practical proxy for road usage. Moreover, the current structure of road user charges is inequitable with owners of small vehicles paying relatively more than owners of larger ones. The second option is likely to be unacceptable in the current political environment as well as more time consuming to implement. This leaves the last option, a mixture of old and new charges, as the most practical way forward.

3.6.5 Turning first to the existing charges, the problem is to find some combination of charges which are both appropriate as road user charges and together add up to the existing allocation from the budget to road maintenance. Directing all the fines for overloading and all transit fees into the road fund account would appear to fulfill to a large extent both of these requirements. They are most certainly appropriate road user charges, relating particularly to the overloaded and foreign vehicles which MPWH see as such a threat to the condition of the network. However, the estimated receipts for the
first year are a little above what is currently allocated from the budget. However, the government, with the assistance of the World Bank, intends to strengthen further axle load enforcement in Jordan, and would deploy a number of movable weighbridges for this purpose. It is expected that this would result in a reduction of overloading to point where revenue from fines is equivalent to the costs of enforcement. Hence, the revenue from the fines from overloading can be expected to fall significantly once the stricter enforcement implemented as part of the Third Transport Project comes into effect\(^{22}\). So, while in the first year there may be some small net loss to the Treasury, this loss can be expected to disappear in future years.

3.6.6 Collecting some levy on fuel would represent an appropriate means of financing road maintenance. Yet, collecting a levy on fuel is complicated by the nature of the fuel pricing structure in Jordan. The retail fuel prices and many of the production components which make up that price are controlled by the Council of Ministers. The construction of the pump prices is far from transparent (see Table A.6.1 in Annex A.6), with a surcharge of approximately 100 Fils/litre being imposed on gasoline between the border price and the price ex refinery. So, although gasoline is not officially taxed, the GOJ receives considerable revenue from its sale. Part of this revenue could be converted into a per litre levy payable to the Road Fund provided MPWH were to receive a corresponding decrease in the amount of funding from the consolidated budget in the year of the conversion. Thereafter, in order to raise additional revenues to meet the expected shortfall, the increases in the gasoline levy could be achieved through retail price rises\(^{23}\).

3.6.7 Turning next to new charges, emphasis should be placed on improving the distribution of charging on road users by applying relatively higher charges to the trucking industry. This could be done in two principle ways. First by collecting a per litre levy on diesel and second through the imposition of an additional annual heavy vehicle fee. The latter is relatively straightforward and could be effected at the same time as owners renewed their vehicle license. Heavy vehicle fees are often recommended as diesel levies alone would have to be very high to capture all the costs imposed on the roads by trucks.

3.6.8 A diesel levy would, on the other hand, present a number of administrative problems, namely:

- the pump price is currently subsidised (by a cross subsidy from gasoline, amongst other things) so any levy will cause a corresponding retail price rise if further subsidy is not to ensue;
- less than fifty percent of total consumption is for transport purposes (see Table 3.6 overleaf) so that a mechanism to repay to, or not imposing the levy on, non transport users will have to be put in place;
- much of the road damage is caused by diesel using traffic from neighbouring countries and such vehicles may be encouraged to buy their fuel elsewhere and stock up for their transit in Jordan; and
- the differential between kerosene and diesel (10 Fils/litre) is already sufficient for some mixing of products, and to minimise further substitution will require kerosene prices to rise at the same rate as diesel.

\(^{22}\) The current system does allow truck operators with permission from the Government to pay up front for the right to drive overloaded vehicles.

\(^{23}\) Alternatively, if this is unacceptable, the rise in the levy could be effected by a further equivalent reduction in the transfer from the consolidated budget to MPWH for rehabilitation.
### Table 3.6 Diesel Consumption by Sector, in 1,000 tonnes

<table>
<thead>
<tr>
<th>Sector</th>
<th>1995 Consumption</th>
<th>1995 %</th>
<th>1996 Consumption</th>
<th>1996 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>477</td>
<td>46</td>
<td>498</td>
<td>46</td>
</tr>
<tr>
<td>Domestic (heating)</td>
<td>36</td>
<td>4</td>
<td>38</td>
<td>4</td>
</tr>
<tr>
<td>Industrial</td>
<td>118</td>
<td>11</td>
<td>130</td>
<td>12</td>
</tr>
<tr>
<td>Electricity</td>
<td>111</td>
<td>11</td>
<td>163</td>
<td>15</td>
</tr>
<tr>
<td>Others(^\text{24})</td>
<td>289</td>
<td>28</td>
<td>254</td>
<td>23</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1033</strong></td>
<td><strong>100</strong></td>
<td><strong>1083</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Ministry of Energy and Natural Resources

3.6.9 Taking all these factors into account, three illustrative scenarios are presented in Annex A.7 for the consideration of the relevant Ministries, participants at the forthcoming seminar and the Board. *Clearly the number of options of which works to be financed and from where the revenue should raised are infinite and in no way should these three be read as recommended models to be followed exactly.* On the expenditure side, the first two scenarios (Tables A.7.1 and A.7.2) do not include any rehabilitation while the last one does incorporate a rehabilitation programme growing from JD2 million in the second year to JD10 in the fifth year. The balance of the rehabilitation programme would continue to be financed, as presently, through the consolidated budget. On the revenue side, all the scenarios include the imposition of a diesel levy while two also include a heavy vehicle fee. In Table A.7.3, which includes some portion of the total rehabilitation needs, the extra expenditure is raised through the conversion of a portion of the existing surcharge on gasoline to a per litre levy\(^\text{25}\).

3.6.10 A separate study has already been conducted on the feasibility of the introduction of toll roads on some of the more heavily trafficked routes in Jordan. This report has not considered toll revenues as a potential source of income for the road fund for two reasons. First, it is very uncertain when and how any toll roads might be introduced. Second, if some roads are tolled, perhaps as a concession, it is likely that the revenue will only provide for a return on the investment and the upkeep of that road, rather than the network more generally. Indeed, the road fund might find itself supporting the concessioning of roads by providing soft loans to make up the difference between actual costs and loans supportable by revenue alone.

