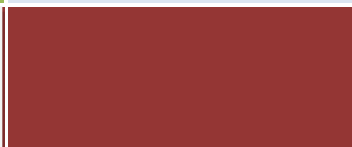


2009 Convention on Rural Roads

Rural Roads for Economic Development, Social Cohesion and Poverty Reduction

26TH TO 27TH NOVEMBER 2009
ARUSHA, TANZANIA



CONVENTION PROCEEDINGS REPORT



IRF/gTKP/TARA
2009 CONVENTION ON RURAL ROADS

Rural Roads for Economic Development, Social Cohesion and Poverty Reduction

Report and Proceedings for 2009
Convention on Rural Roads Meeting
held on
26th – 27th November – Arusha,
Tanzania.



Compiled by
Edward H. Mhina
[Overall Moderator]
&
Mr. Chuwa Sekwao
[Rapporteur]

with support from
Ms. Georgina Tenga
[Assisting Team Member]





Acknowledgement

The 2009 Convention on Rural Roads was an excellent opportunity offered to delegates to gain an insight into the latest research outcomes and experiences in an effort to meet the current increasingly challenges in providing affordable, safe, sustainable and environmental friendly transport to rural communities.

GAD Consult was contracted to facilitate in moderation in the meeting, as well as rapporteuring.

Achieving in the stated endeavors are attributed to the enthusiastic coordination of the whole exercise through the able stewardship of the Chairman of the 2009 Convention on Rural Roads, Mr J. O. Haule and his very supportive team of Mr. Ronald Lwakatare (Planning and Monitoring Engineering), Ms Annett Kadendula (Office Management Secretary) and Msitiri Malongwe (Driver).

Further support towards management of the meeting was received from Ms. Georgina Tenga of GAD Consult and from the meeting administration desk which included Ms. Carolyn Lema, Ms. Roselyne R. Mariki, Ms. Juliet Kilyinga and Mr. Kusirie Senkondo, all from Great African Safaris. These were responsible for registration of participants; follow up on the catering arrangements and supervision of logistics on the culinary welfare of the delegates.

This report was drafted and compiled by Mr. Chuwa Sekwao, a freelance associate consultant who was the rapporteur at the convention. The editing, layout and insertion of photos was done by, Mr. Edward H. Mhina, the Chief Consultant at GAD Consult. Mr. Edward H. Mhina was also the Overall Moderator of the Convention.

This document and the Convention presentations are available to view and download from www.gtkp.com and are available from IRF or gTKP on CD Rom. Please contact info@gtkp.com or info@irfnet.org to request your copy.



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Abbreviations and Acronyms

AFCAP	African Community Access Programme
API	Accident Potential Index
ARRB	Australian Road Research Board
BRAC	Bangladesh Rural Advancement Committee
CarryFAB	Carry First Aid box
DFID	Department for International Development
TARA	Tanzania Road Association
GAD	Gender & Development Consultant
GRSP	Global Road Safety Partnership
gTKP	Global Transport Knowledge Partnership
HDM4	Highway Development and Management
IFRTD	International Forum for Rural Transport and Development
ILO	International Labour Organization
IMT	Intermediate Means of Transport
IRF	International Road Federation
IRAP	Integrated Rural Accessibility Planning
IRAP	International Road Assessment Programme
IRTE	Institute of Road Traffic Education
LCD	Leonard Cheshire Disability
LVRs	Low Volume Rural Roads
MDGs	Millennium Development Goals
MoA	Ministry of Agriculture
MoEc	Ministry of Economics
MoF	Ministry of Finance
MoT	Ministry of Transport
MP	Member of Parliament
PMGSY	Prime Minister Gram Sadak Yojana
PMO	Prime Minister's Office
PwD	People with Disabilities
RDA	Road Development Authority
RTIs	Road Traffic Injuries
SSA	Sub Saharan Africa
TRH20	Technical Recommendations for Highways Manual 20
UNESCO	United Nations Education Science and Cultural Organization
VAT	Value Added Tax
WHO	World Health Organisation



Executive Summary

This section of the document summarises the principal findings and recommendations of each Convention Session.'

