

Global Experiences of Road Authorities to inform development of a Road Authority in Afghanistan



Don Smith

October 2013



**EVIDENCE
ON DEMAND**

CLIMATE & ENVIRONMENT
INFRASTRUCTURE | LIVELIHOODS



This report has been produced by IMC Worldwide for Evidence on Demand with the assistance of the UK Department for International Development (DFID) contracted through the Climate, Environment, Infrastructure and Livelihoods Professional Evidence and Applied Knowledge Services (CEIL PEAKS) programme, jointly managed by HTSPE Limited and IMC Worldwide Limited.

The views expressed in the report are entirely those of the author and do not necessarily represent DFID's own views or policies, or those of Evidence on Demand. Comments and discussion on items related to content and opinion should be addressed to the author, via enquiries@evidenceondemand.org

Your feedback helps us ensure the quality and usefulness of all knowledge products. Please email enquiries@evidenceondemand.org and let us know whether or not you have found this material useful; in what ways it has helped build your knowledge base and informed your work; or how it could be improved.

DOI: http://dx.doi.org/10.12774/eod_hd.oct2013.smith



Contents

SECTION 1	1
Introduction	1
SECTION 2	3
The Current Afghan Context	3
SECTION 3	5
Rationale for a Road Authority	5
SECTION 4	7
Features of a Successful RA.....	7
Advantages of Road Authorities.....	8
Disadvantages of Road Authorities	9
Pitfalls to be avoided	10
SECTION 5	12
Use of Ring Fenced Road Funds	12
Key issues to be considered	12
Afghanistan Road Fund Study Requirements	14
SECTION 6	16
Options for Institutional Arrangements for Afghanistan	16
SECTION 7	19
Possible Timetable for Development of a Road Authority in Afghanistan.....	19
SECTION 8	21
Bibliography	21

List of Figures

Figure 1 The Strategic Road Network in Afghanistan.....	3
Figure 2 Outline Timetable for Establishment of RA in Afghanistan.....	4
Figure 3 Transition Pathway for Reform.....	17
Figure 4 A Possible Timetable for Development of a Road Authority in Afghanistan	20



SECTION 1

Introduction

This report has been commissioned by DFID through the Evidence on Demand helpdesk facility to summarise the global experiences of Road Authorities (RA) in order to inform DFID's support to the infrastructure and transport sectors in Afghanistan. The report describes:

- global experiences of countries that have set up RAs, looking at advantages, disadvantages and pitfalls to be avoided;
- issues related to the setting up of ring-fenced Road Funds (RF);
- options for institutional arrangements; and
- an indication of time needed to implement the changes.

In this report the term Road Authority (RA) is used to note an organisation that has been set up, by a government, as a separate body, with responsibility to manage a defined network or category of roads (e.g. highways, urban, rural). RAs are generally created to replace predecessor roads departments of a line ministry and are intended to be more customer-oriented and commercially minded. RAs can be created by a range of legislative instruments (e.g. ministerial order or decree or by an Act passed for the specific purpose). More than a hundred RAs have been established around the world (author's estimate). The main focus of the report is on the issues and experience relevant to the establishment of an authority responsible for the strategic, or core, road network linking a country's main economic centres.

Following a rapid desk based study of evidence the author identified an evidence gap in the systematic evaluation of the overall performance of newly created RAs. A few partial studies are available and are referred to in this report. This lack of analysis may be because no two RAs are identical: each RA is shaped by a particular set of circumstances, making comparison difficult. The report has been based on the author's professional experience, making reference to concepts of best practice, developed mainly by the World Bank in the 1990s, as part of the Road Management Initiative (RMI).

This report reviews some of the principles that underpin successful establishment of RAs and some of the key issues that need to be addressed during the process. Experience from around the world, that has been gathered over nearly 20 years, indicates firstly, that no one size fits all; and that a combination of elements needs to be in place, at the right time, working in a coordinated, harmonised way, to create suitable conditions for success. The interplay and interdependence of the various factors is important: none will be effective in isolation. Providing additional finance, or creating a new RA, will not, alone, solve the underlying reasons for ineffective road maintenance. The introduction of new organisational structures needs to be coordinated with appropriate new regulations and procedures (applicable to all organisations involved in the process) and supported by appropriate capacity building measures (again, targeted at all entities involved). If a new, autonomous, RA or RF, for example, is established, there will be implications for the day to day activities of ministries of communications and transport, finance, revenue authority, private contractors, etc.



Section 2 of this report provides a brief summary of the Afghan context to date in setting up an RA, Section 3 provides an overview of the rationale for setting up RAs; Section 4 looks at some of the features of successful RAs and the advantages, disadvantages and pitfalls associated. Section 5 looks at issues related to RAs. In Section 6 institutional options are reviewed and a possible timetable for implementation is set out in Section 7.