---

\(^{24}\) Others include agriculture, irrigation, commercial and service industries

\(^{25}\) Such a transfer could equally be effected by converting some portion of the existing receipts from annual license fees. However, from an administrative point of view it would probably be simpler to employ a per litre levy on gasoline and have the JPRC deposit the revenue on a monthly basis into the road fund account.
3.7 Borrowing

3.7.1 Borrowing might potentially play a role in the Road Fund’s finances. There is likely to be a substantial backlog of work which will require upfront financing. This could be financed through the consolidated budget or at least partially through the Road Fund. Whichever, there will be a front heavy spending profile. If the Road Fund were to finance part of the backlog, in order to reduce the initial effects on the road users, loans could support this profile in the short term until such point that road user charges alone can provide sufficient revenue. Even ignoring the backlog, if the level of user charges estimated just to maintain the network is deemed unacceptable, again loans could facilitate a delay in the increase in charges.

3.7.2 A number of different sources of borrowing can be identified, including: GOJ development funds; development bank loans such as from the World Bank; and the private sector, both domestic and international, with or without guarantees from an international financial institution. This latter source was explicitly identified in the terms of reference for this study; in particular the possibility of the road fund administration issuing bonds. The terms of reference also alluded to the possibility of an overdraft facility to meet short term revenue needs.

3.7.3 It would seem highly unlikely that the GOJ would be willing to provide extra funds for any part of the road maintenance or rehabilitation programme. The MOF have consistently stressed their position that, while they fully endorse the notion of imposing a form of surrogate market discipline on the road sector, this was not to be at the expense of other public sector programmes.

3.7.4 Funds could be raised from the private sector through the Road Fund issuing bonds, a source of income which is within the scope of the draft bill. However, bonds are not a particularly appropriate form of financing a continuous road programme. Bonds provide a one off lump sum when regular installments are what is really required. So loans, either from domestic of international commercial banks, would appear to be a better potential way of the Road Fund borrowing. The size of loan which might be realistic would be in the region of $50-125 million, paid out over five years and repayable over 10-12 years. The World Bank could possibly provide a partial risk guarantee for some portion of the amount borrowed. This could guarantee investors against debt service default due to non-performance of governmental obligations and future changes in the law. The Bank would cover only the minimum portion of debt service required to ensure financing.

3.7.5 However, the potential for the domestic private sector at least to provide loans, through the fund issuing bonds or otherwise, is severely limited by the strict credit ceiling agreements imposed by the GOJ and IMF. The fear is that any domestic borrowing for roads will soak up the liquidity for investments in other sectors. The Board will have to work within this tight macroeconomic climate to find extra resources, and loans may represent one way forward.

3.7.6 It is important to remember that borrowing is not free. Excessive commitments to repay loans or other instruments for financing works can quickly reduce the very responsiveness which the new arrangements are trying to encourage. The draft legislation, while identifying a number of different sources of revenue, makes it quite clear that the maintenance of the classified network comes first. Any money left over can be used, in competition with other items such as road safety, for repaying new loans or commitments to share or bond holders. The Board will need to remain wary of

---

26 The World Bank has recently provided such a guarantee in the telecommunication sector.
mortgaging the future revenue stream too heavily thereby removing the very responsiveness and flexibility which the proposed new arrangements are trying to achieve.

3.7.6 There would seem to be a good argument for the World Bank to provide some limited funds for technical assistance for the first few years under the proposed Fourth Transport Project. This would first ensure that the administration cost of the fund itself, a new spending item as far as Jordan is concerned, was found from external sources to start with. Second, it would help to ease the transition, priming the fund and demonstrating World Bank confidence in its potential value. For these reasons, this study has included a loan totaling approximately US$ 1 million from the World Bank over the first three years of the fund’s life, repayable by the fund itself.

3.7.7 On the issue of an overdraft, the nature of the road programme in Jordan is such that there should be no need for the fund to have an overdraft facility, provided that works are planned and implemented according to a workable plan 27. However, as payments might be erratic for the first few years until the system is running smoothly, an overdraft facility should be available provided it is to finance only short term borrowing resulting from delays in deposits or other short term cash flow problems.

---

27 In the event of a national emergency, as was brought about by severe weather in 1992, central government funds would be expected to be brought to bear.
4.1 Purpose of the Road Fund

4.1.1 The purpose of the National Road Fund Administration (NRFA) is detailed in the draft Act and Regulation, included as Annexes A.2 and A.3. It would essentially be to provide an adequate and stable flow of funds for road maintenance and rehabilitation of classified roads and to enhance the transparency between revenues collected from road users and the spending on the road network. It would further provide a direct linkage between the road users and the road agencies that are spending the money to provide an agreed service.

4.1.2 What road costs should then be recovered from the road users? And should the road fund cover only maintenance or should it also be used to finance rehabilitation of existing roads and even new construction? The concept of "fee for service" implies that road users should at least pay for the damage caused by the passage of vehicles. Road user charges should at least cover the marginal cost of maintaining and operating the road system as opposed to network expansion. In this context, maintenance is interpreted as routine, recurrent and resurfacing works, including seals and overlays on paved roads. The expansion of the road network and capacity increase can be financed from loans and the general government budget. That capital cost incurred for road provision is excluded from road user charges, also coincides with the current practice in Jordan, in that municipalities are charging owners of adjacent plots half the initial construction cost of roads that are serving their property. Cost of rehabilitation is a somewhat grey area in relation to a fair definition of attributable road user cost. Rehabilitation involves by definition all work to restore a road to its original design standard. But if rehabilitation is needed because of lack of maintenance, it can be argued that the cost should be charged to road users.

4.1.3 Looking at the road funds that have been established up to now, it is seen that most funds are set up primarily to finance maintenance. Initially, the level of user charges are set to equate with allocations pertaining at the time of establishment and are then progressively increased to meet all basic maintenance requirements. However, some established road funds also finance road rehabilitation, and one (South Africa) also finances new investment. It is recommended that the Road Fund in Jordan should have as its first charge to cover maintenance and then to include rehabilitation and other road related expenditures as the revenues are increased.