KEY ISSUES AND OBSERVATIONS ON THE IMPORTANCE OF RURAL ROADS

1. Increase of informal means of transport in Developing Countries and the difficulties in regulating it.
2. Importance of community participation in rural roads construction and maintenance, taking into consideration the financial resource constraints in rural communities.
3. Importance of community access, taking into account considerations of local situation and including new opportunities to markets.
4. Importance of application of Labour based methods on rural roads construction, expanding opportunities for employment and income generation.

RECOMMENDATIONS

1. Need for more research on rural roads and rural transport.
2. Dissemination of knowledge adapted to local context through knowledge networks.
3. Develop locally adapted solutions for rural transport supply chains.
4. Preference to eco-friendly, locally-occurring, construction materials for rural roads.

5. Need to take into account vulnerable groups and social factors into rural road transport projects.
6. Take into account supporting the 'second economy' generated from road transport projects and go beyond infrastructure.
7. Introduce social and economic programmes and cut across other disciplines.

KEY ISSUES AND OBSERVATIONS ON PLANNING AND MANAGING RURAL ROADS

1. Enormous challenge to provide affordable access and services to the rural poor in many regions with the available limited resources
2. Training, research and dissemination activities need to be funded on a continuous and sustainable basis
3. Roads should be built to appropriate & maintainable standards maximizing use of available Local Resources
4. ALL costs and challenges of the private v public sector approaches need to be identified and addressed

RECOMMENDATIONS

1. Ensure Ministers are informed and engaged to develop and support effective Rural Transport policy and implementation strategies as integral



part of national roads policy and funding framework

2. Establish appropriately and effectively funded local, regional and international training, research & knowledge dissemination networks and mechanisms
3. Develop appropriate and affordable standards & specifications for maintainable & sustainable access for the means of transport used
4. Develop stakeholder 'inclusive' planning, design, implementation, QA and maintenance systems to deliver sustainable rural transport infrastructure optimizing the use of the local resources available
5. Create an 'enabling environment' for local private sector road works, and improve sector funding and cashflow arrangements

KEY ISSUES AND OBSERVATIONS ON FUNDING RURAL ROADS

1. Problems exist as regards justification of ways for sustaining funding, and responsibility for funding.
2. Political decision making as a critical determinant in influencing levels of acceptability of maintenance and responsibility for managing negative impact to communities.
3. Perceived dilemmas can be overcome by proper planning, prioritization and strategy
4. Better roads can cause increase in HIV/AIDS transmission but also present opportunity to implement

programmes that lessen transmission. Better roads reduce poverty which is one of the major causes of HIV/AIDS increase.

RECOMMENDATIONS

1. Establishing specific technical standards that facilitate easier and sustainable roads maintenance approaches in rural areas.
2. Create organizational and technical capacities in villages basing on systematic utilization of available local materials.
3. Mechanisms for participation of local communities in construction and maintenance of rural roads need to be developed for sustainability
4. Strengthen local capacities in construction of rural roads
5. Sources of finances should include local (communities) government; central government; development partners (bilateral & multilateral); NGOs and Private Public Partnerships.

KEY ISSUES AND OBSERVATIONS ON CONSTRUCTION AND MAINTENANCE OF RURAL ROADS

1. Commercial additives can contribute to reduced gravel loss, but traditional construction using thin bituminous seals has a lower whole life cost.
2. Otta seals are a viable and affordable surfacing for rural roads in Tanzania.
3. Long term performance based maintenance contracts carry higher risks and can lead to loss of capacity in the sector.



4. Alliances between the government, private sector and road users can provide a basis for effective maintenance systems.

RECOMMENDATIONS

1. Promote the sealing of rural roads, including the use of Otta seal.
2. Develop strong in-house capacity in road owner organizations to ensure effective maintenance and the safety of road users.
3. Governments should include the private sector and road users in the design of maintenance systems

KEY ISSUES AND OBSERVATIONS ON SAFE RURAL ROADS

1. Human behavior as a critical and complex factor in enforcement and compliance to road safety rules, regulations, provisions in rural areas.
2. Speed management risk assessment as critical aspects in achievement of a safe road traffic system and maximizing community benefits of road infrastructure.