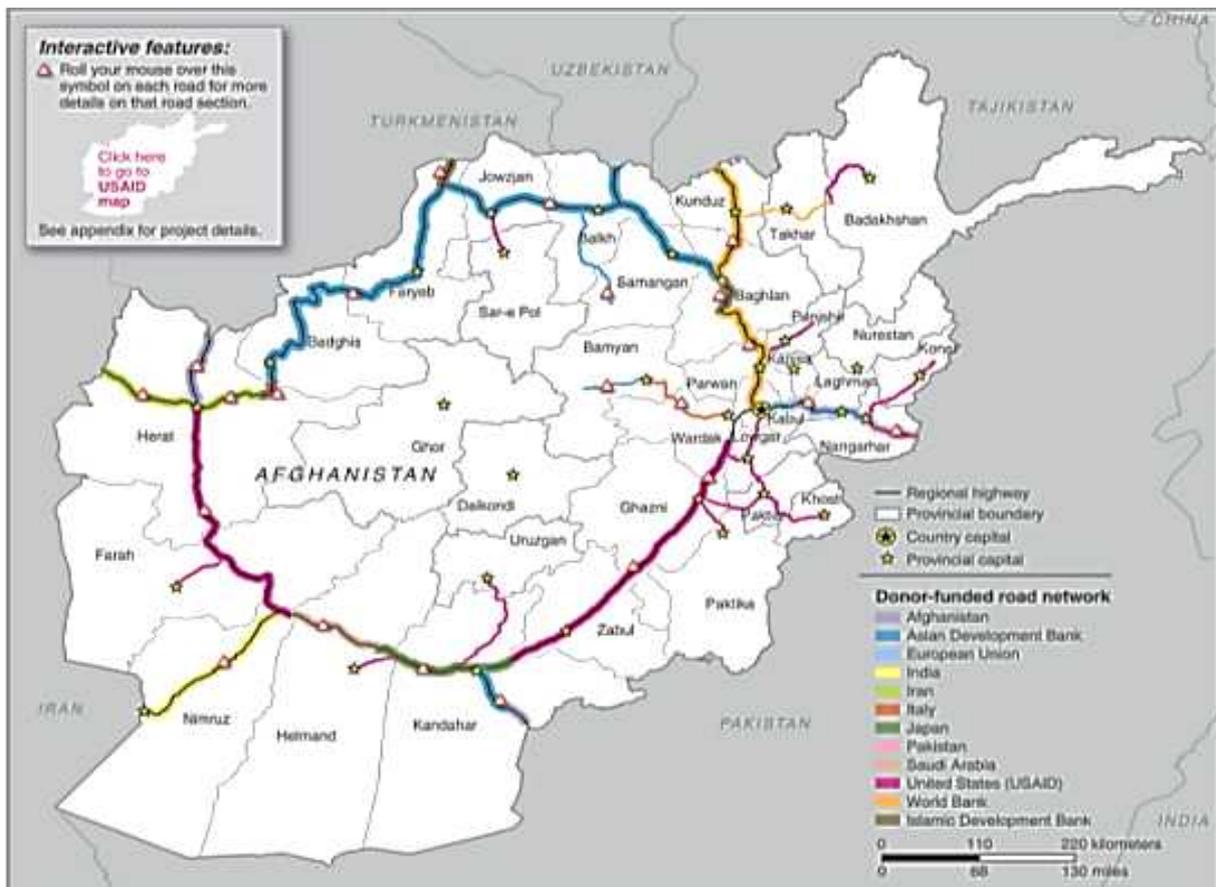


SECTION 2

The Current Afghan Context

Afghanistan is now emerging from more than 20 years of conflict. Massive investments, supported by Afghanistan's development partners (particularly USAID and the ADB), have been made in rebuilding and rehabilitating the country's road infrastructure, particularly the strategic routes that link the country's main economic hubs (as shown in figure 1¹). Afghanistan has an estimated 3,200 km of regional highways, of which the majority is related to "ring road" linking Kabul, Kandahar, Mazar-e-Sharif and Herat. Overall, the road network comprises approximately 46,000km of regional, national, provincial and urban and city roads and 87,000 km of rural roads².

Figure 1 The Strategic Road Network in Afghanistan



At present the Ministry of Transport and Civil Aviation has overall responsibility for the Afghan road network, with other Ministries (e.g. the Ministry of Public Works, the Ministry of Rural Rehabilitation and Development, and the Ministry of Urban Development) having day

¹ USAID, 2009

² Islamic Republic of Afghanistan, 2008a, p94 and 2008c, p119

to day responsibility for specific parts of the network. Afghanistan's Transport Sector Strategy (contained within the Afghan National Development Strategy (ANDS) 2008-13³) set out the need for a fiscally sustainable system for maintenance and its intention that governance of the transport sector shift from direct ministerial control to a system where ministries set policy, carry out critical planning, implement regulations, oversee management of the sector's publicly owned assets (including roads) and contract out as many activities as appropriate to the private sector. The establishment of a RA was a specific aim of the ANDS⁴.

A high level "Conference on the Management and Financing of Roads" was held in Delhi in June 2010⁵, at which senior officials from the Afghan Government, leaders from the private sector and international road sector reform experts discussed best practice and drew up an action plan for the creation of an independent RA. In August 2013 the Government of Afghanistan gave Cabinet approval to take forward the legal and institutional arrangements to establish a RA. An outline timetable was drawn up as part of this process:

Figure 2 Outline Timetable for Establishment of RA in Afghanistan

	2013	2014	2015	2016	2017	2018
Process to Establish Road Authority						
Cabinet Approval	█					
Assessments conducted		█				
Agree road map		█				
Design for Establishment and operation		█				
Parliamentary approval of Plan for RA			█			
Implementation of Plan				█		
Road Authority established				█		
Capacity Building of Road authority					█	█
Capacity Building of Associated Institutions					█	█

³ Islamic Republic of Afghanistan, 2008c

⁴ See Volume II, page 47

⁵ "Conference on the Management and Financing of Roads", Delhi, June 14-17, 2010, USAID-sponsored.



SECTION 3

Rationale for a Road Authority

In most countries the core network represents a small percentage of the total road network (by length) yet carries the majority of the traffic volume (vehicle-km), which is responsible for a major proportion of a country's economic activity. In the UK, for example, over 33% of road traffic is carried on just 2% of the roads (the 4,300 mile core network⁶). In India, approximately 75,000km of national highways, a similar percentage of the (3.34 million km) total roads network, is estimated to carry 40% of the traffic.⁷ A country's core road network represents a large proportion of its physical infrastructure assets. To sustain these roads in proper working order over the long term, regular routine and periodic maintenance is needed. The cost, for most countries, of replacing the network (if allowed to deteriorate) is unsupportable, maintenance is too important to leave to chance.

The earliest RAs were created in the 1920s, but the process accelerated greatly in the early 1990s and over a hundred have now been established, in all corners of the world. Much of the impetus for road sector reform came from the Roads Management Initiative of the World Bank in Sub-Saharan Africa and similar initiatives in Asia and Latin America.⁸ They were stimulated by a need to respond to a startling level of deterioration of road infrastructure, despite massive investments in construction and rehabilitation of highways by the multilateral financing institutions.