4.1.4 Another question is what types of road the road fund should cover. Should it be for the classified road network only, or should it also cover municipal roads and other rural roads? The MPWH road network represents the backbone of surface transport in Jordan and it is in the interest of the nation to preserve it. It would seem obvious that the MPWH road network therefore would be the first priority for financing from the road fund. On the other hand it is clear that more than half the number of vehicles in Jordan are registered in Amman, and it can be argued that they should have their share of the road user charges collected. It was noted that some road user charges are already collected to the municipalities under the Council Law. This includes a fuel tax on gasoline of 2.2 Fils per liter and 35 per cent of the annual vehicle license fees. These collections are not dedicated to road maintenance, but they nevertheless represent a share of the road user charges and a contribution to the municipalities’ general budgets.
4.1.5  Taking the above arguments into account and the limitations of the fund for some
time to come, it is recommended that the Road Fund, apart from its own administration
and that of MPWH, should provide financing for:
(a) the maintenance of all classified roads under the jurisdiction of MPWH
    as its first charge;
After fulfilling all its obligations under (a), the Road Fund would also be expected to
pay out on other items including:
(b) the maintenance of all classified roads under the jurisdiction of the
    municipalities and villages, including the Municipality of Greater Amman;
(c) the implementation of selected road safety projects
(d) the maintenance of unclassified roads; and
(e) the rehabilitation of MPWH roads.
4.1.6  On item (b) it is recommended that the proposed Road Fund share the costs of
road maintenance with local governments on the basis of a formula to be developed by
the Board and agreed with MOMRAE at a later stage.  Such a cost sharing mechanism
has the twin benefit of helping to leverage more funds for road maintenance as well as
helping to ensure that local governments only carry out work of high priority.  In
Lebanon, it is intended that the Road Fund will transfer 15% of total revenues to the
Ministry of Municipalities as a contribution to the maintenance of urban roads.
4.1.7  In the longer term, the Proposed Road Fund could potentially also provide
resources for activities which reduce congestion; for the repayment of existing loans;
and for soft loans or shadow tolls to make good the difference between actual costs and
the loans supportable by revenue on concessioned roads.

4.2  Objectives of the Board

4.2.1  The Administration will be established as a corporate body, capable of suing
and being sued in its corporate name, as spelled out further in the draft bill at Annex
A.2.  The operations of the Administration shall be managed and controlled by a Board.
The broader objectives of the Board would be to set and revise the Road Fund's
objectives; appoint the Executive Secretary and secretariat of the Road Fund; monitor
and evaluate the performance of the Road Fund and recommend adjustments in charging
instruments.
4.2.2  It is recommended that the Board should be responsible towards the Ministry of
Finance.  It could be argued whether the Board should be responsible towards the
MPWH, the line ministry responsible for road maintenance of the principle road
network, or perhaps to the Ministry of Transport.  However, it is felt that there are good
reasons for an attachment to MOF.  The strongest argument would probably follow from
the purpose of the proposed Road Fund, which is primarily to provide a financing
mechanism for road maintenance.  Its establishment would not in any principle way
change the functions and responsibilities of the MPWH for road maintenance.  Also the
fact that MOF would be directly involved in approval of any proposed changes to the
level of road user charges, would point to it as being responsible politically.
Furthermore, it is expected that the proposed Road Fund will have a role in financing
the network outside MPWH in future years, at which point a more impartial role is
called for. Hence, this report assumes that it will report to the MOF.
4.2.3  The more detailed objectives of the Board would follow from the purposes of
the fund. First, it should provide adequate funds, and therefore has to review the annual
expenditure programs put forward by the MPWH and other road agencies and decide,
in consultation with the Minister, the annual road maintenance and rehabilitation
program that can be financed from the proposed Road Fund. It would also be required
to recommend to the MOF the desired level of user charges to be paid into the Road Fund. These recommendations would be based on revenue requirements, substantiated by road condition surveys and qualified cost estimates of work.

4.2.4 Secondly, the Board would be responsible for effective and timely transfer of funds. Experience from other countries where road funds have been set up point to evasion of funds and unduly slow transfer procedures as a major constraint. To meet this objective, the Board would prepare and publish procedures for disbursing funds to finance the approved expenditure program, and the nature of certification required to ensure that work has been carried out in accordance with the contract scope and specifications.

4.2.5 Thirdly, the objective of the board would also be to inspire the road agencies towards a more business-like attitude to road management and ensure that funds are spent effectively so that road users get value for the money. A key experience is that road users are willing to pay for better roads, provided they are convinced that funds are spent effectively. To this end, the Board would prepare and publish audited annual accounts for the Road Fund within three months of the end of each financial year, including a selective technical audit. It should also publish an annual report within six months of the end of the financial year.

4.2.6 The Board should be an important catalyst for enhanced awareness among road users of the economic impacts of good roads. It can help persuade the public that increased road spending, financed through road user charges, is worthwhile and also indirectly dictate a more commercially-oriented road agency through the required improved maintenance management systems and cost accounting. Board members will be responsible for listening to and informing their constituents on road related expenditures and the level of charges which result. The Board will have to consider how best to raise public awareness. In other countries public outreach campaigns have been implemented through newspapers, public notices and radio programmes. A small amount has been included for this work in the expenditure estimates in Annex A.7 but it is expected that a more significant amount might be raised from local pressure groups.

4.3 Composition of the Board

4.3.1 The number of members and the representation of the Board reflects its objectives. A small board with few members might be most effective but may on the other hand fail to represent vital interests within the road sector. Thus, it is important to include representation of the key public and private stakeholders. In other countries where road funds have been set up, these considerations have led to boards of between eight and twelve members.

4.3.2 In order to achieve its objectives, the representation should be balanced with members both from the public and the private sector. Representation from the public sector is of course necessary to provide linkage to the responsible ministries involved with road maintenance, as well as to provide political backing for revenue collection and road spending. But it is equally important that the private sector is fully represented in the Board, as the whole rational of the proposed Road Fund hinges on the road users’ willingness to pay more for maintenance in return for better service. The Board provides the forum where representatives of the private sector may have a direct influence on road spending and management. The importance of private sector representation is well documented from other countries. Experience suggest that it is easier to raise road user charges when the Board includes people who represent road users to participate in decisions about road spending.
4.3.3 The composition of the Board has a major impact on its effectiveness. It is vital to have a strong chairman that has the interest of the Board as its first priority and at the same time has sufficient status within the political environment to win support for controversial issues. The chairman should be nominated by the Minister of Finance after consultation with the Board and then appointed by the Council of Ministers. The chairman could come from the private or the public sector. The MPWH would of course have a strong interest in the proposed Road Fund and should be represented in the Board. It is not recommended however, that the chairman should come from MPWH as this could be viewed as lobbying for one of the road agencies involved, and not representing the road users or the public as a whole. The vice chairman should be chosen by the Board themselves from among their members at the first Board meeting.

