EXPERT ROUNDTABLE

INVESTMENT IN TRANSPORT INFRASTRUCTURE

NEPAD-OECD AFRICA INVESTMENT INITIATIVE

How to increase sound private investment in Africa's road infrastructure:

Building on country successes and OECD policy tools

Carole Biau, Karim Dahou, Toru Homma

This paper is distributed as part of the official documentation at the Expert Roundtable on 11 December 2008. The views contained within do not necessarily represent those of NEPAD or the OECD or their member governments.

LIST OF ACRONYMS

AEO	African Economic Outlook
AU	African Union
AFD	Agence Française de Développement
AfDB	African Development Bank
APF	Africa Partnership Forum
BOAD	Banque Ouest Africaine de Développement
DBSA	Development Bank of South Africa
EAC	East African Community
EATTP	East Africa Trade & Transport Facilitation Project
ECOWAS	Economic Community of West African States
EU	European Union
ICA	Infrastructure Consortium for Africa
IFC	International Finance Corporation
MIGA	Multilateral Investment Guarantee Agency
NEPAD	New Partnership for Africa's Development
NEPAD-IPPF	NEPAD Infrastructure Project Preparation Facility
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OHADA	Organization for the Harmonisation of Business Law in Africa
PAIDF	Pan-African Infrastructure Development Fund
PBC	Performance-based Contract
PPIAF	Public-Private Infrastructure Advisory Facility
PPP	Public-Private Partnership
PRTSR	Poverty Reduction-Transport Strategy Review
REC	Regional Economic Community
SSATP	Sub-Saharan Africa Transport Policy Programme
SWF	Sovereign Wealth Fund
SMEs	Small and Medium Enterprises
TICAD	Tokyo International Conference on African Development
UNECE	United Nations Economic Commission for Europe
WAEMU	West African Economic and Monetary Union

BACKGROUND

- *Investment in transport infrastructure is a **cornerstone for accelerating Africa's regional integration**.*
- ***Transport costs remain very high throughout Africa**, averaging 14% of the value of exports compared to 8.6% for all developing countries.*
- *As currently **only 27.6% of Africa's 2 million Km of roads are paved (19% in sub-Saharan Africa, versus 27% in Latin America and 43% in South Asia)**, the need for increased investment in this domain is urgent.*
- *Without effective road infrastructure and coherent coordination of transport infrastructure policies across African borders, **Africa's share of world trade may well stagnate at its current 2%**.*

Road transport infrastructure is critical for sustainable development in Africa

Roads are Africa's dominant mode of transport and carry over 90% of traffic. Basic transport infrastructure and affordable transport services are indispensable in Africa, so as to provide populations with effective access to social services and in order to unlock the continent's investment potential. From 1964 to 2003, World Bank infrastructure projects generated a higher social rate of return in transport than in any other sector.[1] As highlighted by the OECD's *African Economic Outlook* (AEO) 2005-06, improved transport infrastructure has already accelerated many African countries' progress towards reaching the Millennium Development Goals.[2] As transport costs are a primary consideration for private actors when locating economic activities, facilitating transport can also enhance investment in the short term. Ultimately, developing transport infrastructure is a cornerstone for accelerating Africa's regional integration, which can in turn attract private sector engagement across economic sectors by increasing market size, total factor productivity and economies of scale for potential investors.

However, transport costs remain very high throughout Africa, averaging 14% of the value of exports compared to 8.6% for all developing countries, and even hover around 50% of export value for Africa's 15 landlocked countries – 56% for Malawi, 52% for Chad, and 48% for Rwanda. These operational costs are directly related to poor road infrastructure: a survey conducted in Kinshasa showed that transportation costs were on average two times greater on dirt roads than on paved roads, with a significant impact on food prices.[3] As currently only 27.6% of Africa's 2 million kilometers of roads are paved (19% in sub-Saharan Africa, versus 27% in Latin America and 43% in South Asia),[4] the need for increased investment in this domain is urgent.

Road transport actually forms a central cog in national, regional and international trade. Without effective road infrastructure and coherent coordination of transport infrastructure policies across African borders, Africa's share of world trade may well stagnate at its current 2%. Poor transport infrastructure also renders intra-continental trade far more expensive than external trade – the cost of trucking a 22-24 ton container from Maputo to northern Mozambique is nearly 2.5 times higher than that of shipping the same container from Dubai.[5] Understandably, intra-continental trade thus accounts for less than 10% of Africa's total external trade, compared to nearly 20% for the Western Hemisphere and over 40% for Asia.[6] As current transport operation costs far outweigh the road asset provision and management costs that would be borne by investing parties (sometimes by a scale of 15 to 1), the case for investment in road infrastructure is clear.

---

[1] *OECD, African Economic Outlook 2005-2006, p.67*

[2] *Ibid, p.48*

[3] *Ibid; citing: Minten, Bart and Steve Kyle (1999), "The effects of distance and road quality on food collection, marketing margins, and traders' wages: Evidence from former Zaire", Journal of Development Economics, Vol. 60: 467–495.*

[4] *OECD, African Economic Outlook 2005-2006, p.52*

[5] *Ibid, p.54*

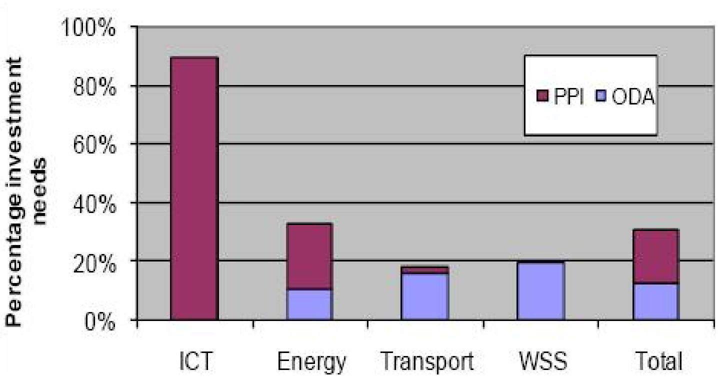
[6] *Africa Partnership Forum, "9th Meeting of the APF". November 2007.*

Road infrastructure needs more private investment

Private sector participation is essential if investment in road infrastructure is to truly experience an upturn. Although the enormous gap between available infrastructure and the needs of the African population cannot be bridged by public resources alone, 90% of investment in Africa's transport infrastructure currently rests on public investment and ODA.[7] Funding is moreover needed not only for road construction, but for rehabilitation and maintenance; on average African countries still lack the budgetary resources and organisational capacity to adequately maintain more than half of the national road network.[8] If private involvement is combined with government and business commitment to regulation, not only can it provide financial inputs – it can durably improve access, affordability, quality and fiscal costs of transportation as well.[9]

• *Private sector participation is essential if* ***investment in road infrastructure is to truly experience an upturn***

Fig. 1: Infrastructure financing gaps



Source: OECD-DAC and World Bank PPI Database, 2006

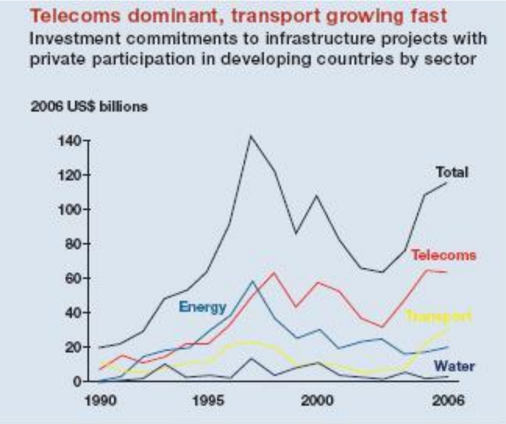
Of all infrastructure sectors, transport and water have long attracted the least private investment in developing countries. While private financing of African infrastructure has surged since 2005, only about 10% of this rise has gone to transport.[10] Public-Private Partnerships (PPPs) are particularly rare in the road sub-sector, notably due to high perceived risk.[11] To encourage private sector involvement, governments can play a central role regarding planning, safety, security, competition and regulation.

• ***Public-Private Partnerships (PPPs) are much fewer in the road sector than in other transport areas****, notably due to high perceived risk.*

Nonetheless, investment in transport in general and in road infrastructure in particular has increased in recent years: the Public-Private Infrastructure Advisory Facility (PPIAF) notes that transport has become the fastest-growing sector in terms of global private activity in infrastructure since 2005.[12] ODA for transport is rising as well, particularly in Africa. From 2005 to 2006, ICA members' commitments for transport projects in Africa rose from US$ 2.6 billion to nearly US$ 3.2 billion.[13]

[7] This is even more true for road infrastructure compared with other transport infrastructure (see *infra*).
[8] *Infrastructure Consortium for Africa 2006 Annual Report, Vol.1, p.30*
[9] *OECD, African Economic Outlook 2005-2006*
[10] Africa Partnership Forum, "9th Meeting of the APF". November 2007.
[11] The commercial profit that will accrue to a private actor as a result of investing in road transport is difficult to predict, as demand in the road sector is also highly subject to exogenous conditions. Low-income Africans moreover have a high price elasticity of demand in this sector (their road use will vary widely according to the price of road access). *OECD, African Economic Outlook 2005-2006, p.55*
[12] *Torres de Mästle, Clemencia and Izaguirre, Ada Karina. "Recent trends in private activity in infrastructure". Public-Private Infrastructure Advisory Facility (PPIAF). Gridlines, Note No. 31, May 2008.*
[13] *Infrastructure Consortium for Africa 2006 Annual Report, Vol.1*

Fig. 2: Telecoms dominant, transport growing fast: Investment commitments to infrastructure projects with private participation in developing countries by sector



Source: World Bank and PPIAF, PPI Project Database.

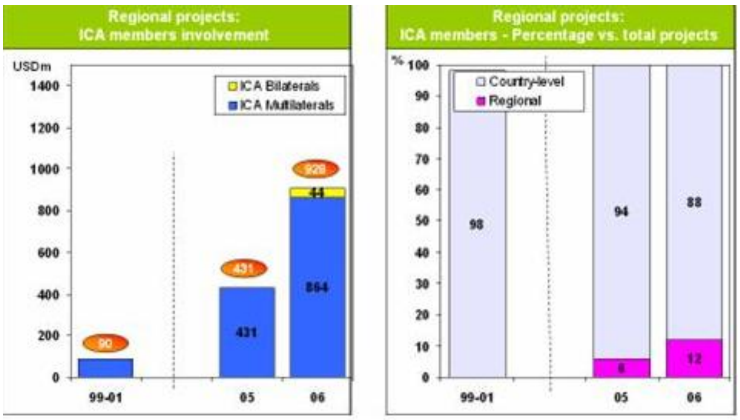
Note: The investment data refer to commitments and include private and public contribution

While oil-producing African countries have concentrated the bulk of the investment rise, some non-oil exporters have substantially increased their rates of investment in road infrastructure. In 2006, Sub-Saharan Africa saw new private activity in road transport in Equatorial Guinea, Kenya, Nigeria, Sudan, and Uganda. The presence of non-oil exporters in this list is encouraging as it suggests that extractive industries are no longer the overwhelmingly dominant driver of private investment in African road infrastructure. Although major obstacles remain, lessons can be drawn from these few successes.

• *The share of annual commitments to regional infrastructure projects by multilateral and bilateral agencies has surged,* ***from less than 100 million USD in 2000 to nearly 1 billion USD (12% of total commitments) in 2006****.*

Also, whereas the regional scale was barely considered by investors and donors just a few years ago, regional projects are attracting increasing attention today. The share of annual commitments to regional infrastructure projects by multilateral and bilateral agencies has surged, from less than US$ 100 million in 2000 to nearly US$ 1 billion (12% of total commitments) in 2006.[14] The central role that Regional Economic Communities (RECs) must play in developing Africa's road transport infrastructure is clearly acknowledged.