The principle was to manage roads in a more commercial, market-oriented way, thus encouraging a more disciplined, efficient and innovative approach. Whereas formerly, roads departments had been directly responsible for commissioning and undertaking works, and reporting to the Minister on performance, it was understood that a separation in roles between client and provider was needed, to encourage accountability and a more consumer-oriented approach, improving management practices and changing the way maintenance of road infrastructure was financed. The experience since the early 1990s has been rather varied, with RAs working in a range of institutional frameworks (differing degrees of autonomy, financing arrangements etc.). Pinard (2012) assessed the performance of RAs in seven countries in Sub-Saharan Africa and found that the proportion of paved network in good condition had increased more in countries with a commercially run RA than in those where the RA continued to operate as a Government Department under the direction of its parent ministry.

Many parallels can be seen between the experience of road sector reform in Sub-Saharan Africa and South Asia. Rohatgi et al (2011) undertook a review of RAs in five countries in South Asia (Sri Lanka, Bangladesh, Nepal, Pakistan and India). A further 17 RAs operating at State level in India were also reviewed. It was found that the creation of new institutional structures was not automatically matched by performance. 92% of RAs studied were effectively "government departments" reporting directly to the Minister and only 8% indicated that their organisation was a public entity with a higher degree of autonomy. Their analysis of performance ranged across seven areas:

⁶ Department for Transport, 2013a

⁷ Government of India, 2011

⁸ See Heggie, 1995; Heggie & Vickers, 1998; Schliessler & Bull, 2004; World Bank, 2013



- Mandate, policy and legal framework
- Planning
- Capacity
- Efficiency
- Quality of Road Network
- Private Sector participation
- Governance

There is a wide variation in the way structures are set up, with authorities around the world enjoying varying degrees of autonomy. This can be a reflection of the degree to which line ministries (and particularly ministries of finance) are prepared to relinquish control in practice; or of the competence of the organisation itself to transform into a professional, commercially-aware institution, able to function in a well regulated and governed operating environment. In the following sections this report looks at how the institutional, governance, legal and financial frameworks influence success.



SECTION 4

Features of a Successful RA

Some basic principles that underpin good practice have been identified. In this document, reference is made to four pillars or 'building blocks'. These principles were promoted in the 1990s by the World Bank, which supported an extensive programme of road sector reform (the Road Management Initiative, or RMI⁹) at that time. The World Bank Technical Papers covered many of the aspects of setting up RAs and RFs in the 1990s. The Bank also gathered an extensive knowledge base which is still available for reference on the Bank's website¹⁰ (though it has not been updated recently). Although the shape and form of RAs, and the circumstances in which they operate, varies widely around the world, the four principles underpinning successful reform still hold. These are:

1. Clear responsibility
2. Create Ownership
3. Stable Financing
4. Strong Management.

These principles will be used in the report to help frame the discussion of possible scenarios the Afghan Authorities can adopt:

1. **Responsibility:** Clear definition of which agency is responsible for which parts of the network and how they will be managed is needed. It is sensible to set up a dedicated authority to manage the strategic highway network. But it is also necessary to make clear how the remainder of the network (around 40,000km of national, provincial and urban roads and 87,000km of rural roads) will be managed - and importantly, how they will be financed. For network responsibility to be assigned, an up to date road classification will be needed, so that precise details of which sections of the road network the respective RAs (at national, regional, urban, provincial and district level) are responsible for. This needs to be supported with an up to date road inventory and road condition survey. The new roles of the Ministry will need to be explained to staff. It will be a major change from having overall responsibility for delivery to a more strategic, policy development and regulatory role. The various road agencies (of which the RA would be one) will have a duty to deliver a standard of service to their parent ministry. The RA in turn will have a clear Client role with respect to its suppliers (contractors and consultants). Responsibility for other areas of road operation - such as axle load control or more general road construction standards - also needs to be clearly defined. Cooperation with those responsible for enforcement will be needed to protect the road asset. Issues of training, legislation and institutional responsibility will all need to be looked at in the detailed studies planned for 2014.
2. **Ownership:** If the new institutional set up is based on the establishment of a system of road user charges, road users will need to be able to exert pressure on the management of the RF or RA. The principles underpinning this are discussed in

⁹ Described in more detail in Heggie and Vickers (1998) and Heggie (1995)

¹⁰ <http://www.worldbank.org/transport/roads/inst&sm.htm>



papers published by the World Bank and Asian Development Bank.¹¹ If the Ministry will no longer have direct administrative control over the activities of the RA, the RA will therefore need some sort of independent overview of its operations, the CEO will need to report to a Board that monitor and assess performance on a regular basis. Provisions for the creation of oversight Boards are typically contained within enabling legislation. The details for this would be worked out in the preparatory studies mentioned. Membership of such a Board should typically include a strong private sector representation, on behalf of road users, but also to ensure some level of independence from the state. Once the authority is operational, capacity building will be needed for Board Members to understand and fulfil their role. Boards of this type are not always as effective as desired.

3. **Finance** for road maintenance needs to be adequate and reliable, whether routed through a dedicated road fund or from general revenues. This is discussed as a separate item in Section 5.
4. **Management:** Efficient management systems and procedures need to be put in place for the new RA, but also all the organisations with which it will interact. Studies need to be carried out to look at all aspects of operation, design of the organisation and preparation of a time-bound, costed action plan for the transition process. Capacity of contractors and consultants will need to be adequate, to comply with the procedures set out by the new RA. Detailed studies need to be undertaken and proposals drawn up for the organisational design and action plan in a number of areas; e.g. institutional and legal frameworks, financing, training and capacity building. Activities required will include: contractor training, definition and use of a wide range of performance indicators, data collection, project management, physical progress measurement, financial management and accounting systems, audit arrangements, governance etc. Capacity development in long, medium and short term maintenance planning (within available financial envelopes) will also be required, as well as coordination with those responsible for financing, budgeting, monitoring and evaluation. Issues of recruitment policies, skills and professional development and competence will also need to be addressed.