4.3.4 In the first elected Board all the main ministries involved in the transport sector should be represented. MOF and MPWH are already mentioned. It is also usual to find a representative of Ministry of Transport sitting on a road board. MOT essentially represents the interests of the road transport industry and is expected to take a keen interest in the condition of the roads and the charges paid by the trucking industry. Also the Ministry of Municipalities (MOMRAE) would represent important road agencies and should be represented in the board.

4.3.5 The private sector organizations to be represented on the Board would typically include those such as chambers of commerce, automobile organizations, the truckers, the farmers association and the engineering profession. It is usual to have members on the board who directly represent the transport industry and the business community, as it is essential to win the support of these groups when considering increases in road user charges. Careful consideration needs to be given to whether representatives from the contracting and consulting industry should be included on the Board because of their client relations with the road agencies.

4.3.6 In conclusion it is recommended that the Board shall consist of twelve members, including the Chairman; five ex-officio members being nominees of the Ministry of Finance, Ministry of Public Works and Housing, Ministry of Transport, Ministry of Planning, Ministry of Municipal and Rural Affairs and the Environment; five non-governmental members elected from the Federation of Jordanian Chambers of Commerce, the public transport industry, the trucking industry, the engineering profession and the agricultural community; and finally two other members nominated directly by the Minister. This final category of Board members will allow some flexibility in future years when places for organisations not recognised initially as being important actors are required. The draft legislation has refrained from mentioning specific organisations, again to allow for greater flexibility. However, the actual organisations should be stipulated in the regulations.

---

28 It could be argued that the Amman City Council should be directly represented in the Board, since as much as 60 per cent of all vehicles in Jordan are registered in Amman.
4.4 Nomination of Board Members

4.4.1 The government members will be nominated by their Ministers/Principal Secretaries (Ministries of Finance, Transport, Public Works and Housing, Planning, Municipalities), the non-governmental members will be nominated by the organizations they represent. Additional non-voting members may be co-opted to the Board when required. Members of the Board will be appointed for a period of three years, after which they may be reappointed. Functions of the members would include gathering of information and views about the road sector and dissemination of information about the work of the proposed Road Fund. They should have enough time to devote themselves to the tasks related to these functions and should be compensated for the time spent attending board meetings. Board meetings should be held at least once a month.

4.4.2 It is important that the members are able to represent their constituency and speak on their behalf. They should be elected because of their general high standing and their ability to speak for their constituency. All ex officio members should not be officers holding office below the level of Director of Department or equivalent.

4.4.3 The first meeting of the Board shall be convened by the Minister of Finance. It shall be chaired by a person nominated as Chairman by the Minister and appointed by the Council of Ministers. The members of the Board shall at the first meeting elect a Vice-Chairman from among their members.

4.5 Need for Sub-committees

4.5.1 The TOR ask specifically for a comment on the need to set up one or more sub-committees to the Board. Sub-committees have sometimes been set up under a road board to highlight work in certain areas of the board's objectives or to assist the board to prepare documentation for papers to the Minister. The sub-committee could typically also work with the private voluntary organizations that benefit from the Road Fund, such as the road traffic society. In the case of the proposed Road Fund for Jordan, the Board would not take over the road management functions from the MPWH or other road agencies, although the way they work would be affected to some extent. The MPWH would still remain with the responsibility for management of the principle road network. Road traffic safety, overloading and enforcement of legal axle loads, are all important aspects of road management. It is felt that these issues should be dealt with by the relevant departments and through the normal government structure, rather than subcommittees of the Board. It is recommended, however, and provided for in the draft legislation, that funds could be allocated from the proposed Road Fund to initiate and assist with such work.

4.6 Fund Secretariat

4.6.1 The Board will be assisted by a secretariat headed by an Executive Secretary. An Executive Secretary will be appointed by the Board to perform such functions as the Board may direct or delegate to him or her. The Executive Secretary will also act as secretary to the Board. The secretariat will be responsible for all day-to-day activities of the Administration. It will liaise closely with the MPWH and the other road agencies, but it is expected that it will have its office premises separated from the road agencies.

4.6.2 The role of the secretariat is in broad terms to manage the financial affairs of the Road Fund in accordance with the decisions of the Board. This would entail in more detail that the secretariat is required to ensure that all charges due to the Road Fund
have actually been collected and deposited into the designated bank account. It would further be responsible for the actual accounts, and for keeping records of all transactions through the proposed Road Fund and prepare necessary reports as required by law and the Board. It would also be the secretariat’s obligation to ensure that all disbursements made from the Road Fund are to finance those civil works and administrative costs which form of the approved road spending program and that works are supervised and controlled in an acceptable manner.

4.6.3 Hence, the mix of skills required in the secretariat is largely financial. However, an ability to review programmes prepared by road agencies (i.e. a planning/engineering capacity) will also be essential. It is expected that the secretariat will consist of no more than five regular staff. It is recommended that the secretariat should be recruited from a firm of chartered accountants, as the functions to be performed are basically of an accounting nature. Additional tasks, for example reviewing road programmes, can either be performed by the accountants or they can subcontract to suitably qualified consultants. The cost of this secretariat is to be met by the fund itself, although in the proposed income and expenditure plans presented in Annex A.7 the World Bank will provide a loan to cover its first three years of operation.