Fig. 3: ICA Members' infrastructures investments Regional projects in Africa 1999-2006



Source: ICA 2006 Annual Report, Volume 1, p. 24, chart 5

[14] *Infrastructure Consortium for Africa 2006 Annual Report, Vol.1*

Box 1: Recent Trends in Forms of Public-Private Contracting for Road Infrastructure Projects

Private investment in road infrastructure entails new responsibilities for the private sector. Unlike for public procurement, private actors must recuperate the costs of their investment relatively rapidly. What PPP contracting options are available for securing a stable revenue stream for private partners?

A rise in BOT (Build, Operate and Transfer) concessions for road projects

- Under BOT projects the private actor builds and finances the infrastructure, and operates and maintains it over a given concession period (20-30 years). The road is then transferred by the private actor to the government. Examples include the Maputo Toll Road (30-year concession since 1996).
- As a share of total investment in privately-managed road projects in developing countries, BOT concessions have risen from 39% in the 1990s to 62% in 2001-06. These projects include both the construction of new roads and the expansion or rehabilitation of existing roads.

"Operate and Maintain" (O&M) concessions and Maintenance Contracts

These contracts are negotiated in order to ensure the good condition of already existing roads. PBCs (*performance-based contracts*) are increasingly frequent in this area, combining performance and traditional pay items. Amongst others, South Africa and Chad are designing PBC road concessions.

Financial Support for Private Actors during the "Operation" Stage

While most projects continue to rely largely on toll revenues for financing, various innovative schemes of government support can reduce the risks of demand-volatility faced by private actors:

- *Shadow Tolling*: the private sector collects tolls for the public sector and is then paid by the latter based on traffic volume and composition. The public sector thus directly benefits if traffic is higher than expected, and can provide subsidies to the concessionaire if traffic is lower.
- *Availability Payments:* paid to the concessionaire by the government on the basis of the availability of required capacity (number of lanes in acceptable condition, etc), regardless of traffic volumes.
- *Minimum traffic guarantees*: the government compensates the concessionaire if revenue or traffic volume falls below a specified minimum. Inversely, if revenues are higher than expected, the concessionaire shares the surplus with the government.
- *Setting and adjusting toll rates*: Tolls can vary according to the concessionaire's direct costs, congestion levels, and/or the road users' ability to pay (as in the Maputo Toll Road, *infra*). Toll rates must be set out in the initial bidding contract. Centralising revenue in an independent road fund moreover allows funding from large toll roads to cover operation costs on rural and feeder roads.

Source: Public-Private Infrastructure Advisory Facility (PPIAF) Toolkit for Partnership in Public-Private Highways. http://www.ppiaf.org/documents/toolkits/highwaystoolkit/2_carac/22/22_.htm

Key challenges to address for increasing private sector involvement in road transport

While the challenges facing African governments are manifold, there is tremendous potential for making headway in private sector involvement in infrastructure. Private interest in Africa's road transport is picking up in an unprecedented manner; this presents governments with an historic opportunity for addressing obstacles comprehensively so as to reduce Africa's yawning road infrastructure gap. The major challenges to be addressed take three dimensions (for matrix form, see Table 1, *infra*):

- Creating an enabling environment for PPP success in Africa
- Coordinating governing bodies at all levels for road infrastructure in Africa
- Ensuring that road infrastructure projects are genuinely sustainable and inclusive, meeting the needs of the African population.

This paper seeks to determine how the above challenges can best be tackled, drawing insights from positive reform examples in individual countries and within RECs. The analysis also considers the OECD *Principles for Private Sector Participation in Infrastructure*, building on a first application to the water and sanitation sector carried out in 2007-2008[15]. The *Principles* are highly relevant to the transport sector and can provide useful guidance for policymakers (for a matrix application of the *Principles*, see Annex).

15 "Private sector participation in the water sector. OECD checklist for public action." OECD forthcoming. See: www.oecd.org/daf/investment/water

Table 1: Key challenges for public and private actors in the road transport sector

Governance in the transport sector	Role of African governments	Role of international community (IC)
Coordinating governing bodies at all levels for road transport		
Coordination among transport sub-sectors and ministerial bodies	Cooperation with air, sea, & rail projects; Rationalise overlapping ministries.	
Territorial governance	Clear responsibility-sharing among regional, national & local bodies; effective decentralisation.	Abiding by local jurisdictions and backing local entities' financial and regulatory autonomy.
Sharing PPP risks and responsibilities among public & private actors		
Sharing PPP responsibilities	Fully understand PPP objectives; commit to shouldering part of financing costs.	Sound project preparation upstream; include public actor in decision-making
Coordinating investment regionally		
Regional transport systems remain poorly integrated and inefficient; strong investment is needed to strengthen cross-border links & enable large-scale intra-continental trade flows	Regional infrastructure projects by RECs (ex the East Africa Trade & Transport Facilitation Project – EATTP). These need to be coordinated continent-wide. Programme overlap should be avoided.	Rationalisation and coordination among initiatives: the Sub-Saharan African Transport Policy Programme (SSATP, WB), the AfDB-UNECA Trans-African Highways (TAH) initiative, etc.
Inappropriate institutional frameworks, poor legal harmonisation within RECs.	Establish regional management committees. Undertake legal harmonisation of transport legislation, to facilitate regional project bids.	Encourage management committees (ex. SSATP corridor management groups). Allocate higher share of donor commitments to road infrastructure.

Sustainability & inclusiveness	Role of African governments	Role of IC / private sector
Sustainability		
Tackle poor maintenance post-construction	Creation of autonomous road funds to oversee tolling and cover maintenance costs. Build capacity for maintenance at the community level. Preventive legislation (ex. axle-load controls, good drainage) to limit road degradation.	Address environmental sustainability and accept to share responsibility for road maintenance. Ensure non-exclusionary tolling to cover maintenance costs. Redistribute toll-revenue to maintain less lucrative (secondary or feeder) roads.
Inclusiveness		
Avoid exclusion of secondary rural and urban roads; **Exploit the road sector's potential for employment generation.**	Monitor projects for affordable access to the poor, inclusion of rural areas, & facilitated urban mobility. Support domestic construction industries and employment generation in projects.	Address complementarities of transport means & development of secondary roads. Include local communities and local contractors in project design, construction and oversight.

An enabling environment for PPPs	Role of African governments	Role of international community (IC)
Appropriate legislative environment		
Cumbersome economic legislation and lack of transparency	Business-friendly reform (ex *2004 Lagos Roads Law*); transparency in information.	Set up mechanisms for communication between private & public actors.
Weak property rights & contractual law	Reinforce governance-monitoring units to guarantee fair competition in bidding	Ensure private actors honour contracts & disclose all bid-relevant information.
Sound public & corporate governance		
Natural monopoly of road sector may be abused; fiscal discipline and coverage of maintenance costs may be overlooked	Verify private sector outputs (ex. through performance-based contracts). Toll revenue managed by autonomous fund	Responsible business conduct; Emerging economies are encouraged to accede the OECD Anti-Bribery Convention.
Access to finance		
Narrow local capital markets, limiting possibilities of local re-financing for private actors	Strengthen local capital markets, tidy up the banking sector, encourage microcredit banks.	Consolidate regional infrastructure funds (ex. EU Infrastructure Trust Fund) available for public & private actors.
Lack of alternative sources of finance; volatility of road use demand, uncertain revenue streams for concessionaire	Offer alternative government financing. Encourage interest of Sovereign Wealth Funds & pension funds in infrastructure.	Strengthen risk-mitigation tools and guarantee mechanisms to facilitate private involvement in the road sector.

• *Difficult access to finance, awkward regulatory and policy environment, and inadequate infrastructure, especially electricity and roads, are **the three key factors impeding firms' involvement in Africa**.*

CHALLENGE 1: CREATING AN ENABLING ENVIRONMENT FOR PPP SUCCESS IN AFRICA

In a recent IFC-sponsored survey, foreign investors cited three key factors impeding their involvement in Africa. In order of importance, these were: the high cost of and lack of access to finance; the cumbersome regulatory and policy environment; and inadequate infrastructure, especially electricity and roads.[16] These responses strongly suggest that improving road infrastructure can generate a virtuous cycle of future investments in all sectors of the economy. They also highlight a crucial need for improving national policy environments and access to finance, as discussed below.

1.1. Creating a conducive legal and regulatory framework

• *Business-friendly legislation remains rare in many African countries; **governments must credibly consolidate regulatory reform** if they wish to raise Africa's profile as a place to invest in.*

The cost of doing business in Africa is 30% higher than in any other region. Cumbersome economic legislation, weak legal systems, and a lack of transparency which delay start-up, all strongly contribute to these expenses. These factors are particularly harmful in the road sector, where vast start-up and sunk costs for projects make investors highly cautious. An enabling legislative environment – especially the protection of property and contractual rights, as noted by *Principle 5* of the OECD *Principles for Private Sector Participation in Infrastructure* – is a prerequisite for engaging the private sector as an agent for transport infrastructure development. At the November 2007 Africa Investor Project Summit held in Lagos, the Lekki Concession Company thus noted that continuity of Nigerian public policy had been critical to creating an enabling environment for private sector investment, and that the 2004 Lagos Roads Law had strongly stimulated its involvement in the Lekki Toll Road Concession.[17] Under its Roads Sector Programme, Ethiopia has in turn significantly harmonised its practices concerning procurement, documentation, management and monitoring of projects.[18] In addition to such reforms, *Principle 7* recommends subjecting activities to appropriate commercial pressure, dismantling unnecessary barriers to entry, and strengthening competition laws. Business-friendly legislation remains thin in many African countries, and there is still much room for progress[19]; governments must keep reforming their regulatory framework if they wish to raise Africa's profile as a place to invest.

1.2 High standards of public and corporate governance

1.2.1 Transparency and good governance of the public sector

• *Transparency in the information released by public and private actors is also essential to **ensure that projects are free from favouritism**.*

Private actors are often reluctant to engage in PPPs out of fear of an unfair bidding and procurement process. Transparent upstream competition, before concessions are even attributed, is essential for the good health of PPPs. As *Principle 15* notes, procurements should ensure procedural fairness and should provide stakeholders with all necessary guarantees and information. As the road sector takes the form of a natural monopoly, a downstream risk of private investment is also that this monopoly power may be abused. *Principle 6* encourages governments to establish appropriate procedures to deter, detect and sanction corruption; this would improve both public and private sector integrity and accountability. Independent corruption-monitoring units, such as the Kenya Anti-Corruption Commission (KACC), which

[16] *OECD, African Economic Outlook 2005-2006, p.394.*

[17] The Lekki Concession Company Ltd (LCC) seeks to provide high quality road infrastructure along the Lekki Peninsular of Lagos. It has established a PPP with Lagos State to design, build, finance and operate the Lekki Epe Expressway (49.4 km) and the Coastal Road (20km). It is financed by the concessionaire, LCC, on a limited-recourse basis, with a 30-year concession.

[18] The programme was agreed between the Ethiopian Roads Authority (ERA) and other stakeholders. *Infrastructure Consortium for Africa 2006 Annual Report, Vol.1*

[19] Countries' existing business deficiencies are examined in depth in the 2007 World Economic Forum *Africa Competitiveness Report* and in the World Bank's annual *Doing Business* reports.

monitors both public and corporate activities, reflect instructive steps in this direction. Transparency in the information released by both public and private sectors is likewise vital for sound project governance. With this in mind, Ghana is centralising a transport database so as to make relevant data readily accessible to all stakeholders by late 2008.[20] Similarly, Tanzania publishes annual transport statistics and regularly disseminates transport bulletins to stakeholders, and Niger has created a website pertaining to the sector.[21]

1.2.2 Responsible business conduct on behalf of the private sector

- *Over a dozen African countries now engage in performance-based contracting (PBC). This could ensure that **private involvement in transport genuinely serves as a means to reduce Africa's transport costs.***

Transparency must be of course matched by responsible business conduct if the public's needs are to be efficiently met (*Principle 20*), with the help of intergovernmental standards or instruments such as the OECD Guidelines for Multinational Enterprises. This includes addressing social and environmental issues and fully involving local communities and end-users from the initial phases of project design. Private actors could be held to account by using output/performance-based contracts (PBCs, see Box 3); as *Principle 16* advocates, public-private contracts should be specified in terms of verifiable infrastructure services to be provided to the public. Encouragingly, over a dozen African countries now engage in PBC. This could ensure that private involvement in transport genuinely serves as a means to reduce Africa's transport costs.