3. Most local transport inventions or alternative modes of transport have poor consideration of safety factors.
4. Engineering designs of rural roads, foot and trail bridges, bus stops and other transport services infrastructure or facilities not appropriately considerate of all road user types.

RECOMMENDATIONS

1. Adapt road safety regulations to local people's context and transport needs.
2. Road authorities need regularize the use of risk assessment approach in road asset planning and management for minimizing overall risks and enhance road safety for all users.
3. Integrated road infrastructure solutions deliver significant benefits if used as key planning points in increasing road safety and survivability and minimizing crash costs.
4. Dissemination of awareness and education on road safety methods that incorporate the needs of all community members especially those with disabilities or enhanced vulnerabilities.



OFFICIAL OPENING

The meeting was officially opened by his excellence **Hon. Mizengo Kayanza Peter Pinda** (MP), the Prime Minister of the United Republic of Tanzania. In his pulsating speech, the PM highlighted, among other aspects, the social economic importance in regard of status of rural roads in majority of Sub-Saharan countries, the challenges faced in the sector, institutional setup for rural roads maintenance, the choice of technology and standards, and the aspect of Governance.

Lastly but not least, was the matter of transport policy and strategy where came up the need for African Government authorities to come up with Rural Transport Policy and Strategy as part of Governments' overall plans for rural development. This shall provide the abstract base for the reform efforts defining the role of Governments, Communities, Private Stakeholders, and Donors. An effective strategy must therefore respond to the queries of management and capacity mobilization for Local Government roads, Community Roads and Path. To elucidate these remarks, the subsequent lively quotation from his excellence Mwalimu. J.K Nyerere was employed.

“While the great powers are trying to get to the moon, we are trying to get to the village...While the great powers have been to the moon and back and are now even communicating with the stars, we are still trying to reach the village and the village is getting even remote...”

The opening remarks were preceded by statements from **Mr. J. Haule**, convention chairman, (Tanzania Road Funds Board), **Mrs. Sibylle Rupprecht**, Director General IRF Geneva, Switzerland and **Mr. Abdul A. Awadh**, Chairman Tanzania Roads Associations.





SESSION 1 - THE IMPORTANCE OF RURAL ROADS

PRESENTATION 1:

RURAL TRANSPORT OVERVIEW – THE UNFINISHED TASK

Rob Petts – Global Transport Knowledge Partnership (gTKP) - United Kingdom



PRESENTATION 2:

ENSURING LINKS TO BASIC SERVICES

Jeff Turner – African Community Access Programme (AFCAP) – United Kingdom



PRESENTATION 3:

INFLUENCE OF NETWORK OF RURAL ROADS ON STEADY DEVELOPMENT FOR AGRICULTURE AND QUALITY OF LIFE

*Vladimir Nikolaevich Bugromenko – R&G
GEOGRACOM – Russia*





PRESENTATION 4:

RURAL ROADS PROGRAMME IN CHINA

Wenjie Liu – China Highway & Transportation Society



PRESENTATION 5:

**RURAL ROADS AND EMPLOYMENT – THE IMPORTANCE AND GROWTH OF THE
INFORMAL TRANSPORT SECTOR**

Paul Starkey – Transport consultant - University of Reading – United Kingdom



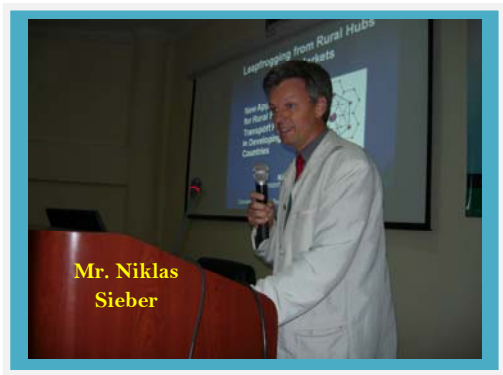
Mr. Paul
Starkey



PRESENTATION 6:

LEAPFROGGING FROM RURAL HUBS TO LOCAL MARKETS

Niklas Sieber – Transport Training Initiative (TTI) – Germany



PRESENTATION 7:

SOCIAL ASPECTS OF TRANSPORT AND RURAL ROADS

Nathalie Pereira – Social Development Theme Champion – gTKP – Switzerland





PRESENTATION 8:

REVISITING THE PAST, REFLECTIONS ON THE FUTURE – GENDER DIMENSIONS OF PUBLIC WORKS INVESTMENTS

Nite Tanzarn - ILO Consultant/Director, IFRTD



PLENARY DISCUSSION: SESSION 1

1. There was a doubt raised in terms of the labour based approach for rural roads. The presenter however assured the audience that there is considerable evidence of the success and benefits of this Local-Resource-Based approach. It was further argued that though there might be some capacity problems in terms of maintenance, the labour based approach is still advisable in many circumstances, as the low costs of labour and high costs (and poor availability) of credit make it more appropriate than equipment based methods for many developing regions.
2. Need for reduced use of cement in construction of rural roads was also raised, since it is considered to be environmental unfriendly (producing significant greenhouse gases in the production process). This was seen as a problem that needs to be mitigated. The presenter suggested that stakeholders need to look to alternatives and also minimize the use of cement through intelligent design. Alternative 'low carbon footprint' binders and sealers must be developed. Furthermore, 'low carbon footprint' techniques should be increasingly used, such as natural stone and fired clay bricks using agricultural waste as a fuel.
3. Finally there was a need expressed to increase pressure on concerned authorities to put more emphasis on building bicycle paths and promoting bicycle use which is considered as a major and affordable means of transport for the poor; economical and friendly to the environment.

The best way suggested here was a need for more advocacy to the authorities and law makers. Some possible initiatives which can be taken here include reducing taxes e.g. In Kenya and Madagascar where bicycle tax is zero.

KEY ISSUES AND OBSERVATIONS: SESSION 1

KEY OBSERVATIONS

5. Increase of informal means of transport in Developing Countries and the difficulties in regulating it.



6. Importance of community participation in rural roads construction and maintenance, taking into consideration the financial resource constraints in rural communities.
7. Importance of community access, taking into account considerations of local situation and including new opportunities to markets.
8. Importance of application of Labour based methods on rural roads construction, expanding opportunities for employment and income generation.

MAIN RECOMMENDATIONS

1. Need for more research on rural roads and rural transport.
2. Dissemination of knowledge adapted to local context through knowledge networks.
3. Develop locally adapted solutions for rural transport supply chains.
4. Preference to eco-friendly, locally-occurring, construction materials for rural roads.
5. Need to take into account vulnerable groups and social factors into rural road transport projects.
6. Take into account supporting the 'second economy' generated from road transport projects and go beyond infrastructure.
7. Introduce social and economic programmes and cut across other disciplines.



SESSION 2 - PLANNING AND MANAGING RURAL ROADS

PRESENTATION 9:

SMART PLANNING LEADS TO SMART DECISIONS

Doekle Wielinga – Sr. DRM Specialist – GFDRR - Global Facility for Disaster Reduction and Recovery - The World Bank

Presented by: Robert Petts



Villagers crossing a broken bridge in rural Southern Tanzania



A poor rural road section in Geita District, Tanzania

PRESENTATION 10:

APPROPRIATE STANDARDS AND SPECIFICATIONS - A KEY TO RURAL ROADS SUSTAINABILITY

Dr. Jasper Cook – OtB Engineering Ltd – United Kingdom



Dr. Jasper Cook



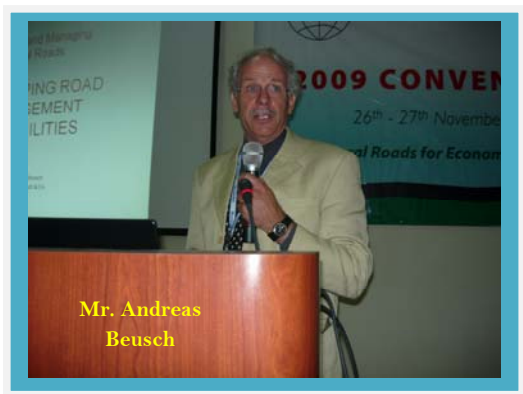
**PRESENTATION 11:
PUBLIC AND PRIVATE SECTOR APPROACHES TO MANAGEMENT OF UNPAVED
ROADS**

*Kingstone S. Gongera –
Chief Engineer DDF – Zimbabwe*



**PRESENTATION 12:
DEVELOPING ROAD MANAGEMENT CAPABILITIES**

Andreas Beusch – Intech Beusch & Co – Switzerland



**Engineer Sengenge
from ITECO**



**PRESENTATION 13:
DEVELOPMENT OF RURAL ROADS IN INDIA –
PMGSY EXPERIENCE**

N.K Sinha – IRF ambassador – India



PRESENTATION 14:

PLANNING AND MANAGING RURAL ROADS - GTZ EXPERIENCE AND PLAN FOR GOVERNMENT ACTION

Gerhard P. Metschies – GTZ Consultant – Germany



PLENARY DISCUSSION: SESSION 2

1. It was suggested that decentralization can be the best solution to rural roads management since majority of roads in SSA remain unpaved while they may serve around 80% of the people, who need to be involved. Yet the factor of local capacity stands as a significant threat; since most of the local level authorities have inadequate technical, management and financial capacities for road management. The presenter suggested that some issues have to remain with central authorities; such as standards and specifications. Furthermore vital technical inputs need to be sourced centrally: e.g. culvert design and construction require indispensable technical inputs through technicians and engineers. The importance of local ownership and participation needs to be given special attention.
2. More clarity was needed on measures undertaken in India to deal with bureaucracy in rural roads projects. Here the use of institutionalization and transparency approach was seen as the factor which minimized bureaucracy.
3. The discussion further raised the importance of the smart planning and smart decision IRAP approach. It was advised that IRAP was implemented in Tanzania between 1986 and 1995, although later fell into disuse because of lack of continuity and sustainability measures. The need for review of this inclusive and comprehensive approach was seen as important.
4. The longevity question in terms of management of contracts was among the raised issues. The presenter suggested a minimum of at least three years for maintenance contracts to encourage commitment from all parties, investment, capacity building and efficiency.



KEY ISSUES AND OBSERVATIONS: SESSION 2

KEY OBSERVATIONS

1. Enormous challenge to provide affordable access and services to the rural poor in many regions with the available limited resources
2. Training, research and dissemination activities need to be funded on a continuous and sustainable basis
3. Roads should be built to appropriate & maintainable standards maximizing use of available Local Resources
4. ALL costs and challenges of the private v public sector approaches need to be identified and addressed

RECOMMENDATIONS

6. Ensure Ministers are informed and engaged to develop and support effective Rural Transport policy and implementation strategies as integral part of national roads policy and funding framework
7. Establish appropriately and effectively funded local, regional and international training, research & knowledge dissemination networks and mechanisms
8. Develop appropriate and affordable standards & specifications for maintainable & sustainable access for the means of transport used
9. Develop stakeholder 'inclusive' planning, design, implementation, QA and maintenance systems to deliver sustainable rural transport infrastructure optimizing the use of the local resources available
10. Create an 'enabling environment' for local private sector road works, and improve sector funding and cashflow arrangements



SESSION 3 - PANEL DISCUSSION ON FUNDING RURAL ROADS

Session Moderator – Dr. Festus Limbu – MP and former Deputy Minister for Finance – Tanzania