4.6.4 The services of the secretariat should be commissioned on a competitive basis from among shortlisted domestic firms. A draft statement of indicative requirements or TOR for recruitment of such services have been included as Annex A.8. The firm commissioned to staff the secretariat should in principle be expected to be well conversant with all the work to be carried out for the Board. The nature of bulk of the work, controlling collection and use of funds, would be familiar to a chartered accountant firm. It is therefore not envisaged that special purpose training would be required. However, due to the unusual nature of the task, a limited amount of technical assistance could be considered by the Board to guide the appointed firm in the initial stages of setting up the Secretariat.
CHAPTER 5 COLLECTION AND DISBURSEMENT PROCEDURES

5.1 Procedures for Collecting Charges

5.1.1 The transit fees are presently collected at ten border stations. The fee is collected as cash by the customs guards and deposited into a local bank account from which it is then transferred to the Central Bank of Jordan on a daily basis. This procedure can continue unchanged. The receipts can be transferred from the Central Bank into the Road Fund bank account on a monthly basis. Returns from the Customs Department can be made also on a monthly basis to the Road Fund secretariat to verify the receipts. A further check could be provided by inspection of the records from Ministry of Interior posts which are also located at the border crossings and record entry and exit of all vehicles.

5.1.2 The existing fuel tax on gasoline and kerosene is collected by the JPRC, deposited to the customs account in Amman every fifteen days, and then transferred via the Treasury to the CVDB on a monthly basis. There is a customs point in the refinery, but this does not currently check on the outgoings of fuel to the retailers, only the reception of crude and collection of the sales tax on lubricants. A similar system could operate for the collection of the diesel levy (and gasoline levy). JPRC would send the per litre levy direct to the Road Fund bank account, providing returns indicating the number of litres leaving the refinery during the month to the road fund secretariat, MOF, MOE and the Customs Department. The customs point in the refinery will have to take on the task of checking the total volume of diesel leaving to verify the sales figures.

5.1.3 There are currently twelve licensing departments, one in each Governorate, and all the different types of revenues from plates fees to drivers licenses are itemised. The receipts are put daily into either the Central Bank (Amman, Irbid and Aqaba) or into commercial accounts, thence onto the Central Bank. The Governorates provide returns to the Vehicle Licensing HQ on a daily basis and in turn HQ makes monthly returns to MOF. It would appear to be straightforward to add the heavy vehicle fee as an additional item with the receipts being transferred into the Road Fund bank account on a monthly basis and returns from the Licensing Department being copied also to the Road Fund secretariat. The supplementary heavy vehicle fee can be collected from users at the same time as existing annual licenses to avoid complications.

5.1.4 The procedures for collecting fines for overloading are to be changed in the near future as part of the component in the Third Transport Project aimed at reducing vehicle overloading. It is expected that the fines will be collected from defaulters at a number of mobile and fixed weighbridges by MOI and the revenues can be paid daily into the Central Bank as stipulated in the existing laws on overloading fines before being deposited on a monthly basis into the Road Fund bank account. The Board will need to put in place its own means of independently checking receipts against the

29 This procedure can continue to be used until such time as the Board may wish to alter the arrangements by, for example, contracting out the collection to a private company. In order to minimise leakage and evasion, it may be preferable also to introduce bank note quality certificates in lieu of cash sold away from the border at recognised outlets. This is currently the procedure in Mozambique.

30 This appears to be a hangover to the days when the collection of the tax was vested in the customs law but this has been superseded by an amendment to the Law on Councils.
number of violations and may consider in the longer term contracting out the collection of the fines to the private sector.

5.1.5 Transit fees and fines for overloading may have to continue to be paid into the consolidated account before being deposited with the Road Fund account to remain in accordance with existing law. One way to improve this system is for their deposit into the consolidated fund to be a paper transaction. The actual cash can be paid directly into the Road Fund bank account.

5.1.6 The Board will need to enter into formal contracts (or at least a memorandum of understanding) with the collecting agencies, be they public or private sector organisations, and negotiate the fee for collecting user charges. A small percentage fee will maximize the incentive on the collecting agencies to improve procedures and minimize leakages.

5.2 Physical Location of Bank Accounts

5.2.1 There are three main options for the location of the Road Fund bank account(s): either, in the central bank of Jordan, or in one or more commercial accounts, or finally a mixture of the two. The feeling expressed in MOF was that the bank account would best belong at the Central Bank. This study endorses this opinion. One small variation would be to have a deposit account at the central bank and to have a current account with a commercial bank into which funds from the deposit account would be transferred as necessary and from which payments, by cheque or electronic transfer, would be drawn. This would help to signal the relative autonomy of the Road Fund from government ministries. There is certainly no need for more than two accounts, both probably located in Amman, as MPWH already have a system in place for paying contractors outside Amman by post or transfer as requested.

5.3 Procedures for Changing Charges

5.3.1 It should be expected that annual funding requirements for road maintenance and rehabilitation may increase. This could come both as a result of inflation or due to heavier road deterioration as well as from the increase in the amount of rehabilitation which the fund is to finance. An appropriate and flexible adjustment mechanism must therefore be put in place so that additional road user charges can be easily adjusted to reflect the changing needs.

5.3.2 The levels of all the road user charges should be stipulated in regulations, and certainly not the legislation, published in the Government Gazette. The Minister for Finance will be the responsible for seeing that these regulations are published as necessary. The Board will receive annually the following year’s programme from MPWH (and perhaps other road agencies in the future). It will debate the size of the programme together with other requirements and then establish a spending estimate for the year. It will also have to plan how the requisite revenues can be raised. The Board will then have to recommend, with justifications, to the Minister of Finance the level of charges necessary to meet the needs. The Minister will in turn consider the implications of the rise in any charges in relation to the macroeconomic environment as a whole, before publishing the charges in the Gazette. It is expected that the charges should be changed no more than once a year, but this may not always be necessary and indeed it is possible that charges might come down as transport patterns change. If the Road Fund is to take out loans, the tariff adjustment mechanism will be a key area which private investors will scrutinize in their evaluation of the level of risk.
5.3.3 One complication is with the transit fees. These are collected under a transit agreement, signed by neighbouring Arab countries in 1977. It requires all vehicles entering Jordan to pay an access charge of three pro mill of the value of goods transported; or four pro mill for non-signatory countries, up to a limit of JD 200 per vehicle and an additional JD 5 on each empty vehicle unit (JD 10 for loaded). Only the limits on the pro value charge and the flat unit rates can be changed by Jordan unilaterally and it is not clear whether even changing these would be acceptable to signatory countries.