1.3 Access to finance for private investors

1.3.1 Strengthening local financial markets

- *__Narrow and illiquid local capital markets deter private actors from investing in transport infrastructure__, where start-up costs are high but returns, although quite stable, are relatively low and long-term.*

If IFC survey respondents identified the largest obstacle impeding their involvement in Africa to be access to finance, this is primarily because local capital markets are extremely narrow and illiquid. This particularly deters private actors from investing in transport infrastructure, where start-up costs are high but returns, although quite stable, are relatively low and long-term. In such cases, reliable local sources of re-financing are essential. Strengthening domestic capital markets is therefore crucial, and can moreover facilitate investment and SME development locally. Cleaning up the banking sector and phasing out obstacles to international capital movements, as *Principle 8* recommends, can likewise encourage private engagement. Forty African countries thus introduced investment-friendly regulatory changes in 2006, including banking sector reform (as in Congo or Nigeria).

1.3.2 Funds and other finance sources to support private actors

- ***Forty African countries introduced investment-friendly regulatory changes in 2006,** including banking sector reform (as in Congo or Nigeria) and easing registration and taxation constraints on new businesses.*

Allowing for the government's financial backing to the private sector may be another avenue for increasing investors' access to finance. Such trends are emerging in Asia and Latin America, where various financial arrangements (such as predetermined government payments) have been used to cover project costs in road infrastructure.[22] In addition to the innovative contracting options available (see Box 1), the development of infrastructure funds and other long term resource-mobilisation schemes could also help mitigate the financial risk faced by private actors.[23] A pioneer in this domain, the Pan-African Infrastructure Development Fund (PAIDF) was launched at the 9th African Union Summit in 2007;[24] one road project is already being considered for future support. Similar efforts are being made within

---

[20] *Kumar, Ajay. "A Contrasting Approach to Road Reforms: The Case Study of Uganda Experience". SSATP Discussion Paper No.1, March 2002.*
[21] *SSATP Annual Report 2005*
[22] Infrastructure Consortium for Africa
[23] Such recommendations were notably made by the East African Community (EAC) in its Kigali meeting in June 2008.
[24] This public-private initiative aims to serve as a financing platform for infrastructure development, tapping resources from potential shareholders such as pension funds and asset management firms.

• *The* ***development of infrastructure funds*** *and other long term resource-mobilisation schemes could help mitigate the financial risk faced by private actors.*

the international community: the Emerging Africa Infrastructure Fund provides investors in Sub-Saharan infrastructure projects with appropriate long-term financing structures,[25] and the EU Infrastructure Trust Fund for Africa seeks to improve infrastructure and services along Trans-African road transport corridors. Simplification or rationalisation of these initiatives may be needed so as to clarify the financial landscape for potential investors, and to effectively steer cash flows towards the road sector.

• *If African governments effectively channel the numerous financial flows (ODA, SWFs, etc.) towards road infrastructure projects,* ***the potential for supporting private actors and attracting investment towards the sector will be greatly enhanced.***

Novel and particularly sustainable sources of financing could also come from pension funds; given infrastructure's potential to match long-term provision assets, these funds are steadily gaining interest in the sector. The OECD/IOPS Global Forum on Private Pensions, held in Mombasa in October 2008, provides valuable insights in this domain. The high liquidity of African assets and their low correlations with global markets is also attracting emerging market funds to the continent; these funds currently deploy near 10% of their portfolios in Africa. Sovereign Wealth Funds (SWFs) likewise present enormous development potential. Emerging markets are also financially backing Africa in terms of ODA: China's commitments within the ICA are surging, as are those from Arab banks and India (which now contribute 10-20% of total ICA commitments).[26] If African governments effectively channel these financial flows towards road infrastructure projects, the potential for supporting private actors and attracting investment towards the sector will be greatly enhanced.

Box 2: Multilateral policy tools provide valuable guidance for private sector involvement in Africa's road infrastructure

The Public-Private Infrastructure Advisory Facility (PPIAF): launched in 1999 as a joint initiative of the governments of Japan and the United Kingdom, PPIAF is a multidonor technical assistance facility created to help governments in developing countries improve the quality of infrastructure through partnerships with the private sector. PPIAF is built on the World Bank Group's Infrastructure Action Program; members include bilateral and multilateral development agencies and international financial institutions. *For more information, see: http://www.ppiaf.org/*

The World Bank offers policymakers numerous tools for guiding private investment in road transport. This includes the *Resource Guide for Performance-based Contracting (PBC)*, designed to help countries maintain their road networks; currently, Chad, Tanzania and a number of other African countries are preparing bidding processes with the help of this guide. In collaboration with PPIAF, the World Bank has also launched a *Highways Toolkit*, a hands-on analytical framework to support local policymakers in assessing contracting, regulatory, and funding options for involving the private sector in developing, operating, and maintaining roads. *For these tools and others, see the World Bank website's "Transport > Roads and Highways" section.*

The OECD *Principles for Private Sector Participation in Infrastructure*: launched in March 2007, the *Principles* were developed through a process of consultation with a broad group of public and private sector experts from OECD and non-OECD countries, as well as from non-governmental organisations. They are intended to be used for government assessment, action plans and reporting, international co-operation and public-private dialogue, in conjunction with other OECD instruments, such as the Policy Framework for Investment and the OECD Guidelines for Multinational Enterprises. The value-added of the *Principles* as guidelines for private participation in Africa's infrastructure were first explored at the *NEPAD-OECD Africa Investment Initiative*'s 2007 Lusaka Roundtable, in the water and sanitation sector. Following up on this success, the 2008 Kampala Roundtable proposes to investigate how the *Principles* can best support policymakers and private investors in the sector of road transport. *For the full Principles, see: http://www.oecd.org/daf/investment/ppp*

[25] *Matsukawa, Tomoko and Habeck, Odo. "Review of Risk Mitigation Instruments for Infrastructure Financing and Recent Trends and Developments". Trends and Policy Options, No.4. World Bank and Public-Private Infrastructure Advisory Facility (PPIAF).*

[26] While over 70% of all donor money to African infrastructure remains provided by the AfDB, the European Commission and the World Bank, these new actors may bring substantial financing (both public and private) to Africa's transport sector in coming years. *Infrastructure Consortium for Africa 2006 Annual Report, Vol.1*

CHALLENGE 2: COORDINATING GOVERNING BODIES AT ALL LEVELS FOR ROAD DEVELOPMENT

2.1 Coordination across transport sub-sectors and ministries

Due to the high interdependence among transport modes, road infrastructure projects cannot be carried out in isolation. Coordination among public authorities, including with other infrastructure sectors (energy, water) and with transport sub-sectors (air, sea, rail), is crucial to ensure that every road project forms an active trading and migratory link on the continent.[27] Mozambique's Maputo Corridor is exemplary in this respect: the 380 km highway has been rehabilitated in parallel with the private operation of Maputo port and with an upgrading of the rail link between Maputo and the border.[28] As noted by *Principle 11*, such intra-transport coordination requires that strategies for private sector participation in infrastructure be understood, and objectives shared, at all levels of government and in all relevant parts of the public administration. This may require a substantial restructuring of governance frameworks.

*• **Coordination among public authorities,** including with various transport sub-sectors (air, sea, rail...), is crucial to ensure that every road project forms an active link with other means of transport on the continent.*

This was the case in Zambia, where a weak legal framework had previously prevented the clear assignment of public responsibilities concerning road transport, and where performance targets were relatively vague.[29] Under the Road Sector Investment Programme's (ROADSIP) governmental reforms, performance indicators were redrawn and Zambia's good-condition paved road network rose from 20% in 1994 to 60% in 2002.[30] Since 2005, fragmented ministerial bodies have furthermore been regrouped under three agencies aiming to clarify the network's management and financing.[31] Uganda, likewise, has fully restructured the Ministry of Work, Housing and Communications (MoWHC, which is granted regulatory and monitoring functions) and the Ministry of Finance, Planning and Economic Development (MoFPED, now responsible for long-term investment programmes in the road sector and for fund use oversight).[32] Such rationalisations of responsibilities among the transport sector's public actors are indispensable; they show potential for providing unitary and representative platforms for effective public-private dialogue.

*• nder the Road Sector Investment Programme (ROADSIP)'s governmental reforms, **Zambia's good-condition paved road network rose from 20% in 1994 to 60% in 2002***

*Given that **road use demand is highly susceptible to changes in exogenous circumstances**, many PPPs have failed because demand risk was inappropriately assigned to the private partner.*

2.2 Sharing PPP risks and responsibilities among public and private actors

2.2.1 Mitigating risk for the private actor

Road transport is perceived as a particularly high-risk sector. Given that road use demand is highly susceptible to changes in exogenous circumstances, many PPPs have failed because demand risk was inappropriately assigned to the private partner. The International Transport Forum stresses that risks for road projects should be assigned to the partner best able to manage them, with private partners taking on only the risks that result from factors under their control (such as construction and project management costs). So as to adequately share these responsibilities throughout project implementation, *Principle 3* advocates that governance structures be clearly established between public and private actors. The proportions of equity and borrowing in projects

*• **"Private participation does not mean the withdrawal of the state"** – rather, strong economic governance and institutional capacity are prerequisites for effectively sharing risks and supporting private actors in project implementation.*

[27] The EU-AU Partnership on Infrastructure thus aims to promote interconnectivity of African transport infrastructures, particularly among road and rail networks.
[28] *Africa Partnership Forum, "9th Meeting of the APF". November 2007.*
[29] *Kumar, Ajay. "A Contrasting Approach to Road Reforms: The Case Study of Uganda Experience". SSATP Discussion Paper No.1, March 2002.*
[30] *SSATP Annual Report 2005*
[31] The National Road Development Agency (NRDA) oversees planning, procurement, supervision and monitoring; the National Road Fund Agency (NRFA) coordinates all relevant financial resources; and the Road Transport and Safety Agency (RTSA) controls transport licensing and traffic control. *OECD, African Economic Outlook 2005-2006, p.61*
[32] *Kumar, Ajay. "A Contrasting Approach to Road Reforms: The Case Study of Uganda Experience". SSATP Discussion Paper No.1, March 2002*

are also instrumental for sound financing. A 2007 UNECE session on promoting successful PPPs thus attributed part of the Maputo Toll Road's success to the efficient sharing of commercial risk by a wide range of investors.[33] As the AEO 2005-06 summarises, "private participation does not mean the withdrawal of the state"[34] – rather, strong economic governance and institutional capacity are prerequisites for effectively sharing risks and supporting private actors in project implementation.

In this aim, mitigation instruments are being developed by multilateral bodies such as the AfDB, MIGA and the World Bank. These instruments encompass not only commercial forms of risk, but risks of political and regulatory instability as well. As noted by the PPIAF, demand for political risk mitigation is now shifting from traditional political risk coverage (which addresses risks of currency inconvertibility, expropriation, and civil disturbance) towards more commercial risk (breach of contract by the host government, risks of public non-payment, etc). New coverages offered therefore include: regulatory risk (which results from adverse regulatory actions taken by the host government); devaluation risk of the local currency; and subsovereign risk (in case of loss due to non-performance by the subnational host governments). Covers of this type are notably offered by the AfDB, with coverage going up to 33% of total project cost and 50% of shareholders' net worth.[35] If further strengthened, these new tools can significantly facilitate investment in road infrastructure on the national level.

*• **New mitigation instruments** (regulatory risk, devaluation risk of the local currency, and subsovereign risk are being developed by multilateral bodies such as the AfDB, MIGA and the World Bank…*

*… **Regional and global guarantee facilities** are also emerging to support private investors.*

Regional and global guarantee facilities are also emerging to support private investors. The World Bank, MIGA, and the *Agence Française de Développement* are developing the BOAD (Banque Ouest Africaine de Développement) Infrastructure Guarantee Facility,[36] and the G8 has launched a continent-wide initiative for guaranteeing bonds against currency risk. These present sound first steps towards sustainably financing private investments in large-scale regional transport infrastructure projects.