Panel List – Mr. Jeff Turner- AFCAP – United Kingdom

Mr. Servacious Likwalile – Tanzania Social Action Fund – Tanzania

Mr. Samuel D. Nengue – President ARMFA – Cameroon

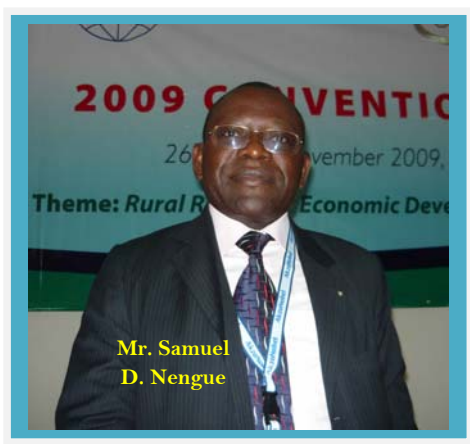
Mr. Samuel Toray – Country Programme Officer – ADB – Tanzania

Mr. Peter O'Neil – World Bank – USA

PRESENTATION 15:

INTRODUCTORY PRESENTATION

Mr. Samuel D. Nengue – President ARMFA – Cameroon



The presentation was based on five key dilemmas:

Dilemma 1 - Justifying investments

- How can investment in rural roads be justified?
- Sober economic analysis (CBA, IRR, NPV) versus wider economic and social assessment of costs and benefits
- Competition with other public services

It is argued that public enterprises are shouldering a large share of the capital; investment programme. Having grown by an average of 15.9 per cent; in real terms over the past four years, investment by public enterprises will accelerate and is expected to average about 20 per cent a year, over the medium term. Eskom's infrastructure programme. (R340 billion over five years) accounts for the largest share of this expansion, followed by Transnet (R80 billion), the Central Energy, Fund (R30 billion) and the Airports Company of South, Africa (R17 billion). Investment spending by the large water boards also contributes to rising public-



sector capital spending. (Real Gross Fixed Capital Formation by the South African General Government and Public Corporations on Economic and Social Infrastructure, 1946 -2007)

In 2001 10 million hh had access to water and 1.8 million lacked access. In 2007 the original backlog of 1.8 was almost filled, with an additional 1.4 hh serviced. However, the backlog increased, to 1,4 million. This is the result, mainly of the average hh size that was, officially reduced. This means that growth in HH outstrips the roll out of services.

Dilemma 2 – Finding ways for sustainable funding

- Looking into sources of funding and their pros and cons
- What is a reasonable investment rate

Which instrument for which aspect?

Risk/Return expectations

- Equity investors five years at between 17% and 50% per annum (Libor and Jibar rates)
- Commercial banks eight years at prevailing interest rates
- Merchant Banks twelve years at medium term interest rates
- Pension funds fifteen years at long term interest rates
- DFI's 20 year horizons ideally judged on economic as opposed to financial merit

An indication of viability for self sustaining projects

- Roads in the South African model can start at between 4 000 and 4 500 vpd AADT, with approximately 17% heavy vehicles
- Rail requires 1 m tonnes per annum (South African Freight Rail) cf 300 000 tonnes per annum for the BBR concessionaire
- Ports appear to require 3 million tonnes per annum
- Airports are difficult but appear to need in excess of 500 000 persons per annum
- Below these thresholds does not imply PPP's can't be developed but other measures of support need to be considered (eg shadow tolls, market guarantees, increasing the revenue base)
- In general, speaking of debt equity ratios of approx 17:83 and DSCR of between 1,0 and 1,5 in year 5 to 8

Dilemma 3 – Who is responsible?

- Centralization versus decentralization of funds and management
- Community involvement: how does it work and what are pros and cons?
- Capacity to manage and governance issues

Thought starters for Dilemma 3



- World Bank suggests, from the Pacific Rim, that there is no material difference between centralised and decentralised management: Recognise practicalities of distance and size of network
- Community involvement embraces both participation and involvement as well as social auditing (eg Press Conferences)
- Recognise difference between economic and social roads, or at least the continuum
- Consensus emerging that agencies operate better than government departments
- Need independent review of funding, both of the Road Fund and of toll roads and of procurement processes
- Ideally report to both public and private sectors

Dilemma 4 – How to tackle negative spill-over

- Investing in one region means decreasing competitiveness of other region
- Roads are said to cause spread of HIV/AIDS → better roads, more infections: how to address?