5.4 Board Involvement in Maintenance Management

5.4.1 The Road Fund would be set up essentially as a financing mechanism. This implies that the MPWH will retain the responsibility of maintaining the primary, secondary and village roads under its jurisdiction. The objectives of the Board will be related to this purpose and not directly to changing the structure of road management. However, the Board would be charged with responsibilities that indirectly involve the MPWH and other road agencies. It is clear that there has to be close liaison and interaction between the Board and the road agencies. One responsibility of the Board is to ensure that adequate funds are collected. But deterioration of paved roads is insidious, and not easy to predict. The Board therefore has to make sure that the MPWH as the major road agency develops and implements procedures to monitor conditions of roads so that maintenance will not be delayed beyond the point of deterioration at which costs rise steeply. Also the Board must ensure that the road agency monitors the volume and mix of traffic and axle loads to determine priorities for maintenance and rehabilitation. An effective maintenance management information system that covers these conditions as well as cost and performance data, is a basic requirement for efficient planning.

5.4.2 In short the Board needs to know from the MPWH how much money would be required over the next five years, and what would be the implications on road conditions and transport cost if financing requirements are not met. Answers to these questions can only be given from a detailed knowledge of the physical conditions of the road network and the damaging effect of present traffic. The present Maintenance Management System (MMS) installed in MPWH is not functioning well and can only provide some of the answers needed by the Board. It gives some basic inputs needed, such as road lengths and quantities of maintenance elements in the network, but does not provide information required to estimate physical rehabilitation needs nor consequences on transport cost from deferred maintenance. The MMS in the MPWH needs to be improved and it would be essential in a future MMS to include measurements of road roughness as this provides the most direct parameter for estimating vehicle operating cost. The MMS used by MPWH was installed with a primary focus on the needs of the road agency as owner and not so much occupied with the consequences for the road users. The objectives of the Board would require that the MMS is redirected to include monitoring of road condition parameters and facilitate the use of the HDM-III model. It further needs to be improved to program both routine, periodic and rehabilitation work. Both the quantity and performance standards need to be reviewed to reflect level of service and current cost of resources. The MPWH would need to procure suitable equipment for a systematic registration of roughness and rutting on the paved road network.

5.4.3 The Board will be obliged to review the annual expenditure programs put forward by the various road agencies and decide, in light of these requests and in
consultation with the MOF, on the overall size and composition of the road program to be financed through the Road Fund.

5.4.4 The Board would have ensure that work managed by MPWH, whether by contract or force account is cost competitive. To do that, the Ministry would need to improve its cost accounting system to be able to compare unit cost of work by force account with that by contract. The present accounting system does not apportion the cost of support services, such as administration and vehicle maintenance to specific maintenance operations, and therefore cannot be expected to provide comparable unit rates of work. An improved cost accounting system is also required to establish an information bank on unit or element cost of rehabilitation and periodic maintenance. This would be essential to monitor prices of tendered work and thereby the competitiveness of the domestic construction industry.

5.4.5 It is recommended that all resurfacing and rehabilitation work to be financed through the proposed Road Fund should be carried out by contract and procured on a competitive bidding basis. It is understood that this is also the procedure today for MPWH, and that all resurfacing, which is in practice 50 mm asphalt overlay, is carried out by contract. The mission was informed that the Municipality of Greater Amman (MGA) through the Engineering Department carries out a considerable portion of its resurfacing work as force account operations. It was also claimed that the cost of force account was less than comparable contract works. Whether MGA eventually would be allowed to compete on an equal basis with the private contractors for works funded through the Road Fund is not clear at present. The actual procurement of civil contracts would follow basically the same procedures as today. MPWH would call for tenders and evaluate bids, with the Central Tendering Department involved when tenders exceed JD 100,000.

5.4.6 It is recommended that routine and recurrent maintenance of MPWH network at least for some time should be carried out as a force account operation. However, the Board would require that such maintenance included in the annual program is carried out on the basis of a formal agreement with the MPWH. Such an agreement would include the unit cost per km of various types of road and a specification of the scope and frequency of maintenance activities to be carried out. It would also include a description of the technical audit to be commissioned by the Board to ensure that funds allocated are actually spent on routine and recurrent maintenance.

5.5 Transfer of Funds

5.5.1 The MPWH and other road agencies will continue to be the Employer in contracts for resurfacing and rehabilitation. The question is how could funds from the proposed Road Fund best be transferred. The method of transfer should be transparent and should satisfy the Board's need for control of expenditure. It should also be reasonably efficient to ensure payment of certificates in less than thirty days from submission. MPWH would be required to open up a special maintenance account for all disbursements directly from the Road Fund to separate it from salaries and other expenditure paid from the government budget. The funds could then be transferred in three different ways.

5.5.2 First, funds could be transferred to the designated account of the MPWH as the road agency on a quarterly basis in accordance with the agreed budget and annual program of work. The road agency would then spend the money on agreed work and account for the expenditure at the end of the year. This would no doubt give MPWH most flexibility and would entail little change from the present system of allocations from the government budget. It would simply mean that that funds come from the Road
Fund instead of from the Treasury. But it would not provide the Board with the necessary control of expenditure and the means of monitoring on a continuous basis how funds are spent. These requirements would be essential for the Board to fulfill its obligations.

5.5.3 Secondly, funds could alternatively be transferred to MPWH ex post. It would mean that funds are transferred to the MPWH account on the basis of certificates for contracted work done, and then paid to the contractors by the MPWH's cashier.

5.5.4 The third alternative, and the one recommended by the consultant, would be to pay the contractors directly from the Road Fund by the secretariat. It would follow much the same payment procedures as today, only that checks are issued by the secretariat instead of the MPWH’s accountant. Contractors’ certificates are currently approved by the MPWH's project engineer before it is certified by the MOF’s controller in MPWH. Certificates above JD 1,000 also need the signature of the Auditing Bureau before checks are issued by the cashier of MPWH. Checks are reportedly paid promptly and within days if not held up because of disputed work or any other formal reason. Checks below JD 1,000 are signed by the cashier and the manager of the MPWH's Financial Department, whereas checks above the same amount requires also the signature of the chief accountant. The Financial Department operates under a cash flow ceiling imposed by the MOF for every month. It handles about 55,000 invoices annually, including salaries to ministry employees.