2.2.2 Making the partnership as constructive as possible for all actors involved

During the 2007 UNECE conference, the Development Bank of South Africa mentioned that private participation was often resisted by public sector officials, for fear of loss of control or due to misunderstanding of the PPP's objectives. Effective communication between the private and public sectors indeed constitutes another key element of successful PPPs. *Principle 13* recommends that public authorities clearly communicate the objectives and priorities of infrastructure policies, and that mechanisms for public-private consultations regarding these objectives be established. This could be accelerated by better training and empowerment of officials; numerous road management workshops have for instance been held under the SSATP in 2004-2007.[37] On the side of the private actor, full disclosure of activities can help to create mutual trust in the partnership.

*• **Effective communication** between the private and public sectors constitutes another key element of successful PPPs*

Principle 10 also notes that authorities responsible for privately-operated infrastructure projects should have the capacity to manage the commercial processes involved and to engage on an equal basis with their private counterparts. This remark is essential: African governments must fully share PPP responsibilities, and cannot expect private actors to single-handedly finance road infrastructure projects. Governments must acknowledge that committed public financing is also a crucial part of road infrastructure development;

*• Domestic resources spent on transport infrastructure average **only 1% of GDP in sub-Saharan Africa**, far below the average in other developing regions.*

[33] 20% equity and 80% debt, with support from four South African banks and from the Development Bank of Southern Africa – DBSA. *UNECE session on promoting successful PPPs: "African experiences in PPPs for infrastructure". Tel-Aviv, 5-8 June 2007*
[34] *OECD, African Economic Outlook 2005-2006, p.60*
[35] *Matsukawa, Tomoko and Habeck, Odo. "Review of Risk Mitigation Instruments for Infrastructure Financing and Recent Trends and Developments". Trends and Policy Options, No.4. World Bank and Public-Private Infrastructure Advisory Facility (PPIAF), p.5*
[36] This facility offers three types of guarantee instruments which cover both commercial and political risks, thus providing flexible guarantees to small and medium infrastructure projects in the WAEMU. *Matsukawa, Tomoko and Habeck, Odo. "Review of Risk Mitigation Instruments for Infrastructure Financing and Recent Trends and Developments". Trends and Policy Options, No.4. World Bank and Public-Private Infrastructure Advisory Facility (PPIAF), p.33*
[37] *SSATP 2007 Annual Meeting. "Progress towards achieving the LTDP goal in relation to the outputs – RMF main achievement, lessons and challenges (2004-2007)".*

private investment can then be leveraged on the basis of this financing. Currently however, domestic resources spent on transport infrastructure average only 1% of GDP in sub-Saharan Africa, far below the average in other developing regions; public commitments to the sector must be greatly increased in order to credibly back PPPs.

2.3 Multi-level governance: from the local to the regional scale

Just as much as other infrastructure sectors, the road sector requires a multi-layered system of territorial governance. Due to the very nature of roads (which on the one hand cross inhabited territories, directly affecting the lifestyles of individual communities, and on the other can form a vast network of regional and intra-continental exchange), local, national and regional authorities all face crucial responsibilities in road project design, oversight and maintenance.

• *Just as much as other infrastructure sectors, the road sector requires a* ***multi-layered system of territorial governance****.*

2.3.1 Territorial governance of road projects

Local authorities are an integral part of this governance structure; road projects must be designed in view of the specific needs of surrounding populations. Forms of decentralised governance may be successful for catering to local needs, especially for overseeing road maintenance. As local authorities however often lack experts in road administration and engineering, specific training is vital for decentralization to function. Equally crucially, the transfer of authority towards territorial bodies must be accompanied by a durable transfer of financial and legal resources. In Mozambique for instance, where authorities were expected to delegate oversight to territorial entities after the Maputo Toll Road's construction[38], the project currently remains very 'top-down'.[39] Elsewhere, significant headway has nonetheless been made. Building on Uganda's 1992 District, Urban and Community Access Roads (DURCAR) Strategy, the 1997 Local Government Act of Uganda thus aimed to devolve maintenance services for urban, community, and rural district roads to local authorities.[40] Despite this approach's limits (no objective criteria determined the amount of funds to be disbursed per district, for example), it can provide valuable insight concerning the territorial organization of responsibilities. The international community and the private sector can also play a part in strengthening territorial governance structures, by abiding by local jurisdictions and backing local entities' financial and regulatory autonomy.

• *The 1997 Local Government Act of Uganda, which aimed to devolve maintenance services for urban, community, and rural district roads to local authorities, can provide valuable* ***insight concerning the territorial organization of responsibilities.***

2.3.2 Regional coordination: Legal harmonisation of road transport

Beyond the local and national levels, road transport projects must crucially be developed on a regional scale. Currently most road infrastructure projects remain country-centred; Africa's regional transport corridors are poorly integrated, face a high percentage of missing links, and lack efficiency. This mutual isolation among projects severely limits the resulting roads' social and economic benefits, particularly for landlocked countries. Regional coordination can notably enable African companies to exploit economies of scale and to become more competitive. Developing major long-distance roads along Africa's key intra-continental trade and transport axes may therefore be the continent's most pressing transport priority. Recent G8, TICAD and SSATP action plans all highlight the crucial role of RECs in this; regional coordination may well hold the key to fully developing the potential of private investment in Africa's road transport infrastructure.

• *The* ***mutual isolation among road infrastructure projects*** *(mostly country-centred or poorly integrated at the regional level) severely limits the resulting roads' social and economic benefits, particularly for landlocked countries.*

[38] Mozambique's Maputo N4 Toll Road is a 30-years concession for a 503km road linking Maputo port with South Africa's economic centre in the Gauteng. Since the highway's completion in 2000 traffic has been increasing by 6% per year and private-sector investment in Mozambique has surged. *OECD, African Economic Outlook 2005-2006.*

[39] *Grant, Andrew J. and Söderbaum, Fredrik (eds). The new regionalism in Africa. Burlington, VT: Ashgate, 2003. p.78.*

[40] The DURCAR strategy notably established Planning Departments for road maintenance at the district level and allocated central revenues to sub-national authorities through a system of conditional grants. *Kumar, Ajay. "A Contrasting Approach to Road Reforms: The Case Study of Uganda Experience". SSATP Discussion Paper No.1, March 2002.*

Box 3: There is a recent surge in donor commitments for supporting private sector participation in Africa's road transport, particularly on the regional level

- **The TICAD IV Yokohama Action Plan** (30 May 2008) identifies infrastructure as the topmost priority for boosting Africa's economic growth. Over the next 5 years, the TICAD process commits to focus on regional transport infrastructure, including roads and ports. This includes: "providing financing and technical assistance for the planning, construction and improvement of regional transport corridors and international ports; supporting capacity-building for the management and maintenance of regional infrastructure; and promoting facilitation of cross-border procedures such as One Stop Border Posts (OSBP); and supporting technical cooperation for comprehensive community development along with road infrastructure development". The Action Plan also aims to "promote, support and strengthen PPP in infrastructure".

- **The G8 Hokkaido Toyako Summit Leaders Declaration** (8 July 2008) acknowledges that, "the development of infrastructure, in particular road and power networks, focusing on trans-national solutions and coordination through the Infrastructure Consortium for Africa together with private financing" is "critical both to generating private sector-led economic growth and achieving the MDGs". Concerted G8 efforts are particularly interested in the potential of regional infrastructure projects for developing regional markets. In this light the G8 launched a REC Capacity Building Initiative at the June 2007 Heiligendamm Summit; this should enable RECs to accelerate implementation of planned regional infrastructure projects for which funding is already in place.

- **The Almaty Programme of Action** (August 2003) was adopted at the Ministerial Conference organized by the United Nations ECOSOC's Special Body on Least Developed and Landlocked Developing Countries. This Programme of Action had already reflected the international community's recognition of the key importance of regional transport infrastructure for the development of landlocked and transit developing countries.

Regional transport projects have particularly complex legal implications, however. They involve harmonising the stances of multiple national ministries on a wealth of issues (technical agreement on engineering specifications, common bid requirements, etc.), and generally require more time and funds than national or bilateral projects do.[41] As implied by *Principle 12*, which recommends establishing mechanisms for cross-jurisdictional cooperation in infrastructure projects, legal harmonization is central to regional transport development.

• ***Legal harmonization is central to regional transport development****, as transport projects have particularly complex legal implications and require more time and funds than national or bilateral projects do.*

Firstly, countries must rapidly coordinate legislation concerning *private involvement in transport infrastructure*. This remains a very delicate topic because governments must decide which legislation (national or regional) applies to private actors. As noted by an observer of the OHADA (Organization for the Harmonisation of Business Law in Africa), even once regional business law has been formulated, its application is often resisted by competing national or sub-regional regulatory frameworks.[42] Secondly, legislation must be coordinated concerning transport *use*: toll levies should be regionally consistent, and costly border controls (which can last up to 72 hours) need significant reduction. WAEMU and ECOWAS have thus jointly implemented a regional traffic facilitation programme since 2003, prioritising the adoption of a single road transit document and the reduction of border controls. Likewise, under the EATTP's *Northern Corridor Transit Facilitation Programme*, the EAC aims to reduce non-tariff barriers along the Northern Corridor[43] and to establish 14 additional one-stop border posts over the next five years (one has already been created at Malaba, on the Kenya-Uganda

• ***Decentralisation, regulatory alignment, and project coordination*** *under corridor management groups are therefore promising steps to be envisaged by African policymakers.*

[41] *Infrastructure Consortium for Africa 2006 Annual Report, Vol.1*
[42] While the 1995 OHADA Treaty was for instance designed to replace national business legislations in 16 west-African countries, due to its overlap with competing regional frameworks, to poor cross-country communication, and to national resistances, Treaty application has been suboptimal. *Lohoues-Oble Jacqueline. "Le Traité OHADA, 5 ans après". CCEJ, Les Grands débats du CAFIDA, 14 mars 2003.*
[43] The Northern Corridor connects a number of landlocked countries including Rwanda, Uganda, Burundi, and the DRC to Mombasa port.

border).[44] These moves should further enhance the Corridor's efficiency, in which transit traffic already doubled between 1998 and 2003.[45]

Decentralisation dynamics can also be highly useful for regional road projects, as emphasised by the SSATP's Second Development Plan. In particular, forthcoming SSATP programmes hope to strengthen Regional Coordinators (RCs), granting them more autonomy for overseeing transit transport.[46] The SSATP's REC-TCCs (Transport Coordination Committees) moreover advocate setting up corridor management groups to improve overall corridor performance; this has recently triggered the establishment of a North-South Corridor transport operation group, which unites seven countries under the continent's biggest corridor management authority.[47] This is a major move forward in terms of continental harmonisation, and should encourage other regional road networks to follow suit. Decentralisation, regulatory alignment, and project coordination under corridor management groups are promising steps to be envisaged by African policymakers.

• ***The risk of overlap and duplication*** *of infrastructure projects presents a real risk on the regional level: if conducted in isolation, programmes such as the SSATP and the EATTP can clearly be counterproductive.*

2.3.3 Coordinating regional infrastructure projects and programmes

Overlap and duplication of infrastructure projects presents a real risk on the regional level. The harmonisation and rationalisation of transport infrastructure initiatives is imperative, and is gaining momentum under the guidance of the AU and NEPAD (see Box 4). At the AfDB's September 2006 Tunis meeting, agreement was reached on the establishment of a new "Coordination Mechanism", which clarifies the specific roles of the AU Commission, NEPAD Secretariat, the AfDB and the RECs, and attempts to achieve better coordination among them and with national governments. At Heiligendamm in June 2007, G8 leaders announced the launch of a REC Capacity Building Initiative, in view of assisting RECs in moving forward on regional infrastructure projects that have been planned and for which funding is in place. The initiative is to be merged with NEPAD's Infrastructure Project Preparation Facility (IPPF), and in the long term should enable RECs to independently implement continental infrastructure programmes.