Advantages of Road Authorities

If the principles that underpin good practice are implemented successfully, RAs can offer several advantages:

- **Focused operating environment**

The creation of an autonomous RA can provide a more focused and business-like environment in which to operate. If structured in the correct way, the CEO should have a degree of freedom to hire and fire staff and set up the organisation to deliver the targets. RA performance should be judged on delivery of outputs and outcomes, rather than inputs. A set of Performance Indicators should be formally agreed and documented (e.g. in an annual business plan). Framework Documents, such as those used by the UK Highways Agency¹² can set out the accountability and key relationships between the Authority and its parent ministry and would describe the supporting governance arrangements.

¹¹ Heggie and Heggie & Vickers op cit; Allan & Caday, 2003

¹² See example in Department for Transport / Highways Agency, 2013



- **Clearer accountability**

If set up well a RA can have a clearer line of responsibility for road maintenance: the public know who to contact; the media can hold the authority to account. Strict guidelines within which RAs operate will need to be defined (in legislation, regulations and procedures) and implemented to safeguard the spending of public funds. Transparency can also be improved with: reporting of budgets allocated, work carried out, tenders issued, contracts let, monies spent, condition of roads, satisfaction surveys etc. The RA will essentially become a procurement and contracting organisation, so needs to have highly qualified staff, able to take the appropriate decisions. If properly set up, the RA should be able to:

- **Encourage competition**

Encouraging competition, which in turn pushes down prices, increases value for money. However, competition cannot be assumed. Extensive capacity building and policies that promote contractor participation in the sector may be needed.

- **Encourage Small Contractors**

A RA can be used to promote national policies, e.g. encouraging small contractors, by packaging procurement contracts appropriately. This has been done in South Africa through the South African National Roads Agency Limited (SANRAL), where previously disadvantaged groups are actively encouraged to bid for work¹³.

- **Encourage Innovation and Initiative**

Competition should also encourage innovation as contractors seek to find more efficient ways of delivering a defined service at lower cost. With the RA, initiative can be encouraged within the workforce. This will depend on the management style of the CEO, but a more commercial style of management will aim to recruit, and retain, motivated individuals, and reward effort. There is a need to move away from a more traditional top-down culture where there can be a fear of taking any decisions, or making mistakes.

- **Reduce excessive staffing levels**

Staffing structures should be based on a functional requirement rather than historical levels. While reaching the appropriate levels will be disruptive, the organisation will, in time, be able to function more effectively.

Disadvantages of Road Authorities

There may be teething problems early on in the process of developing a RA:

- **Redundancy - or redeployment- programmes**

¹³ Pinard, 2012 p52, box 3.1



Redundancy or redeployment programmes may be needed if the RA is not to simply be a new version of the existing Roads Department; jobs need to be linked to functional needs of the organisation. Some of the staff not needed in the new organisation may be able to be redeployed into new roles within the sub-sector. Staff of works units or force account units, for example, could be encouraged to set up as private contractors.

- **Ministry Challenges**

The change in function of Ministry can cause difficulties for some of its staff. Much of the Ministry's day to day responsibility for planning and spending budgets, procurement etc. will devolve to the RA. This can result in a perceived loss of influence. Explaining the new role and its importance - and keeping Ministry staff motivated in their new situation can be a challenge. As with the RA, as part of the planning and transition process there may be a need to sensitise staff; and where necessary, re-shape and re-size the Ministry to reflect its focus on its core functions.

Pitfalls to be avoided

When any of the key building blocks are not in place or properly designed, various situations can arise. Particular situations that need to be avoided include:

- **Capture of Boards**

Capture of Boards by "the usual elites" depends to some extent on the nature of the legislation put in place to establish the RA: how clearly and unambiguously it sets out the terms. For example: does the President appoint Board Members; how much private sector representation is guaranteed; how involved in process is Civil Society etc. Issues of conflict of interest, and also the capacity to understand what and how a RA or RF is supposed to operate, and how to measure performance, need to be addressed.

- **Inadequate Capacity of Staff**

It is important not to underestimate the amount of investment in capacity of staff and officials at many levels. As the Client-Provider relationship is put into place between a Ministry and RA; between the RA and its suppliers; possibly between the RA and a new RF organisation, great emphasis is placed on the ability to measure and hold to account. Common pitfalls include:

- **Inadequate capacity of staff to carry out audits.** RAs are essentially Contracting Organisations. They must have the ability to check the quality of the work being carried out by their agents (contractors, consultants). Autonomous RFs operate at a further level of remove from the works being carried out. Their staff need to have the ability to audit the performance of the RAs. Practical performance indicators need to be determined; and the means and techniques by which they are measured, worked out.
- **Inadequate Capacity to hold to account.** Where errors are found, the RA needs to have the power to hold those responsible to account. This is perhaps more an issue when a RF has been set up. Where the "agency" not performing (e.g. a district or urban council, acting as a RA) is very much part of the state sector, it is not easy for the RF as "client" - to exert pressure to



follow the rules. Sometimes "the deliverer" remains very close to the parent ministry. This can make it hard for a RA to act as the "client".

- **Poor governance.** Good governance is a key feature of successful road sector reform. An active media is needed to highlight poor performance (and highlight and praise good performance); the RA must have recourse to a judiciary willing to hold poor practice (fraud etc.) to account. Road users can play a key role in promoting good governance, but they need to be able to articulate their voice effectively.
- **Lack of clear procurement procedures.** The RA is - or will become - primarily a procurement organisation. Procurement procedures need to be clearly set out and followed. Extensive training (of potential tenderers as much as RA staff) will be needed. There needs to be a clear awareness of procedures to be followed, standards to be met, documentation to be submitted etc. In many countries public sector procurement is heavily centralised- and often unwieldy (and open to abuse). For a RA to function in a commercial way it needs to be able to procure the services it needs to deliver its programme. It may require a change in legislation for the RA to be able to undertake Procurement (subject to appropriate rules and regulations, and regular audit of its activities).
- **Lack of contractor capability.** It is not enough just to create a RA; if it is to act as Client (and get away from the old "command" structure) then the Provider function also needs to be addressed. An extensive and multi-year capacity building programme, linked to measures to encourage contractors (small, medium and large) to bid for and win road maintenance contracts is needed.
- **Unclear network responsibility.** Despite clear lines of responsibility being defined, they can sometimes be ignored in practice. One situation that can arise is where the RA is designated as in charge of highways, yet there is often a legacy responsibility to maintain urban and rural roads; and the RA can come under pressure to continue supporting these areas (often as it retains the skilled staff and equipment able to provide support). If the budget is set up for highway maintenance, it should not be used for other purposes.
- **Dissatisfaction with new roles.** As mentioned, there can be misunderstandings by Ministry staff of the role of the Ministry under the new arrangements. Once they were an integral part of the road development and maintenance cycle, being involved in procurement, contracting, planning, and supervision, responsible for large budgets. Under the new arrangements, these functions become the responsibility of the RA. It can be very hard for some Ministry staff to come to terms with what is perceived as a loss of power, certainly influence. The Ministry needs to be sensitised to the more narrowly defined, though strategic, role. They have to set policy and sector strategy; define the regulatory framework and oversee performance. This means a far smaller establishment; for staff to be effective in their new roles attention should be given to the skills sets needed, and the appropriate levels of remuneration required to retain staff of the appropriate calibre. Training can be given in the new roles.