5.5.5 For routine maintenance, which it is anticipated will continue to be conducted by force account, the formal agreement between the Board and MPWH, (as recommended in paragraph 5.4.6 above), will detail the payment procedures. It is expected that transfers will be made quarterly in advance. The transfer will provide for the materials, plant and wage labour required for specified activities to an agreed quality of work on an agreed length of road. Salaries of regular staff would continue to be financed through the consolidated budget as is the current practice.

5.6 Management Procedures

5.6.1 The management procedures would in broad terms define items such as financial reporting arrangements; internal and external auditing arrangements and the nature and scope of reports to the MOF as the responsible ministry. The secretariat should keep accounts to separate various kinds of expenditure, such as administration, routine maintenance, resurfacing maintenance and rehabilitation. The mission noted that the MPWH seemed to lack a consistent definition of the different types of maintenance and this needs to be reviewed and improved. The secretariat should develop and employ computer-based financial systems in order to keep proper accounts and records in respect of the Fund, and should keep a ledger for the Fund bank account in which should be recorded all receipts and disbursements.

5.6.2 The secretariat would be expected to prepare monthly statements of revenues collected, amounts deposited into the account, commitments entered into by the Board, authorized withdrawals and actual withdrawals for subsequent presentation at Board meetings. It would also be required to prepare quarterly and annual projections of revenues and planned expenditures.

5.6.3 In general, funds from the Road Fund will be disbursed for goods and services forming part of an approved maintenance and rehabilitation program. Each check withdrawing funds from the Road Fund will be signed by one person from the Board and the Secretary, or a member of the secretariat. Work undertaken by contractors will be certified by a project engineer of the road agency before payment is made. Road agencies will transmit requests for payment to the secretariat who will arrange to pay
the contractor directly out of the fund account. Funds for that maintenance undertaken by the road agency’s force account operations will be disbursed in advance on a quarterly basis, in accordance with the approved program and a formal agreement for such work. The road agency will be required to submit returns of expenditure and activity reports for all force account maintenance carried out on a monthly basis.

5.6.4 The Road Fund accounts should be subjected to an independent system of auditing and inspection. The objective of the audit is to ensure that the income of the Road Fund from all sources is accurate and complete, and that payments made are properly supported and are in respect of expenditure allowed for by the legislation. A further objective is to ensure that the accounting and internal control procedures adopted by the secretariat, and the records and accounts kept of the Road Fund are adequate. The accounts and other financial statements of the Road Fund will therefore be audited annually by a firm of auditors selected by the Auditor General. The Secretariat will prepare and submit for audit annual accounts, which will include a Statement of Income, a Balance Sheet, and a Statement of Cash Flow, to be published within three months of the end of each financial year. The audit will include a full financial audit and selective technical audit. The auditor will prepare a report to the Board which will give an opinion of the accuracy of the financial records and on the completeness of income of the Road Fund.

5.6.5 The Secretariat will prepare on behalf of the Board an annual report within six months of the end of each financial year. The report will deal generally with the policies and activities of the Board during the year, and include a copy of the audited accounts and the auditors report on the accounts.

5.7 Indicators of Effectiveness

5.7.1 The policy of the Board should always be to keep the stakeholders, whether public or private, well informed about activities of the Board and how these are managed. It is also one of the objectives of the Board to inspire sound business practices in the road sector. To this end it would also be appropriate to apply a set of agreed indicators of its own effectiveness, to be published in the annual reports. The indicators of the Board’s effectiveness should per definition provide a quantitative or qualitative measure of to what degree the objectives have been achieved. The following suggested indicators could, as a minimum, be used to monitor objectives:

(i) Objective of adequate funds for maintenance
   - Disbursed funds/estimated requirements
   - Road condition trends, for example as average IRI for Primary, Secondary and Village Roads.

(ii) Objective of value for money
   - Cost per km of maintenance and rehabilitation

(iii) Objective of transparency
   - Qualitative assessment of road user’s awareness of the Board’s activities in the sector.

(iv) Objective of efficiency
   - Administration cost/disbursed funds last five years.
   - Average time for processing of certificates for work
CHAPTER 6 THE WAY FORWARD

6.1 Brief Summary

6.1.1 The findings of the mission confirmed that road maintenance is presently underfunded in Jordan. Roads are still in a reasonable condition but could be expected to deteriorate markedly in the years to come and become critical if the present level of funding is not improved. Road users are currently paying much more in various charges than what is spent by the government in the road sector. Part of these charges can be dedicated to a Road Fund without eroding the government’s general budget for allocations for other purposes. The further findings and conclusions of the present paper will be presented at a seminar envisaged to be held in Amman in June, 1997. A proposed programme for this seminar is at Annex A.9. The purpose of the seminar will be, among other things, to discuss and agree on basic principles and operating modalities for the Road Fund. A further objective will be to define what actions need to be taken and who should be responsible to initiate those actions needed to get the Road Fund operational.

6.2 Transition Plan

6.2.1 It is clear that both the start of collection of revenues from road user charges, as well as the deposits into the Road Fund will have to coincide with the Financial Year. A Schedule of Events, in the form of a summary of main milestones to be reached in the process towards a functioning Road Fund, is included below. The dates indicated are based on the Road Fund being operational from January 1, 1998.