• *The* ***harmonisation and rationalisation*** *of transport infrastructure initiatives is imperative.*

Similarly, the SSATP's REC Transport Coordination Committee unites most Sub-Saharan African RECs and sector-specific regional organisations in the aim of better coordinating initiatives across the continent.[48] Within this framework, in March 2006 key players in regional transport resolved to develop a regional consultative mechanism for corridor management groups. This facility would enable inter-corridor exchange of best practices and experiences, avoid overlaps, and facilitate mutually-beneficial business partnerships by promoting competition between modes. Most innovatively, participant states are also considering the establishment of a multinational corporate entity (owned by member states through public-private partnerships) which would lead the management and operation of transport infrastructure in the corridor network.[49] Such articulations must urgently be followed through so as to limit the counter-productive multiplication and dispersion of road infrastructure initiatives, and instead to make the most of mutual synergies.

---

[44] Harmonisation of regulations concerning axle load controls is also being envisaged, and a Comparative Transport Cost Study will analyse different investment options on the regional scale. *SSATP Annual Report 2005*
[45] *Africa Partnership Forum, "9th Meeting of the APF". November 2007.*
[46] *"SSATP Annual Meeting 2007". Nov 5-7 2007, Ouagadougou. SSATP Working Paper No.88.*
[47] *Ibid*
[48] *Ibid*
[49] *Adzigbey, Yao, Kunaka, Charles and Mitiku, Tesfamichael Nahusenay. " Institutional Arrangements for Transport Corridor Management in Sub-Saharan Africa". SSATP Working Paper No.86*

Box 4: Potential for harmonising Africa's multilateral initiatives for regional transport infrastructure

Coordinating road infrastructure efforts: a leadership role for the AU and NEPAD?

- **NEPAD's Short-Term Action Plan (STAP) in infrastructure development:** A two-pronged approach for the development of infrastructure within the NEPAD (consisting of the STAP and of a complementary medium-to-long-term strategic framework, **MLTSF**) was proposed by the African Development Bank in 2001. The STAP outlined priority infrastructure projects and programs for 2002-2007. Attention is placed on the continent's important infrastructure requirements, as well as on the policy, regulatory and institutional frameworks required to ensure the efficiency of regional infrastructure assets. The STAP and MLTSF are primarily based on the programmes of the RECs, and envisage a major role for private sector participation in the development of infrastructure.
- **The African Union** is seeking to develop a common **Master Plan for infrastructure development**. This would complement the NEPAD framework and correspond to the infrastructure priorities laid out in **NEPAD's Africa Action Plan**. This Master Plan should establish a single vision of cross-border infrastructure in Africa, by coordinating priorities and by uniting various initiatives (such as the MLTSF and the AU Commission's sector master plans) under a single infrastructure programme.

Tools and actors for the facilitation of regional project implementation

- **The East African Community (EAC) – illustrating the coordination capacity of RECs:** Under the East African Trade and Transport Policy Programme (EATTP), the EAC Secretariat, the Northern Corridor Transit Transport Coordination Authority (NCTTCA), and the Central Corridor Transit Transport Facilitation Agency (TTFA) have received AfDB grants for strengthening their role in regional-level policy, planning, harmonization, and coordination of transport infrastructure and trade. Similar coordination efforts are taking place in other RECs, such as the SADC or ECOWAS.
- **NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF):** Managed by the AfDB, this facility's objectives are to assist African countries, RECs and related institutions to prepare regional infrastructure projects and programmes, develop consensus, and broker partnerships for their implementation. Other objectives include supporting the creation of an enabling environment for private sector participation in infrastructure, and supporting targeted capacity building initiatives.
- **Infrastructure Consortium for Africa (ICA):** established in 2005 following the Gleneagles G8 Summit, the ICA encourages a joined approach to meet Africa's urgent infrastructure needs across all sectors. ICA's financial support to projects which have an important regional impact has more than doubled since 2006, reaching $1.9 billion in 2007 (nearly one quarter of all financing).

International initiatives backing Africa's regional road infrastructure plans

- **World Bank: the Sub-Saharan African Transport Policy Programme (SSATP):** Currently engaged in the implementation of its Second Development Plan (DP2, 2008-2011), the SSATP is a partnership of 35 African countries, 8 RECs, AU/NEPAD, UNECA, and international development partners, that aims to channel transport infrastructure towards poverty reduction and regional integration. Private sector representatives have been co-opted on the SSATP board since 2007.

CHALLENGE 3: ENSURING THAT ROAD INFRASTRUCTURE PROJECTS ARE GENUINELY SUSTAINABLE AND INCLUSIVE

3.1 Sustainability and road maintenance

• *Due to poor maintenance, many* ***African countries have lost about half of their road*** *networks over the last 40 years.*

While attracting private sector actors towards Africa's transport infrastructure is certainly an important first step, it is equally crucial to ensure that the resulting transport projects are fully sustainable and have the desired social impact. Post-implementation, road projects face an overriding maintenance constraint. In much of Africa, newly-constructed roads therefore seldom last long: systematic axle overloading of trucks and poor water drainage result in the multiplication of potholes and accidents.[50] The SSATP estimates that, due to poor maintenance, many African countries have lost about half of their road networks over the last 40 years.[51] If maintenance and its funding are not addressed from the initial phases of a PPP, financial flows towards road infrastructure become one-shot construction efforts that soon fall into disrepair. Financial sustainability of road projects is therefore crucial, as emphasised by the OECD's *Principle 2*: no infrastructure project should be embarked upon without assessing the degree to which its costs can be recovered from end-users and, in case of shortfalls, what other sources of finance can be mobilised. Environmental sustainability should also be considered in all project phases; Environmental Impact Assessment (EIA) guidelines, which are now a pre-requisite for most multilateral development bank funding, are gradually being set for the road sector – as for instance in Uganda.[52]

• ***If maintenance and its funding*** *are not addressed from the initial phases of a PPP and financial flows towards road infrastructure become one-shot construction efforts.*

3.1.1 Establishing autonomous road agencies and maintenance funds

• *In 2007 Sub-Saharan Africa counted 12* ***autonomous road agencies****, and four more are under establishment (in Ghana, Kenya, Rwanda and Swaziland).*

The International Transport Forum, ICA, the Africa Infrastructure Country Diagnostic (AICD) and the SSATP all advocate transfer of management from a ministry to an autonomous road agency in order to improve project management and to ensure that road maintenance funds are appropriately used. Likewise, *Principle 17* recommends establishing specialized and independent regulatory authorities to monitor infrastructure projects. Many African countries have thus seen a shift in the governance structure of road management, from traditional government bodies to performance-based agencies. In 2007 Sub-Saharan Africa counted 12 autonomous road agencies, and four more are under establishment (in Ghana, Kenya, Rwanda and Swaziland). These agencies can significantly disentangle road project governance, and can back road *funds* in covering maintenance costs.[53] 'Second generation road funds', financed by fuel levies, vehicle registration fees and other charges on transport users, are thus spreading in Africa;[54] since they require major institutional reforms, in 2006 only 27 Sub-Saharan African countries counted road funds, 23 with autonomous boards.[55] Senegal, DRC, Burkina Faso and Uganda are nonetheless setting up new road funds and eight African countries restructured their funds in 2004-07.[56]

• ***Second generation road funds****, financed by fuel levies, vehicle registration fees and other such charges on transport users, are spreading in Africa, although they require major institutional reform.*

Like the 'first generation', however, these funds face problems. Only a third of them are meeting their needs for regular maintenance[57]: while in some countries over 80% of road maintenance requirements are covered (as in Kenya or Ethiopia), in others such as Zambia or Tanzania only 25-50% of needs are met. Another challenge lies in ensuring that resources are channelled towards all road transport sectors, without sidelining less

[50] *OECD, African Economic Outlook 2005-2006.*
[51] *SSATP Annual Report 2005*
[52] *Ecaat, Justin. "Review of EIA Application in Uganda, July 2004". UNECA, Oct. 2004.*
[53] *Africa Partnership Forum, "9th Meeting of the APF". November 2007.*
[54] *Ibid*
[55] *Ibid*
[56] *SSATP 2007 Annual Meeting. "Progress towards achieving the LTDP goal in relation to the outputs – RMF main achievement, lessons and challenges (2004-2007)".*
[57] *SSATP Annual Report 2005*

*• By operating with concrete performance objectives, **second generation road funds problems** (insufficient maintenance, effective use of resources, autonomy from public and private influence, …) should be countered.*

lucrative areas.[58] Funds also risk over-relying on road users for finance, which may lead to excessively high toll costs and bar the poorest from road access. Road funds and agencies must moreover be sufficiently independent from both public and private influence; if such autonomy is not firmly secured, these bodies risk further reducing accountability in the road sector by multiplying inefficient oversight agencies.[59] This would run completely counter to the road sector's maintenance needs.

*• While resources remain insufficient, funds have begun allocating **more of these to the rural sector** (1/3 of revenues in Ghana, Kenya, Namibia, Rwanda, Tanzania and Zambia).*

So as to counter these risks, road funds and agencies should operate based on concrete performance objectives. This was the case of Uganda's Road Agency Formation Unit (RAFU), created in 1998, which was autonomous from the MoWHC and had its own Management Committee.[60] A corporate body for overseeing road maintenance, the Uganda Road Fund, is now being launched along the same framework.[61] Road funds should also be financially separated from the general government budget; this ring-fences money for maintenance and avoids its diversion towards other priorities. Encouragingly, financial audits of African road funds indicate that funding is increasingly transparent.[62] Also, while resources remain low, funds have begun allocating more of these to the rural sector (1/3 of revenues in Ghana, Kenya, Namibia, Rwanda, Tanzania and Zambia). If public authorities remain mindful of the risks facing road funds and consistently manoeuvre to avoid these, funds can therefore bring substantial benefits. There is furthermore potential for regionally coordinating road funds within the African Road Maintenance Funds Association (ARMFA), whose membership has risen from 16 to 26 funds over 2004-07.[63]

*• **Output-based maintenance contracts** are another possible solution for road maintenance: most road agencies now contract out 80% or more of maintenance works and continent-wide, new forms of PPPs are allowing a more significant contribution to road maintenance.*

3.1.2 Output-based contracts and traffic control

Output-based maintenance contracts are another possible solution for road maintenance. Most road agencies now contract out 80% or more of maintenance works.[64] Continent-wide, new forms of PPPs are allowing a more significant contribution to road maintenance: the South African National Roads Agency (SANRAL) has renovated its routine road maintenance (RRM) contracts in this view, and Nigeria's Federal Roads Development Project implements long-term performance-based contracts where initial public coverage of maintenance costs is gradually taken over by toll revenues. Tolling nonetheless remains problematic: since the road projects that best lend themselves to cost recovery via tolling are high-volume, limited-access highways, co-financing these with government funds could entail under-investing in rural and secondary roads. Possible solutions include concessioning large-scale toll roads to the private sector without co-financing them, thereby freeing up public funds for roads where cost recovery is limited. This logic has partly been followed in Kenya: tolls taken by the concessionaire on a part of the Northern Corridor go towards maintaining both the corridor and part of the Nairobi ring road, where tolling is more difficult.[65]

*• **Preventive measures** (for example decreasing the percentage of overloaded vehicles and improving roads' water drainage during construction) to reduce road damage itself can also clearly reduce maintenance costs.*

Preventive measures to reduce road damage itself can also clearly reduce maintenance costs. Until 2004, Mozambique's N4 Corridor for instance faced high risks of degradation, since the concession agreement did not specify truck load regulations. The concessionaire has since assisted the South African and Mozambican governments in establishing axle load controls, decreasing the percentage of overloaded vehicles from 23% in 2001 to 9% in 2004.[66] Improving roads' water drainage during construction can

---

[58] In 2007, on average countries devoted 60% of funds to main roads, and only 18 % and 15% to rural and urban roads respectively; six road funds even allocated no funds to rural roads. *SSATP 2007 Annual Meeting. "Progress towards achieving the LTDP goal in relation to the outputs – RMF main achievement, lessons and challenges (2004-2007)".*

[59] *Kumar, Ajay. "A Contrasting Approach to Road Reforms: The Case Study of Uganda Experience". SSATP Discussion Paper No.1, March 2002.*

[60] *Kumar, Ajay. "A Contrasting Approach to Road Reforms: The Case Study of Uganda Experience". SSATP Discussion Paper No.1, March 2002, p. ix.*

[61] *Uganda Road Fund. Available at: http://www.roadfund.ug*

[62] The SSATP notes that average delay for paying contractors' bills was 32 days in 2007, compared to one year in Burkina Faso prior to fund establishment. *SSATP Annual Report 2005*

[63] *Ibid*

[64] *SSATP 2007 Annual Meeting. "Progress towards achieving the LTDP goal in relation to the outputs – RMF main achievement, lessons and challenges (2004-2007)".*

[65] *Infrastructure Consortium for Africa 2006 Annual Report, Vol.1, p.30*

[66] *OECD, African Economic Outlook 2005-2006*

• *Road projects should imperatively include rural areas, as* ***rural transportation*** *is not only a social priority but an economic one as well…*

…the improvement of local roads can double agricultural productivity and quadruple sales, as happened in Guinea over a five-year period.