SECTION 5

Use of Ring Fenced Road Funds

Key issues to be considered

Afghanistan is considering whether to establish an autonomous RF. This section looks at some of the issues influencing whether and how to proceed. The references to further reading cover many of the main issues in detail and it would be cumbersome to quote excessively. Many countries operate very successful RAs but without requiring separate RFs. In countries where the overall tax revenue is sufficient to cover all the competing "spending" line ministry needs (e.g. health, education, defence, social security etc.), and the road sector can be confident of receiving a predictable, adequate budget for maintenance and development works, year on year, then a dedicated road fund is not necessarily needed. Many western European nations (e.g. Sweden, UK, Germany etc.) finance road maintenance from general revenues and allocate budgets annually, albeit within the framework of a longer term financing and development plan.

Where funding is erratic, and allocations to the road sector frequently fall below the level needed to maintain roads properly, the network can quickly deteriorate, leading to the need for eventual infrastructure rehabilitation, costing many times that of repeated and regular maintenance. In many countries the traditional budget allocation process bears little relation to what is needed or can effectively be spent, but is often based on what has previously been allocated. Where this is the case, there is a strong case for creating an earmarked RF. Earmarked funds can be set up and remain within the central budgeting system. China is a recent example¹⁴. A new central tax was set up in 2009 which allowed a more coordinated approach to road funding. Though centrally managed, it is based on road user charges (mainly a fuel levy).

Over the years many "second generation" RFs have been set up¹⁵. These attempt to put roads on a "fee for service" basis, treating roads as a utility (similar to gas, water, electricity, etc.), explicitly linking charges for use of the road (e.g. via a levy on fuel) to the wear and tear on the road network. As long as these "second generation" RFs observed certain principles of fiscal responsibility (described in a paper by a senior IMF official at the time)¹⁶, ministries of finance would be prepared to sanction them. It has also been recommended that the establishment of RFs be promoted by Ministries of Finance (rather than the ministry responsible for roads) in order to set out clearly the parameters to ensure fiscal responsibility.¹⁷

With the exception of bridges, tunnels or high traffic volume roads, which can impose tolls, it is not practicable to charge for use of public roads at the point of use (unlike the utilities mentioned). Therefore a proxy charge needs to be made. Levies on fuel and vehicle licence fees have proved to be useful examples of easily collectible road user charges forming the basis of a dedicated RF. They can guarantee a more reliable flow - and

¹⁴ ADB, 2012

¹⁵ See Metchies, 2005; Heggie, 1995, ADB, 2003, Heggie & Vickers, 1998

¹⁶ Potter, B., 1997

¹⁷ Allan & Caday, 2003



quantum - of funds, which enables long term road planning (which is not always the case with national budgets). For its part, the RF must be able to demonstrate that it is spending public monies in an effective, efficient, transparent and accountable way (and thus keep political pressure at bay). This will require a high level of training and capacity building, not only in the RF, but all associated organisations (the RA, Contractors, Auditors, Petroleum Companies (who pay the fuel levy on behalf of drivers) etc.). Donors could support the phased introduction of a new RF over a number of years, gradually decreasing their level of support as the income of the new road fund increases. The levels of income required should be closely linked to the estimated expenditure required by the RA to maintain the network on a sustainable basis. It also needs to be linked to the ability to spend; this could require a phased introduction: as the capacity of the RA to process the contracts, and contractors to tender for and carry out work to an acceptable standard, increases.

Since axle loads are normally the greatest cause of wear and tear and damage to the pavement, the level of vehicle licence fees for heavy trucks should reflect this. Fees should ideally be set at a level that bears some relation to the wear and tear that truck users impose on the pavement. This is often a sensitive subject, and will require support from trucking and bus operator organisations to implement (without their support, major price rises can be impossible to implement). A phased rise in vehicle licence fees (e.g. over a ten year window) can be one way of introducing charges that share the cost more equitably. Ineffective control of axle loads is a major cause of pavement degradation and should be addressed in the studies planned for 2014.

Though set up as "independent funds", with an independent oversight Board etc., in practice many RFs remain under the control of the Minister. There is a need to ensure high levels of accountability, transparency and governance in the operation and maintenance of such funds to ensure that fiscal discipline is observed.

Building capacity in all the areas of road-fund-related operation will clearly present a challenge. Staff of the RF; of the RA; of other road authorities (e.g. provincial, district, urban councils) will need to become competent in many areas, and will need to learn new skills, procedures, reporting requirements etc.

Audit will be an important feature. Not only the technical skills required (and the training involved) but issues of security, safety and independence of staff carrying out audits need to be reviewed. Audits at several levels will be needed: procurement processes, financial flows, physical works, contract administration etc.

Procedures to be followed by contractors working for RAs, need to be set out and training given. Standards of reporting, measurement of work etc. need to be followed. Though the RF would not pay contractors directly, the Fund would need to audit that procedures had correctly been followed. With the large amounts of (public) funds involved extremely robust systems of control, reporting and audit need to be in place to retain public confidence in the performance of both the RF itself and the RA.