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar in Amman</td>
<td>June 1997</td>
</tr>
<tr>
<td>Law and Regulations publicized in the government Gazette</td>
<td>August 1997</td>
</tr>
<tr>
<td>Appointment of the Board</td>
<td>September 1997</td>
</tr>
<tr>
<td>Approval of first year maintenance plan</td>
<td>September, 1997</td>
</tr>
<tr>
<td>Recruitment of the Secretariat</td>
<td>November 1997</td>
</tr>
<tr>
<td>Inclusion of first year estimated Road Fund expenditure in government budget</td>
<td>January 1998</td>
</tr>
<tr>
<td>Appraisal of World Bank proposed Fourth Transport Project</td>
<td>May 1998</td>
</tr>
</tbody>
</table>
Annex A.1 Terms of Reference for this Study

Annex A.2 Draft National Road Maintenance Fund Administration Bill

Annex A.3 Draft Regulations for the Management of the Road Maintenance Fund
### Annex A.4 Condition of MPWH Network

Table A.4.1 Current Condition of MPWH Network, %

<table>
<thead>
<tr>
<th>Classification</th>
<th>1⁴¹</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>3.9</td>
<td>10.4</td>
<td>19.1</td>
<td>37.8</td>
<td>28.7</td>
</tr>
<tr>
<td>Secondary</td>
<td>2.8</td>
<td>15.3</td>
<td>29.8</td>
<td>36.1</td>
<td>15.9</td>
</tr>
<tr>
<td>Village</td>
<td>15.7</td>
<td>11.8</td>
<td>26.6</td>
<td>30.6</td>
<td>15.3</td>
</tr>
</tbody>
</table>

Source: Visual Condition Survey conducted by MPWH in October 1996

---

⁴¹ Condition 1 is failed and condition 5 excellent.
Annex A.6  Petrol and Diesel Price Construction

Table A.6.1  Price Construction (in part) of Regular Petrol and Diesel, Fils/litre,

<table>
<thead>
<tr>
<th>Items</th>
<th>Regular</th>
<th>Diesel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border price</td>
<td>106.2</td>
<td>114.1</td>
</tr>
<tr>
<td>Refinery door price</td>
<td>211.7</td>
<td>102.6</td>
</tr>
<tr>
<td>Municipality fees</td>
<td>2.0</td>
<td>0</td>
</tr>
<tr>
<td>Village fees</td>
<td>2.0</td>
<td>0</td>
</tr>
<tr>
<td>Refinery commission</td>
<td>0.9</td>
<td>0.7</td>
</tr>
<tr>
<td>Transportation costs</td>
<td>0.3</td>
<td>0.4</td>
</tr>
<tr>
<td>Distributor commission</td>
<td>3.1</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Consumer price</strong></td>
<td>220.0(^{33})</td>
<td>105.0</td>
</tr>
</tbody>
</table>

Source  Ministry of Energy and Natural Resources, March 1997

---

\(^{32}\) This is worked out by MENR figures for the ratio between international prices and local effective prices for the period 11/95 to 10/96.

\(^{33}\) Unleaded is 350 Fils/litre and Super is 300 Fils/litre
Annex 7 Tables in MS-Excel Format
Annex A.9   Draft Programme for the Proposed Seminar

Road Maintenance Financing Seminar
Hosted by the Ministry of Public Works and Housing
at the Intercontinental Hotel, Amman
June 1997

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 1997</td>
<td></td>
</tr>
<tr>
<td>09.00-09.05</td>
<td>Welcome - Ministry of Planning by TBD</td>
</tr>
<tr>
<td>09.05-09.15</td>
<td>Opening Address and Statement- Ministry of Finance by Minister</td>
</tr>
<tr>
<td>09.15-09.45</td>
<td>Report on the Operating Modalities for the Road Fund by Member of</td>
</tr>
<tr>
<td></td>
<td>Study Team</td>
</tr>
<tr>
<td>09.45-10.15</td>
<td>Questions and Discussion</td>
</tr>
<tr>
<td>10.15-10.45</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>10.45-11.15</td>
<td>South Africa - 60 Years with a Roads Board and Road Fund by SA</td>
</tr>
<tr>
<td></td>
<td>speaker TBD</td>
</tr>
<tr>
<td>11.15-11.45</td>
<td>Questions and Discussion</td>
</tr>
<tr>
<td>11.45-12.15</td>
<td>New Zealand - Commercialising the Management of Roads by NZ</td>
</tr>
<tr>
<td></td>
<td>speaker TBD</td>
</tr>
<tr>
<td>12.15-12.45</td>
<td>Questions and Discussion</td>
</tr>
<tr>
<td>12.45-13.00</td>
<td>Explanation of facilitation process and formulation of groups by</td>
</tr>
<tr>
<td></td>
<td>Facilitator TBD</td>
</tr>
<tr>
<td>13.00-14.00</td>
<td>Lunch</td>
</tr>
<tr>
<td>14.00-14.20</td>
<td>Main Topic 1 - Establishing and Adequate and Stable Source of Funds by</td>
</tr>
<tr>
<td></td>
<td>Ian Heggie</td>
</tr>
<tr>
<td>14.20-14.45</td>
<td>Questions and Discussion Topic 1</td>
</tr>
<tr>
<td>14.45-16.15</td>
<td>Facilitated Group Discussions on Topic 1 (3-4 local facilitators)</td>
</tr>
<tr>
<td>16.15-17.00</td>
<td>Group Feedback Session on Topic 1</td>
</tr>
</tbody>
</table>

34 TBD is to be decided

35 It is proposed that a professional, probably international, facilitator is employed together with three to four local facilitators. The professional facilitator would brief the local ones as necessary who would in turn act to chair group discussions and report back at the plenary as necessary. The plenary, or group feedback session, would be chaired by the professional facilitator. After each of the two group feedback sessions, the professional would write up a summary (1-2 sides). Individuals would consider this during the afternoon coffee break on the second day. The last session of the workshop is for the plenary to discuss and agree on this summary document which can then be used as the basis for an action plan for the future.
June 1997

09.00-09.20  New Zealand - Land Transport Fund by NZ speaker TBD
09.20-09.50  Questions and Discussion
09.50-10.20  Coffee Break
10.20-10.40  Main Topic 2 - Detailed Requirements of Road Maintenance Funds by Ian Heggie
10.40-11.10  Questions and Discussion
11.10-12.45  Facilitated Group Discussion on Topic 2 (3-4 local facilitators)
12.45-13.30  Group Feedback Session on Topic 2
13.30-14.45  Lunch
14.45-15.30  Visiting Country Teams to outline their views and what they take back to their countries from the seminar
15.30       Distribute draft recommendations
15.30-16.15  Coffee break
during which individuals consider the draft recommendations
16.15-17.30  Presentation and amendments to draft recommendations by Facilitator TBD
17.30       Close

---

36 This gives the resource team from 13.30 to 15.30 to draw up the draft recommendations from the second session (the first topic can be done overnight)