• *While* ***motorway and corridor development*** *should remain Africa's topmost priorities, secondary road transport therefore requires careful consideration.*

also facilitate maintenance. The Maputo Corridor experience should encourage governments to explore regulatory and technical frameworks for limiting road degradation; it also sets a valuable example for other PPPs in terms of the efficiency and ease of public-private cooperation, particularly when more than one government is involved.

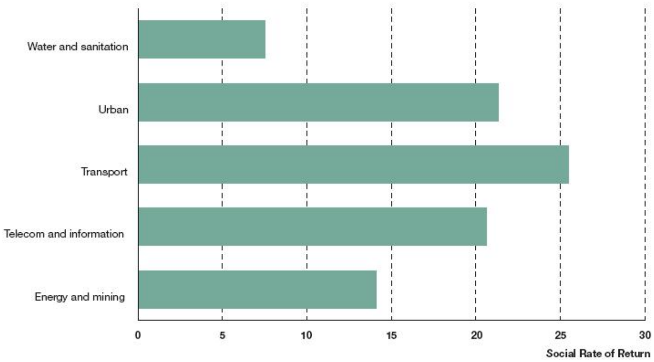
3.2 Inclusiveness

While inclusiveness is easily sidelined in many private concessions, it is crucial that road transport services consider the needs of all road users if they are to benefit local communities. The poor should retain affordable access, environmental sustainability must be safeguarded, and, given that 50% of Africans will live in urban areas by 2030,[67] the facilitation of urban mobility must also vitally be addressed in all projects.

3.2.1 Including rural areas

Alongside prioritising the development of highways linking economic hubs, road projects should imperatively include rural areas. Rural transportation is both a social and an economic priority: case studies in five African countries show that improving local roads can double agricultural productivity and quadruple sales, as happened in Guinea over a five-year period. Inversely, in Ethiopia overall crop yield declined significantly with increasing distance from the Combolch-Gundowein road.[68] Linking rural areas to market hubs is particularly vital; according to the ICA, the reliability of farm/village-to-market roads strongly affects populations' possibilities of shifting from subsistence to agriculture.[69] Unfortunately, past projects have tended to overlook this rural dimension. Tellingly, the unweighted average of the World Bank's Sustainable Access to Rural Transport indicator[70] for Sub-Saharan Africa is 37%. This compares to 43% for all IDA-only countries (including from other regions), and to 94% for the eight IBRD countries also covered.[71] While motorway and corridor development should remain Africa's topmost priorities, secondary road transport therefore requires careful consideration.

Fig 3: Social Rate of Return of World Bank Infrastructure Projects in 1964-2003



Source: AEO (2006)

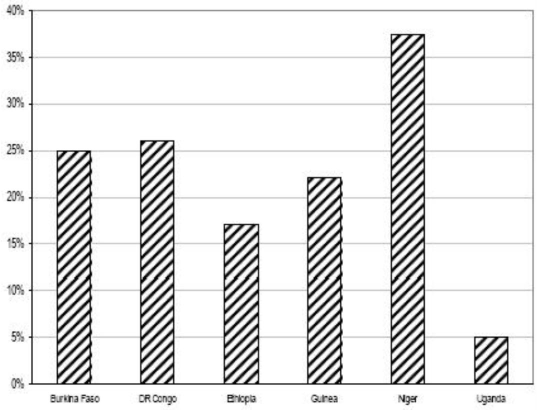
More recently, rural access to roads has enjoyed more attention in PPP design. Having improved 500km of community access roads under various programmes, since 2005 Uganda is preparing a ten-year District Road investment plan. Likewise, Cameroon, Swaziland, Zambia and Tanzania are all developing rural transport infrastructure and services, and building the local governments' capacities for coordinating these efforts.[72]

---

[67] *SSATP Annual Meeting 2007 Main Report. SSATP Working Paper No.88, January 2008.*
[68] *SSATP Annual Report 2005, p.44*
[69] *Infrastructure Consortium for Africa 2006 Annual Report, Vol.1, p.9*
[70] This indicator measures the proportion of rural people living within two kilometers of an 'all-season road'.
[71] *OECD, African Economic Outlook 2005-2006, p.52*
[72] *SSATP Annual Report 2005*

Next steps involve matching these programmes with concerted investment in marginalized *urban* roads; despite their proximity to economic hubs, many less lucrative urban roads (for instance those linking townships to city-centres) are also often ignored in concessions.

Fig 4: Rural population living less than 2 km from an all-season road



Source: SSATP 2005 Annual Report

3.2.2 A participatory approach to project design

• *Adopting a* ***participatory approach and prioritising community involvement*** *from the design stages of the project is essential because of the potential value-added of local authorities.*

Inclusiveness also requires adopting a participatory approach and prioritising community involvement from the design stages of the project. The potential value-added of local authorities comes to the fore here. As emphasized by *Principle 9*, end-users and all stakeholders should be consulted at all stages of the project, as well as for post-project monitoring. Local ownership has been granted particular attention by the SSATP under its Poverty Reduction-Transport Strategy Reviews (PRTSRs). These verify whether countries' transport frameworks sufficiently take the goals of national Poverty Reduction Strategies into account.[73] The recent review process for Kenya commended its Roads 2000 Programme as an important initiative for rural access and mobility; a particularly innovative, ownership-geared approach to road maintenance was undertaken in Nyanza Province, where stakeholders' fora were created to prioritise road projects, mobilize the community, monitor implementation, and liaise with public organizations in each district.[74] This strategy is also in line with *Principle 23*, which urges private actors to communicate with affected communities so as to develop mutual understanding of the project's objectives. To enable constructive dialogue between private actors and the general public, empowering local associations through capacity-building programmes may be in order.

3.2.3 Ensuring low-income access to toll roads

• *Only by ensuring that the majority of* ***workers in a road concession are locally-hired*** *can capacities for long-term road maintenance be developed*

While the Mozambique Corridor has been criticized for sidelining secondary roads and the rural sector, in other domains the project has been remarkably inclusive. Toll road access has been facilitated for low-income Mozambicans: the concessionaire subsidises the Mozambican portion of the road with the higher revenues from the South African side, allows the toll to vary according to vehicle size, and offers regular Mozambican users substantial discounts.[75] This approach can provide guidance for mitigating the exclusionary risk presented by road-tolling.

[73] PRTSR recommendations have been heeded by many countries in their subsequent transport development plans: in Malawi for instance, the PRTSR process and results have been incorporated into the Malawi Growth and Development Strategy (MGDS) since late 2005. SSATP. *"Lessons from Poverty Reduction Transport Strategy Reviews (PRTSR) Process". 2007.*

[74] As the Kenya Roads Programme only targets 37% of districts, expansion of the project nonetheless remains necessary. *SSATP, The Government of Kenya. "SSATP Review of National Transport Policy and Poverty Reduction Strategy - Kenya". Final Report, February 2006.*

[75] *OECD, African Economic Outlook 2005-2006*

• ***Uganda has forged ahead*** *in terms of employment-generation through its emphasis on strengthening the capacity of the domestic construction industry.*

3.2.4 Employment-generation

A final, essential dimension of sustainable infrastructure investment is employment generation; due to its high labour-intensity, the transport sector holds particular potential for this. Local employment directly facilitates road maintenance: only by ensuring that the majority of workers in a road concession are locally-hired can capacities for long-term road maintenance be developed. If local employment is not fostered, investment in road transport may simply generate unsustainable 'jobless growth'. As urged by *Principle 24*, private sector participants must be mindful of the consequences of their actions for local communities, and should work to mitigate such socially detrimental outcomes.

Uganda has forged ahead in terms of employment-generation through its emphasis on strengthening the capacity of the domestic construction industry: labour-based contracts are let out on both main and district roads.[76] Likewise, Zambia is following an action plan to strengthen the local road construction industry,[77] and the South African National Roads Agency (SANRA) aims to develop sustainable small, medium and micro enterprises along its road network. This innovative, socially-geared approach to road concessions focuses on small sub-contractors (particularly women, local labour, and Historically Disadvantaged Enterprises) which execute over 80% of the work.[78] Road *funds* can also stimulate local contracting: around 2,000 contractors have thus been promoted in rural Tanzania since the commercialization of rural roads.[79] So as to further enhance private investment's capacity for local employment generation, governments could also empower local construction industry associations and encourage them to play a more active role in road projects.

---

[76] *SSATP Annual Report 2005*

[77] In addition to fostering employment, this plan seeks to ensure widespread road access: in accordance with SADC stipulations, toll roads can only be introduced if an alternative road is provided free of charge. *OECD, African Economic Outlook 2005-2006, p.61*

[78] To this end, entry barriers for small contractors are maintained low. The main contractor operates as a management contractor, and bears the responsibility for training the sub-contractors. *World Bank, "Performance Based Contracts for Roads in South Africa". Resource Guide for Performance-based Contracting, March 2006.*

[79] *SSATP 2007 Annual Meeting. "Progress towards achieving the LTDP goal in relation to the outputs – RMF main achievement, lessons and challenges (2004-2007)".*

CONCLUSIONS

Dialogue across governments and investors can enable private and public partners to make the most of the diverse and complementary innovations discussed above, and to actively tackle the key challenges facing Africa's road transport infrastructure sector. It is important to note that, while some arrangements (reduction of border controls, establishment of autonomous road funds, or simplification of national business laws) may be attainable relatively rapidly, others (strengthening Africa's financial markets, fully harmonizing regional jurisdictions, or effective decentralization) will take more time. Keeping these different timeframes in mind, both long- and short-term targets deserve central positions in African policymakers' and RECs' agendas. The international community and private actors also have a central role to play. To obtain maximum effect, projects and policies concerning road transport must imperatively be coherently prioritised. Developing road corridors at the regional level deserves particular emphasis: trans-regional transport links can provide a vital springboard for intra- and extra-continental trade, catalyse FDI to Africa, and generate numerous social spill-over effects for local populations. In the short-term, the following recommendations can be made:

• ***Developing road corridors at the regional level*** *deserves particular emphasis: trans-regional transport links will provide a vital springboard for intra- and extra-continental trade, will catalyse FDI to Africa, and will generate numerous social spill-over effects for local populations.*

Creating an enabling environment for PPP success in Africa

The role of African governments and RECs:

- Regionally-consistent business-friendly legislation and diffusing sector-specific information can make an immediate difference for attracting private investors.
- Governments should take advantage of emerging regional guarantee facilities and infrastructure funds to support private actors. Countries should also work to enhance Africa's profile as a place in which to invest, particularly vis-à-vis 'new' investors including SWFs and emerging economies.
- Reinforcing the powers of independent governance-monitoring units and of autonomous road boards can strongly deter irregular practices in awarding and fulfilling contracts, both for public and private actors.
- Governments must share responsibilities with the private actor, and recognize that developing road transport infrastructure also requires (and indeed starts with) *public* investment. Significantly increasing the percentage of GDP allocated to the transport sector will leverage private involvement and permit sustainable partnerships.