Dilemma 5 – How do we ensure political acceptance of the need for acceptable maintenance?

- Effective asset management of any infrastructure is never ‘sexy’ when compared to new projects. How do we change that perception?
- The relative size of any road fund in smaller economies makes it an attractive target for the provision of funds for purposes different to that intended. How do we protect against that and preserve the funds for new construction, rehabilitation and maintenance of ROADS?
- The road maintenance backlog in many countries is so large that some roads can NOT be maintained. How do we decide which roads to maintain to the benefit of the overall network?

The presenter concluded by arguing that he is personally satisfied that there is a strong case to continue to develop PPP's to provide necessary infrastructure. Does it need to start small (e.g. municipal services) and work upwards? Or start big (e.g. toll roads) and work downwards? Fundamentally need long term committed champions from both the public and the private sector side.

Possible solutions:

- Define specific technical standards for rural roads infrastructures construction
- Systematize the use of available local materials and other local cheaper resources at community level
- Rural infrastructures don't have legal framework. Very few SSA countries has relevant institutional framework for community infrastructure construction and management
- Organisational and technical capacities in villages are limited, and need to be reinforced to ensure capacity transfer



- Lack of funds to acquire unavailable materials in rural areas should be compensated by research and use of local materials
- Design and implement a sustainable roads maintenance approach in rural areas that bring together governments and partners
- In the absence of a clear and voluntary policy of Governments to design a transport infrastructure maintenance strategy in rural areas, all the good efforts would be vain and for short term.

PLENARY DISCUSSION: SESSION 3

1. Among the very strongly raised argument in the discussion here was that there are no dilemma. The situation around being a result of absence of principles which are suggested to be an absolute solution to the so called dilemmas. There is a need for imposing adequate principles in planning, prioritization, approaches and strategizing.
2. A concern on miss-use of funds was brought forward debating between centralization and decentralization approaches. However, it was argued that, the risk is higher at the central level compared to the local authorities taking an example of a country like Tanzania where the district councils are voted in and out after every five years the thing which discourages abuse of funds.
3. In increasing pressure to more funds allocation to rural roads, it was urged that, apart from all other factors, this can also provide access to campaigns against HIV/AIDS in rural areas.
4. In winning sense of ownership and sustainability element, community participation was highly recommended. It was suggested that the budget has to consider the need for training from planning stage. This will create a room for technical capacity enhancement to the locals giving a special priority to the youth who will later respond to the maintenance and rehabilitation needs.
5. Since most of the roads are constructed then leaving a huge load of rehabilitation and maintenance on no one's hand, the suggestion was put forward that construction budget should be moving in turn with maintenance. On other hand introduction of road users levy can be done where possible.





Posing a
Question or
Comment

KEY ISSUES AND OBSERVATIONS: SESSION 3

KEY OBSERVATIONS

1. Problems exist as regards justification of ways for sustaining funding, and responsibility for funding.
2. Political decision making as a critical determinant in influencing levels of acceptability of maintenance and responsibility for managing negative impact to communities.
3. Perceived dilemmas can be overcome by proper planning, prioritization and strategy
4. Better roads can cause increase in HIV/AIDS transmission but also present opportunity to implement programmes that lessen transmission. Better roads reduce poverty which is one of the major causes of HIV/AIDS increase.



MAIN RECOMMENDATIONS

1. Establishing specific technical standards that facilitate easier and sustainable roads maintenance approaches in rural areas.
2. Create organizational and technical capacities in villages basing on systematic utilization of available local materials.
3. Mechanisms for participation of local communities in construction and maintenance of rural roads need to be developed for sustainability
4. Strengthen local capacities in construction of rural roads
5. Sources of finances should include local (communities) government; central government; development partners (bilateral & multilateral); NGOs and Private Public Partnerships.