The change from more time and cost-based contracts to output and performance based contracting will itself present a challenge. This would be the responsibility of the RA to implement and oversee, but as payments would be related to that performance, the RF will have a clear interest in effective implementation of new ways of contracting. As in a number of other areas, sufficient time and investment in capacity building will be needed to allow competence levels to improve over time. The RF transition plan will need to allow time for standards to rise.



RF Oversight Boards need to be independent and free from interference. Enabling legislation has to reduce potential for political interference. Who appoints members? How is the Chairman appointed? Attention needs to be given to training Board members.

The nature of the formal agreements between RFs and RAs can be a major cause of misunderstanding and conflict. The nature of future relationships between a RA, Ministry and RF need to be agreed with clearly defined lines of responsibility, reporting; and procedures to indicate who is responsible for what; and how performance is measured.

Afghanistan Road Fund Study Requirements

In Afghanistan a study will be needed to estimate reliable levels of road sector revenue (year on year) that can be guaranteed from the consolidated fund. The study should analyse the actual budgets and disbursements over the past five years and how much has actually been spent on works; with a clear distinction between spend on periodic and routine maintenance and new roads or rehabilitation. If the tax-based revenue cannot be predicted with certainty, then a dedicated RF does appear to be a realistic option, as has been the case with several of Afghanistan's regional neighbours.

The study should also look at the proportion of revenue generated by road users, to establish that the Fund could be "self-financing". It is important that diverting funds into a dedicated fund in this way does not disadvantage other sectors of the economy (and distort the allocation of public sector resources¹⁸). Many of the "second generation" RFs set up since the 1990s have attempted to comply with this principle - basing the initial road user charge on existing payments by road users (through the tax system - e.g. duty on fuel) and designing the fund as a "charge" directly related to use of the road system. Once the fund is set up, then increases in the road user charges can be negotiated (e.g. with the Ministry of Finance) but remain off-budget. In practice, in many countries around the world, this distinction can become blurred. The initial study should set out very clearly the way the Fund should be structured - which, once approved by all key stakeholders, should be incorporated into legislation.

The study will need to look at the practicalities of collection of the road user charges. Although some fuel duty may be collected at present; and some vehicle licence fees collected, an assessment of the efficiency of collection should be reviewed. How efficient are the revenue authorities at present? What levels of "leakage" currently occur? How much of what is collected actually reaches the exchequer etc. What are the relationships with the petroleum importing companies? How quickly do payments move?

The provincial aspects of the fund operation should also be discussed in the study, covering local collection of vehicle licence fees and transit fees for example.

Finally, another key element of the RF study will be to provide realistic estimates of road expenditure required over a ten-year period. This will make reference to current levels of expenditure, but also needs to take an objective view of expenditure required, assuming that the RAs are able to operate in an efficient way. Expenditure needs to be broken down into estimates for routine maintenance, periodic maintenance, upgrading and rehabilitation. The fundamental principle underpinning a RF is to protect the asset - therefore adequate and well-targeted spend on maintenance must be the first priority.

The establishment of both a RA and RF will require a high level of capacity building and strengthening governance. To create a Fund at the same time as an Authority may be

¹⁸ Potter, 1997 discusses the IMF view on the World Bank initiative



ambitious. Where capacity is lacking, the risks of fraud and incompetence will be high, both at operational levels, and at those of oversight (Boards). Activities exposed to risk include: reporting, integrity, audit, performance measurement, etc. The various detailed studies to be carried out in 2014 should investigate all these areas.

The studies also need to provide a design template for the institution, and a detailed transition plan that indicates how, where and over what period capacity building will be provided. Some indication will be needed of the measures to be taken to counter the areas of weakness. Planners may not expect the institutions to operate at 100% effectiveness on day 1, but a phased transition should set out what standards of performance should be expected over a 5 to 10 year perspective.

Several of the documents referred to already discuss RFs as well as authorities. UN ESCAP, (2005) provides further review of experience of RFs in Latin America, India, Nepal, Pakistan and Tanzania.



SECTION 6

Options for Institutional Arrangements for Afghanistan

There are many options on how to set up an autonomous RA. Experience from around the world show that many are not, in practice, completely independent. Roads are a public good, and the state has a duty to ensure that the public good is protected. In practice, greater independence can be achieved where there is: a well-structured legal and regulatory framework to govern business within the sector; a mature contracting industry with wide experience of performance output and performance based contracting; a secure rule of law (particularly in enforcing contracts), a trusted judiciary; a lively media and engaged civil society. Adequate and predictable financial flows need to underpin the contracting activity. Contractors will only invest in equipment, staff (and staff training) and tender for work if they can expect a guaranteed flow of work; and get paid on time.

If a dedicated RF is set up, there will have to be considerations of the need to channel a proportion of the funds raised to other RAs, including the Highway Authority, responsible for the strategic highway network; and other agencies responsible for the upkeep of urban roads and provincial and district roads.

It is essential that all components are taken into consideration. A RA does not operate in a vacuum. For a RA to be able to act as a client there needs to be a body of consultants and contractors in the market place. Without genuine competition among suppliers, it will be very hard for the Client organisation to put pressure on them to provide value for money.

It should be noted that many countries in Sub-Saharan Africa are designated as Fragile or (recently) Conflict Affected States; and much of the experience gained is of clear relevance to the Afghan situation. While countries like New Zealand are often held up as examples of best practice, it is useful to be realistic and pragmatic when setting targets and objectives. The UK's highway management system is now quite sophisticated, with (private sector) Management Agents managing sections of England's highways - typically for a period of about five years. The present arrangements have evolved gradually over the past 25-30 years as the necessary degree of competence and trust (on both sides of the contract) has built up with experience.