• ***Dialogue across governments and investors*** *can enable private and public partners to make the most of the diverse and complementary innovations discussed above, and to actively tackle the key challenges facing Africa's transport infrastructure sector.*

The role of private actors and the international community:

- International organizations and multilateral bodies should consolidate the guarantee tools and infrastructure funds available for governments and private actors. Fund access could be conditioned on standards of corporate social responsibility and on local contracting; this would increase private investment's positive spill-overs in the road sector.
- Emerging economies seeking to engage in Africa's transport infrastructure are encouraged to accede to the OECD Anti-Bribery Convention.
- Mechanisms for continuous communication between public and private actors should be put in place, to ensure that all project-relevant information is disclosed on both ends and that private actors do not renege on formal agreements.

• *Mechanisms for* ***continuous communication between public and private*** *actors should be put in place, to ensure that all project-relevant information is disclosed on both ends and that private actors do not renege on formal agreements.*

Development of regional road infrastructure

The role of African governments and RECs:

- Regional coordination must urgently be addressed. Establishing corridor management groups and increasing communication across RECs under the AU's Coordination Framework can significantly reduce project overlaps and catalyse mutual synergies.
- RECs should rapidly rationalize Africa's multiple infrastructure investment initiatives, including those concluded multilaterally or bilaterally with extra-continental bodies. Aligning programmes within a single prioritized and time-bound framework is essential

to avoid overcrowding.
- Road project funds must be coherently channeled towards the most pressing projects; fund dispersion among disconnected initiatives should be avoided at all costs. Rather than focusing on isolated national networks, countries must seek to make realistic headway in developing road corridors across Africa's essential trading axes.
- Establishing regional or continental facilities to guide upstream project preparation could make road PPPs more coherent and longer-lasting.

• ***Regional coordination*** *must urgently be addressed*

The role of private actors and the international community:
- Multilaterally-backed transport infrastructure initiatives such as the SSATP must continue their efforts in harmony with AU and REC policy frameworks, and must imperatively increase cross-communication so as to avoid overlap. Rationalization of these initiatives is essential.
- Donors should allocate a higher percentage of resources towards regional projects in their road infrastructure commitments, and should actively encourage private actors seeking to engage in such projects.

• ***Rationalization*** *of infrastructure initiatives amongst all actors is essential.*

Road maintenance and inclusiveness

The role of African governments and RECs:
- Maintenance can be facilitated by enhancing road fund autonomy, by implementing preventive maintenance measures such as axle-load controls, and by effective performance-based contracting (the World Bank PBC Resource Guide may be useful in this respect – see Box 2).
- Funding for secondary roads, both rural and urban, can be sustained through innovative toll fund transfers from more lucrative road sections.
- Differentiated tolling or taxes (with an emphasis on contributions from large freight carriers and lower charges for individual road use) would help to fund national and regional networks (see Box 1).

• ***Maintenance*** *can be facilitated by enhancing road fund autonomy, by implementing preventive maintenance measures such as axle-load controls, and by effective performance-based contracting*

The role of private actors and the international community:
- Private actors must share responsibility for maintenance issues with the public sector, and tolling must be adapted to the specificities and access needs of local populations.
- In addition to involving local communities in project design and implementation, private actors should ensure that local contractors are employed to the greatest possible extent in road projects.
- Engaging in less lucrative sectors (rural areas or secondary urban roads) is equally paramount.

• *The* ***involvement of local communities*** *in project design and implementation by private actors is essential.*

Both public and private actors clearly have core responsibilities as concerns private sector involvement in Africa's transport infrastructure. The private sector can bring crucial financing, experience, and efficiency to the road sector. In parallel, far from entailing state withdrawal, private involvement requires the empowerment of local and central public authorities so that these can engage in a sustainable and equal partnership. RECs will also shoulder increasingly large responsibilities in the road sector as regional infrastructure projects pick up speed. To ensure the smooth running of such partnerships, public and private actors can draw both on successful national and regional experiences, and on the guidance provided by policy tools such as the OECD *Principles for Private Sector Participation in Infrastructure*. The above analysis indicates that the time is ripe for African governments to decisively engage with private partners in the aim of improving road transport infrastructure: the current need is vast, but so too is the potential for progress.

• ***Both public and private actors*** *have core responsibilities as concerns private sector involvement in Africa's transport infrastructure.*

Annex

I. Creating an enabling environment for PPP success in Africa

1) Appropriate legislative environment

OECD PRINCIPLE	Transport sector specificities	Successful efforts made	Current trends & next steps
P. 5 *A sound enabling environment for infrastructure investment: high standards of public and corporate governance, transparency and the rule of law, protection of property and contractual rights.* **P.14** *There should be full disclosure of all project-relevant information between public authorities and their private partners, including the state of pre-existing infrastructure, performance standards and penalties in the case of non-compliance. The principle of due diligence must be upheld.*	Due to vast start-up costs and sunk costs, initial investment is particularly cautious. Cumbersome rules have a strong deterring effect on investors.	**Nigeria**: the 2004 Lagos Roads Law has been a strong stimulus for the Lekki Toll Road Concession. The role of government support in the form of waivers, incentives, and guarantees was also key. **Ethiopia**: harmonisation of practices concerning project procurement, documentation and monitoring under the Roads Sector Programme, has been agreed between the Ethiopian Roads Authority (ERA) and other stakeholders.	**Regulatory simplification** in the interests of attracting private investment is spreading. 40 African countries introduced business-friendly measures in 2006, reforming the banking sector (as in Congo, Nigeria, amongst others), or easing registration/taxation constraints on new businesses. **Information provision:** since 2006 Ghana is centralising a transport database; Tanzania and Niger are making similar efforts.
P.7 *Enhancing benefits of private sector participation in infrastructure by creating a competitive environment: subjecting activities to commercial pressures, dismantling unnecessary barriers to entry and enforcing adequate competition laws.*	Supply in the transport sector is rather inelastic due to high fixed costs, which reduces possibilities for direct horizontal competition; nonetheless, upstream competition for concessions should imperatively be encouraged and rendered as transparent as possible.	**Regionally:** In 2006 key players in regional transport resolved to develop a common consultative mechanism for corridor management groups. This would promote competition between project modes on a regional level.	**Fostering a competitive environment** is on good tracks, especially in East Africa. The WB's *Doing Business Report 2007* featured Tanzania and Ghana among the top 10 global reformers for the year, joined by Egypt and Kenya in 2008.

2) High standards of public and corporate governance

OECD PRINCIPLE	Transport sector specificities	Successful efforts made	Current trends & next steps
P. 15 *Awarding infrastructure contracts so as to guarantee procedural fairness, non-discrimination and transparency.*	As the road sector takes the form of a natural monopoly, contracting may be subject to favouritism. Unfair bidding is a major risk.	Efforts made in terms of information provision (see above) constitute important first steps.	Transparency of 'rules of the game' concerning procurements must be enhanced, notably at the regional level, for larger projects.
P.4 *Fiscal discipline and transparency must be safeguarded, and the potential public finance implications of sharing responsibilities for infrastructure with the private sector fully understood by public officials.*	Local road management involves sub-sovereign entities, which must have financial autonomy. Long-term budget costs of providing guarantees or sharing responsibility for maintenance must be realistically considered.	**Local governments** have been partially empowered through decentralization acts (Zambia, Uganda, Tanzania), though financial autonomy remains weak. **Maintenance** costs are addressed by road funds (in 27 countries).	Fiscal discipline is particularly relevant for the appropriate use of road fund resources. While much financing will rely on the private actor, provision of guarantees and oversight may draw on the public budget. New contract forms (Box 1) can also support private actors.
P.16 *The formal agreement between authorities and private sector participants should be specified in terms of verifiable infrastructure services, on the basis of output-based specifications.* **P.20** *Private sector participants in infrastructure should observe commonly agreed principles and standards for responsible business conduct.*	Verification of private sector outputs is essential where access is low and often sidelined (rural sector, township roads, etc). Community consultation can be helpful in this respect.	**Nigeria:** the Federal Roads Development Project implements long-term performance-based contracts**,** where public coverage of maintenance costs is gradually taken over by toll revenues. **South Africa:** the National Roads Agency (SANRA) has renovated its routine road maintenance (RRM) contracts by giving them a performance-based approach.	On the regional level, private contractors' targets should be consistent across countries. Performance-based contracts (PBCs) should be adequately timed, as profits take time to materialise. Public bodies must take long-term performance outputs into account, and ensure that corporate responsibility is observed in concessions.
P.17 *Entrusting regulation of infrastructure services to specialised public authorities that are competent, well-resourced & shielded from undue influence by parties to infrastructure contracts.*	Monopolistic sector, where procedural fairness for awarding contracts is key. Service regulation is paramount in the road sector due to the risk of poor maintenance.	**Road boards** are gaining in autonomy. Uganda's Road Agency Formation Unit (RAFU), established in 1998, is autonomous from the MoWHC and has its own Management Committee.	Oversight (including of maintenance) would best be ensured by an autonomous road agency or board, with inclusion of public, private and community-level stakeholders.
P.6 & P.22 *Freedom from corruption in all project phases. Public authorities should establish appropriate procedures to sanction corruption. Private participants should not resort to bribery.*	Road tolls and fuel levies risk being diverted from their purpose. Regionally, border controls and regulatory discrepancies multiply opportunities for corruption.	**Autonomous road funds** are growing, and are increasingly transparent (as shown by SSATP-led audits). **Regionally**, reduction of border controls (WAEMU, EATTP) limit avenues for bribery.	Ensuring genuine road fund and road agency autonomy can reduce corruption opportunities, as can further regional alignment of transport use and business law.

3) Access to finance for private investors

OECD PRINCIPLE	Transport sector specificities	Successful efforts made	Current trends & next steps
P. 8 *Access to capital markets to fund operations is essential. Wherever possible, restrictions in access to local markets and obstacles to international capital movements should be phased out.*	The heavy sunk costs of road projects and their long-term and initially low returns create a specific need for durable capital access locally, as re-financing must take place. Fluctuating revenue, dependent on tolling and variable road demand, further increases the need for reliable local financing sources. Most projects cannot rely on toll revenue alone to cover 100% of the private actor's operation and maintenance costs (especially if low-income road users are to retain access).	**Strengthening capital markets:** Over 522 firms are listed on sub-Saharan stock exchanges, up from 66 in 2000. 18 countries host stock markets. African funds are also emerging (like the AFDB's infrastructure-geared PAIDF). **Alternative sources of finance:** Given infrastructure's potential to match long-term provision assets, pension funds are steadily gaining interest in the transport sector. The high liquidity of African assets and their low correlations with global markets is also attracting emerging market funds; these currently deploy near 10% of their portfolios in Africa. Sovereign Wealth Funds (SWFs) likewise present enormous development potential. **Risk-mitigation tools and guarantee schemes** are spreading to support private actors (see matrix I.2 on sharing private sector risk).	**Capital markets:** Strong performances are concentrated in a few countries (80% in South Africa), and capital markets remain to be strengthened. Innovative regional financial services could increase liquidity. **Alternative sources of finance:** The OECD/IOPS Global Forum on Private Pensions (Mombasa, Oct. 2008) can provide valuable insights concerning the potential of pension funds. Commitments to African road infrastructure by 'new' donors are on the rise (China, USD 5 billion in 2006; Arab partners, USD 600 million in road projects in 2006). African governments must attempt to channel these promising flows towards sustainable road projects at the national and regional levels. **Forms of public support in contracting and tolling** (see Box 1) can help private actors to face the risks of variable demand.

II. Coordinating governing bodies at all levels for road infrastructure in Africa

1) Coordination among various public bodies: transport sub-sectors and territorial governance

OECD PRINCIPLE	Transport sector specificities	Successful efforts made	Current trends & next steps
P. 11 *Strategies for private sector participation in infrastructure need to be understood, and objectives shared, throughout all levels of government and in all relevant parts of the public administration.*	Coordination and clarification of responsibilities among public authorities is particularly crucial among transport sub-sectors (air, sea, rail…) to ensure that road projects form active links with other means of transport. Ministries and overlapping public bodies may have to be rationalised so as to efficiently coordinate transport sector projects (perhaps in the form of a road board). Project oversight also requires cooperation from empowered local bodies (both in urban and rural communities). This entails functional decentralisation programmes: comprehensive transfers of resources and of expertise from central to local authorities.	**Zambia:** since 2005, ministerial bodies were regrouped under 3 agencies to clarify the network's management and financing. The National Road Development Agency (NRDA) oversees planning, procurement and monitoring; the National Road Fund Agency (NRFA) coordinates all relevant financial resources; and the Road Transport and Safety Agency (RTSA) controls transport licensing & traffic control. Rationalisation is also taking place in Senegal, Malawi, and Sierra Leone. **Uganda** has fully restructured the Ministry of Work, Housing and Communications (granted regulatory and monitoring functions) and the Ministry of Finance, Planning and Economic Development (now responsible for long-term investment programmes and fund use oversight). **Decentralization:** Zambia's Eastern Province Feeder Road project enhanced capacity building within local district councils, as did Kenya's Roads 2000 Programme. Uganda's DURCAR strategy devolved maintenance services for urban, community, and rural district roads to local authorities.	**Transport sub-sector** co-ordination remains insufficient. Heed must be taken from the Maputo Corridor, which is exemplary in terms of intra-transport coordination: the 380km highway has been developed in parallel with Maputo port and with an upgrading of the rail link between Maputo and the border. **Road boards**, if created, should be governed by independent managers and granted separate funds that are ring-fenced from use in other budget priorities. Road board audits would be necessary to monitor efficiency. **Decentralisation** must be accompanied by genuine financial autonomy and capacity-building, and local representatives must be accountable. The SSATP's 2008-2011 Development Plan will place particular emphasis on *functional* decentralization. This programme will notably aim to strengthen Regional Coordinators (RC) and to grant them more autonomy and authority for overseeing transit transport. The empowerment of local road associations is also encouraged to address maintenance issues.

2) Risk and responsibility-sharing between the public and private sectors in PPPs

OECD PRINCIPLE	Transport sector specificities	Successful efforts made	Current trends & next steps
P. *3 Risk allocation between private parties and the public sector will be largely determined by the chosen model of private sector involvement. Selection of a particular model and associated allocation of risk should be based on an assessment of the public interest.*	Road transport is a particularly high-risk sector, with high initial costs of investment. As road use demand is susceptible to changes in exogenous circumstances, many PPPs have failed because demand risk was inappropriately assigned to the private partner.	**Risk-mitigation** instruments are developed by multilateral bodies (AfDB, World Bank), covering political and commercial risks. **Regional guarantee facilities** (like the BOAD Infrastructure Guarantee Facility) are growing with external donor support. This offers three types of guarantee instruments which cover both commercial and political risks, thus providing flexible guarantees to small and medium infrastructure projects in the WAEMU. **The G8** has launched an initiative for guaranteeing bonds in Africa against currency risk.	**Sharing project risk** with a wide range of investors (the Mozambique Toll Road was successfully supported by 4 banks, with 20% equity and 80%). **Demand for political risk mitigation** is now shifting from traditional political risk coverage (which covers risks of currency inconvertibility, expropriation, and civil disturbance) towards more commercial risk (breach of contract by the host government, risks of public non-payment, etc). Increasing the availability of guarantee covers and offering guarantees for regional projects is needed.
P.13 *Public authorities should communicate clearly the objectives of their infrastructure policies and put in place mechanisms for consultations between the public and private partners regarding these objectives and individual projects.* **P.10** *Authorities responsible for privately-operated infrastructure projects should have the capacity to manage the commercial processes involved and to partner on an equal basis with their private sector counterparts.*	Private participation is often resisted by public sector officials, due to misunderstanding of the PPP's objectives. Multiplicity of stakeholders and territorial entities makes dialogue more sensitive.	**Training:** numerous workshops for public officials in road management have been held by the SSATP over 2004-07. These aim to build policymakers' capacity for cooperation with the private actors on an equal basis. **Consultation** is facilitated through representative road agencies (in 2007 sub-Saharan Africa counted 12 road agencies; 4 more are under establishment in Ghana, Kenya, Rwanda and Swaziland, and Senegal, Malawi and Sierra Leone are undertaking governmental reform in this direction.	**Road agencies** must be fully autonomous, with representatives from the public and private sectors, as well as from territorial authorities, to share information concerning projects. Governments should not expect private actors to single-handedly finance road infrastructure projects. Rather, **public financing** can act as a lever for private investment. Domestic resources spent on transport infrastructure average 1% of GDP in SSA; this is vastly insufficient for backing strong PPPs, and far below the average in other developing countries.

3) Coordinating investment at the regional level

OECD PRINCIPLE	Transport sector specificities	Successful efforts made	Current trends & next steps
P. 12 *Mechanisms for cross-jurisdictional co-operation, including at the regional level, may be established. Special caution is warranted to ensure that project objectives are widely shared and underpinned by formal agreements and dispute resolution mechanisms. Uncertainty about chains of command and incompatibility between legal systems can increase investment risk and reduce benefits.*	Transport infrastructure cannot be developed in isolation from that of neighbouring countries. Regional coordination is crucial, particularly for landlocked countries. Discrepancies in jurisdictions across states (both on transport use and private involvement in transport) can be very costly. While significant progress has been made in terms of aligning transport use law in many RECs, legislations on private contracting remain poorly coordinated. Diverse regional investment programmes furthermore risk overlap, and the rationalisation of multi-lateral regional action plans and programmes is necessary.	The AU's 2006 "**Coordination Mechanism**" aims to clarify the roles of the AU, NEPAD, AfDB and RECs in transport projects. The **G8 REC Capacity Building Initiative** could also accelerate regional project implementation. This initiative is to be merged with NEPAD's IPPF, and should in the long term enable RECs to independently facilitate the implementation of continental infrastructure. **EAC:** under the EATTP, transport barriers in the Northern Corridor have been greatly reduced, and one-stop border posts set up. 14 more are expected over the next 5 years. **The North-South Corridor transport operation group** established under the SSATP unites seven countries under the continent's biggest corridor management group.	While regional alignment on transport use rules (tolls, border controls etc) have been partly successful, little progress is being made on clarifying jurisdictions for private investment in regional transport infrastructure. Perceived risk remains very high here. Harmonising competing regional business law agreements (such as the OHADA) could help in this respect. The SSATP's REC-TCCs (Transport Coordination Committees) also promote the establishment of corridor management groups to improve overall corridor performance. The role of RECs in this domain is essential; multi-lateral initiatives on regional transport infrastructure should comprehensively back REC programmes. Common models for project design could reduce discrepancies across initiatives: relying on banking sector expertise, ECOWAS is for instance setting up a Project Design and Implementation Unit, which could be followed by all RECs. The potential role of the NEPAD and AU in an Infrastructure Master Plan could greatly reduce the risk of programme overlap in the sector (see Box 4).

III. Ensuring that road infrastructure projects are genuinely sustainable and inclusive, meeting the needs of the African population

1) Sustainability: road maintenance

OECD PRINCIPLE	Transport sector specificities	Successful efforts made	Current trends & next steps
P. 2 *No infrastructure project, regardless of the degree of private involvement, should be embarked upon without assessing the degree to which its costs can be recovered from end-users and, in case of shortfalls, what other sources of finance can be mobilised.*	**Road maintenance** poses an overriding constraint on the sustainability of projects. The SSATP estimates that, due to poor maintenance, many African countries have lost about half of their road networks over the last forty years. ICA estimates that on average African countries still lack the budgetary resources and organisational capacity to adequately maintain more than half of the national road network. Resources from road funds or tolling are therefore crucial. Nonetheless, tolling must be monitored and tailored to each project's context to avoid exclusionary effects.	**Road funds** are multiplying to cover maintenance costs. Senegal, DRC, Burkina Faso and Uganda are establishing new road funds and 8 African countries restructured their funds in 2004-07. There is potential for the coordination of these funds at the regional level: membership of the African Road Maintenance Funds Association (ARMFA) has risen from 16 to 26 road funds over 2004-07. **Tolling** is not easy on all roads; in Kenya, tolls taken by the concessionaire on a part of the Northern Corridor go towards maintaining both the corridor and part of the Nairobi ring road, where tolling is more difficult. Government support in tolling schemes (shadow tolls, Box 1) can help cover maintenance costs. **Performance-based contracting** is spreading (as in Nigeria , South Africa and Chad - forthcoming). **Preventive legislation:** in Mozambique, damage to the N4 Corridor was reduced by introducing axle load controls (decreasing overloaded vehicles from 23% in 2001 to 9% in 2004).	**Road funds** must fence resources off from use in other budget sectors; they must also diversify their financing sources - fuel levies and tolls rely entirely on the consumer and can have exclusionary effects. Funding for rural roads, where tolling is difficult, should be addressed. Currently only a third of funds are meeting their needs for regular routine maintenance. **Government funding** for road maintenance should be increased, in addition to the resources generated by road funds. While East Africa is in the lead in terms of public investment in road transport, this respect (with Ethiopia spending over 4% of GDP on the sector), this remains far behind the average in other developing regions. More committed financial supported is needed. **Preventive measures** such as road axle legislation and adequate road drainage would significantly reduce the cost of maintenance.

2) Inclusiveness

OECD PRINCIPLE	Transport sector specificities	Successful efforts made	Current trends & next steps
P. 9 *Public authorities should ensure adequate consultation with end-users and other stakeholders including prior to project initiation.*	Road transport services must consider the needs of all road users; otherwise road projects risk excluding rural areas.	Cameroon, Uganda, Swaziland and Tanzania are all developing rural transport infrastructure and services, with local consultation.	**Capacity** is insufficient at the local level, preventing effective community participation in project design.
P.23 *Private sector participants should contribute to strategies for communicating and consulting with the general public (consumers, affected communities and corporate stakeholders) with a view to developing mutual acceptance and understanding of project objectives.*	Empowering local associations and building capacity at the community level could facilitate maintenance and ensure that population needs (urban mobility, environmental sustainability, village-to-market access) are being met. Without consultation, tolling amounts may be exclusionary.	**Kenya:** in the Nyanza 2000 Road Programme, stakeholders' fora were created in each district to mobilize the community, prioritise and monitor road projects, and liaise with public organizations. **Mozambique:** the concessionaire grants discounts for low-income Mozambicans and depending on vehicle size to ensure inclusion.	**On the regional level**, a participatory approach would necessitate forming cross-country stakeholder fora to share priorities and best-practices; the SSATP's **REC Transport Coordination Committee**, established to enhance coordination in regional projects, could provide a platform for this.
P.24 *Private sector participants in the provision of vital services to communities need to be mindful of the consequences of their actions for those communities and work, together with public authorities, to avoid and mitigate socially unacceptable outcomes.*	Due to its high labour-intensiveness, the transport sector holds particular potential for **employment generation**; in its provision of road transport the private actor must include local communities and foster local employment as much as possible.	**Uganda**: labour-based contracts are let out on main & district roads. **Zambia**: large-scale road infrastructure projects have been accompanied by an action plan to strengthen the local road construction industry. A Road Training School trains not only private contractors, but also the administrators of out-contracting schemes in local district councils. **South Africa**: the National Roads Agency aims to develop sustainable small, medium and micro enterprises (SMMEs) along its network. Entry barriers for small contractors are kept low. The main contractor operates as a manager, and sub-contractors execute 80% of the work. Focus is placed on women, local labour, & Historically Disadvantaged Enterprises.	In addition to road construction, road *funds* can also enhance the development of local small-scale contractors: around 2,000 local contractors have thus been promoted in rural Tanzania since the commercialization of rural roads. Nonetheless, in many concessions local labour remains under-utilised (as was criticised for the Maputo Toll Road). So as to further enhance private investment's capacity for local employment generation, governments could empower local construction industry associations and encourage them to play a more active role in road projects. Local contracting could also be specified in contract clauses when establishing the PPP with the private actor.