It must be stressed however, that the creation of a RA is often just the first step on a long journey. It will take time, effort and political will to build capacity and gain the experience needed to fulfil the new functions in the many road and road-related institutions. Figure 3 illustrates a transition pathway for reform described by Talvitie (1996) (amended by Dunlop 1998):

Figure 3 Transition Pathway for Reform

Phases in Road Administration Reform					
Phase I	Phase II	Phase III	Phase IV	Phase V	Phase VI?
Public Works Dept.	Identify client and deliverer	Separate client and deliverer Establish road board	Corporatise deliverer	Corporatise client	Privatise client ?
Decreasing government involvement			➔		

RAs in countries like New Zealand, Australia, Sweden and the UK enjoy a high degree of autonomy from ministerial interference in the day to day operations. In the case of the UK, the Highways Agency runs its own operations (as well as that of its suppliers) on very commercial principles (e.g. the Agency has to comply with a Framework Document (setting out all the performance criteria) drawn up between it and the Department for Transport. The Chief Executive is appointed through a competitive process to a term contract). Many of the Highways Agency's contractors also act as RAs, with formal responsibility for designated parts of the road network¹⁹. Private sector firms bid for management contracts, which upon completion are then re-tendered in open competition: a process which constantly encourages innovation and value for money.

These may serve as a model for Afghanistan, but a range of experience can be seen. At the other extreme, where institutional and management structures have not been fundamentally changed, RAs have little true autonomy, functioning much like the Roads Department they have replaced - with the Authority's Director often responding on a day to day basis to the Minister (responsible for roads). If the Executive Director cannot take Executive decision it will be hard to deliver the Authority's mission. If any of the four principles elaborated above is not able to function, then the performance of the RA will be compromised.

International experience suggests that reform of the supply side (provider) needs to occur before that of the demand side (client). Many countries with road departments or less autonomous RAs often do have a reasonably active contractor industry. In many countries of the former Soviet Union for example, many State Contracting firms have been privatised. Over time, these new firms will begin to face genuine competition from the private sector as new procurement rules begin to encourage new entrants to the market. This does require several factors to be in place, such as reliable finance, appropriately sized procurement packages and fair procurement procedures, which in turn offer realistic expectations of workload and return on investment. As this develops and experience grows, it will be possible to move to the next phase. The creation of genuine capacity and competition is needed. In the Afghan situation, it is important that expectations are not artificially high. The establishment of the RA would be the first step along a long path. Capacity to carry out various levels of work needs to be built up over time. Genuine competition will only be possible when there are enough players, across the range of contracting and consulting services, in the market. This takes time.

Public Private Partnerships (PPP) are frequently discussed as a way of addressing public sector budget constraints. They can be an alternative to awarding multiple, smaller contracts. They are increasingly being used in the road sector to encourage the private sector to take on some of the financial burden and risk of providing maintenance, for a return (receiving payments from the RA) over an extended period (typically 25 or more years),

¹⁹ See Highways Agency website (Highways Agency, 2013)



which also offers attractive profit margins. Two of these "super agency" arrangements are currently being used in England at present (Highways Agency, 2013). It should be stressed at the outset, that this would not be an option for Afghanistan at this stage. A very high degree of contractor competence, experience, and trust between the Client and Contractor needs to have been established for this option to be considered. A further aspect is that high levels of competition need to exist - i.e. multiple potential and interested providers in the market place to ensure that the Client (i.e. the taxpayer) gets genuine value for money. If only a few providers bid for the work, value for money is hard to guarantee.



SECTION 7

Possible Timetable for Development of a Road Authority in Afghanistan

The following timetable (see figure 4 below) aims to provide a more detailed description of the key decisions that need to be taken, and over what sort of timeline. They have been categorised into the main thematic areas discussed in the report. The intention is to broadly follow the schedule shown in Section 1 but highlighting the separate thematic areas.

The studies foreseen for 2014 would need to provide the detail for many aspects of RA design and of the transition to set it up. The main issues are:

- Financing: determine required levels of expenditure, RF or budget allocations?
- Institutional Relationships - with ministries, other road sector agencies (police, engineers, works), donors, contractors, consultants
- Legislation needed
- Governance framework - road user representation, involvement of civil society, media
- Road Condition Surveys, Detailed road inventory
- Pavement Management system and Asset management system
- Detailed Organisational Design
- Capacity Building of all parties involved in road infrastructure management and financing
- Procurement procedures and policies (e.g. encouraging new, small-scale contractors into the market through appropriate packaging of lots)
- Contracting methods - moves toward more performance and output-based contracting
- Contract Administration (for authority staff and contractors)
- Financial management, accounting procedures
- Technical and Financial Audit
- Clear definition of role of ministry, contractors, consultants and appropriate training
- Reporting requirements
- High level conference to secure "buy in" at the highest levels for the measures proposed
- Design Road Map transition plan
- Training for Board members

Issues of security have not been discussed at length in this paper, as they will be familiar to most readers, but will clearly be an issue to be considered. Regular site visits, assessment of project progress, measuring, reporting, monitoring and audit are all essential elements of RA and RF activity; and free access will be needed to assure all parties that processes are working. This aspect should also be included in the studies planned.



Figure 4 A Possible Timetable for Development of a Road Authority in Afghanistan

Possible Timetable

	2013	2014	2015	2016	2017	2018
Process to Establish Road Authority						
Options to be reviewed and approved		■				
Detailed design of approved option		■				
Legislation introduced and passed			■			
Operationalisation of Road Authority				■		
Continued Capacity Building					■	■
Detailed Studies						
Financing - determine expenditure required; revenue needed;		■				
Financing options: New Road Fund or rely on Budget allocations??		■				
Decision in principle		★				
Detailed design of Road Fund organisation and financing mechanisms		■				
Decision and formal approval			★			
Legislation drafted			■			
Operating procedures			■			
Legislation passed				■		
Technical assistance during Transition period				■	■	■
Capacity building of Staff, Board Members, associated organisations				■	■	■
Institutional Framework						
Review institutional options		■				
Define responsibility for parts of road network		■				
Define relationships between RA, RF and other institutions		■				
> public and private sector institution roles and responsibilities			■			
> road user participation, involvement of civil society			■			
Road Authority						
Detailed design of Road Authority organisation		■				
Legislation drafted		■				
Operating procedures			■			
Legislation passed				■		
Technical assistance during Transition period				■	■	■
Capacity building of Staff, Board Members, associated organisations				■	■	■
Procedures, Guidelines (for RF, RA and related organisations) to cover:						
Detailed regulations, procedures etc. in (<i>inter alia</i>):						
Financial Management, accounting,				✓		
Technical and Financial Reporting, monitoring & evaluation				✓		
Procurement, contract administration				✓		
Contracting, Tendering procedures (for small scale contractors)				✓		
Technical and Financial Audit				✓		

SECTION 8

Bibliography

Author(s)	Year	Title
ADB	2012	Financing Road Construction and Maintenance after the Fuel Tax Reform, ADB, 2012 http://www.adb.org/sites/default/files/pub/2012/financing-road-construction-maintenance.pdf
Allan, Ron, Caday, Olga	2003	Road Funds and Road Maintenance - An Asian Perspective, Asian Development Bank (authors: Dr Ron Allan and Olga Caday)
Department for Transport	2013 a	Reliability of journeys on Highways Agency's motorway and 'A' road network, England: [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/183362/reliability-ha-network-stats-release-feb-13.pdf]
Department for Transport / Highways Agency	2013 b	Highways Agency framework document: outlining the relationship between the Highways Agency and DfT, September 2013 [https://www.gov.uk/government/publications/highways-agency-framework-document-outlining-the-relationship-between-the-highways-agency-and-dft]
Dunlop R.	1998	Dunlop, R. (1998), Highway Management Reform in New Zealand Post 1984 Compared to World-wide Road Agency Reform, Transit New Zealand. [quoted in OECD 2001]
Government of India	2011	Government of India, Ministry of Road Transport & Highways: 12th Five Year Plan (2012-17), Report of the Working Group on Central Roads Sector [http://planningcommission.gov.in/aboutus/committee/wrkgrp12/transport/report/wg_central_roads.pdf]
Heggie, Ian	1995	Management and Financing of Roads: An Agenda for Reform, World Bank Technical Paper 275 [http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.201.4246&rep=rep1&type=pdf]
Heggie, I. and Vickers, P.	1998	Commercial Management and Financing of Roads, World Bank Technical Paper No.409, World Bank [http://rru.worldbank.org/documents/toolkits/highways/pdf/17.pdf]
Highways Agency	2013	(Web page regarding Current Framework Contracts:) [http://www.highways.gov.uk/about-us/procurement/current-and-forthcoming-contracts/works-and-consultancy/network-maintenance-arrangements/]
Islamic Republic of Afghanistan	2008 a	Afghanistan National Development Strategy 1387-1391 (2008-2013), Volume I: Islamic Republic of Afghanistan / ANDS Secretariat [http://mfa.gov.af/Content/files/Volume%201%20ENG.pdf]
Islamic Republic of Afghanistan	2008 b	Afghanistan National Development Strategy 1387-1391 (2008-2013): Volume II: A Strategy for Security, Governance, Economic Growth & Poverty Reduction, Volume II: Security and Good Governance Pillars. Security; Justice and the Rule of Law; Governance, Public Administrative Reform and Human Rights; and Religious Affairs Strategies, Islamic Republic of Afghanistan / ANDS Secretariat [http://mfa.gov.af/Content/files/Volume%202%20ENG.pdf]
Islamic Republic of Afghanistan	2008c	Afghanistan National Development Strategy 1387-1391 (2008-2013): A Strategy for Security, Governance, Rule of Law, Human Rights, Social & Economic Growth and Poverty Reduction, Volume III: Social and Economic Development Pillar: Energy, Transportation, Water Resource Management, Information and Communications Technology, Urban Development and Mining Sector Strategies, Islamic Republic of Afghanistan / ANDS Secretariat [http://mfa.gov.af/Content/files/Volume%203%20ENG.pdf]
OECD	2001	Performance Indicators for the Road Sector OECD 2001 [http://www.internationaltransportforum.org/pub/pdf/01PerformIndicE.pdf]
Pinard, Michael	2012	Progress on Commercialized Road Management; SSATP Working Paper 92, Sub-Saharan Africa Transport Policy Program (SSATP) / World Bank [http://www4.worldbank.org/af/SSATP/Resources/SSATP-WorkingPapers/SSATPWP92-Commercialized-road-management-cover2.pdf]
Potter, Barry	1997	Dedicated Road funds: A Preliminary View on a World Bank Initiative, IMF, Fiscal Affairs Dept.



Author(s)	Year	Title
		[http://www.imf.org/external/pubs/ft/ppaa/ppaa9707.pdf]
Rohatgi, Rajesh, Bandyopadhyay, Arnab, Gupta, D.P.	2011	A Review of Highway Agencies in the South Asia Region, Transport Research Support Program / World Bank/DFID [http://siteresources.worldbank.org/INTTRANSPORT/Resources/336291-1239112757744/5997693-1294344242332/HighwayAgencies-SouthAsia.pdf]
Andreas Schliessler Alberto Bull	2004	Road Network Management : Roads - A new Approach for Road Network Management and Conservation http://www.giz.de/Themen/en/dokumente/giz2004-en-road-network-management.pdf
Talvitie, A.	1996	Talvitie, A. (1996), International Experiences in Restructuring the Road Sector, The World Bank, Washington, DC. (paper referred to in OECD 2001 and: [http://www.ppiaf.org/sites/ppiaf.org/files/documents/toolkits/highwaystoolkit/6/bibliography/pdf/international_experience_in_restructuring_road_sector.pdf]
UN ESCAP	2005	Transport and Communications Bulletin for Asia and the Pacific No. 75; Road Maintenance Funds, UN ESCAP [http://www.unescap.org/ttdw/Publications/TPTS_pubs/bulletin75/Bulletin75_fulltext.pdf]
USAID	2009	Map source: USAID. From: Afghanistan: U.S. and Internationally-Funded Roads (GAO-09-626SP), an E-supplement to GAO-09-473SP; [http://www.gao.gov/products/GAO-09-626SP]
World Bank	2012	Afghanistan in Transition: Looking Beyond 2014 Volume 2: Main Report
World Bank	2013	World Bank Knowledge Base: Institutional and Management Structures for Roads: http://www.worldbank.org/transport/roads/inst&sm.htm