Maintenance can be achieved with labour and intermediate equipment.

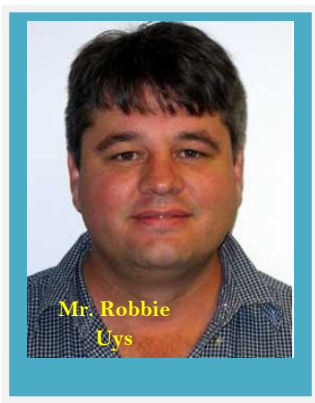


SESSION 4 - CONSTRUCTION AND MAINTENANCE OF RURAL ROADS

PRESENTATION 16:

OVERVIEW OF GRAVEL ROAD PERFORMANCE STUDIES IN THE WESTERN CAPE

Robbie Uys - PDNA Consulting Engineers (Pty) Ltd-South Africa





**PRESENTATION 17:
OTTA SEAL CONSTRUCTION IN KAGERA
REGION IN TANZANIA**

*Joseph Nyamhanga – Tanzania National Roads Agency
(TANROADS) – Tanzania*



**PRESENTATION 18:
ROAD MAINTENANCE DELIVERY IN AUSTRALIA: PROGRESS AND CHALLENGES
AFTER A DECADE OF CHANGE**

Tyrone Toole – Chief Consultant, Sustainable Infrastructure Management ARRB – Australia



**PRESENTATION 19:
RURAL ROADS IMPACT ON DEVELOPMENT
POLICIES IN DEVELOPING COUNTRIES**

Cheikh Diene – Senegalize Studies Office - Senegal





PLENARY DISCUSSION: SESSION 4

Due to time constrain discussions for session 4 & 5 were agreed to be combined together before end of the meeting.

KEY ISSUES AND OBSERVATIONS: SESSION 4

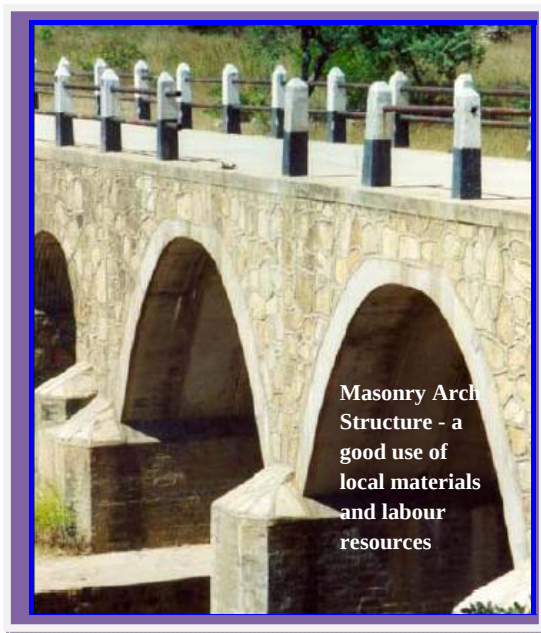
KEY OBSERVATIONS

1. Commercial additives can contribute to reduced gravel loss, but traditional construction using thin bituminous seals has a lower whole life cost.
2. Otta seals are a viable and affordable surfacing for rural roads in Tanzania.
3. Long term performance based maintenance contracts carry higher risks and can lead to loss of capacity in the sector.
4. Alliances between the government, private sector and road users can provide a basis for effective maintenance systems.

MAIN RECOMMENDATIONS

1. Promote the sealing of rural roads, including the use of Otta seal.
2. Develop strong in-house capacity in road owner organizations to ensure effective maintenance and the safety of road users.
3. Governments should include the private sector and road users in the design of maintenance systems





SESSION 5 - SAFE RURAL ROADS

PRESENTATION 20:

BROADENING THE TRANSPORT SAFETY AGENDA: A RURAL PERSPECTIVE - A SYNTHESIS OF PILOT CASE STUDIES FROM SRI LANKA, INDIA, MADAGASCAR, CAMEROON AND PERU

Guy Kempstop – IFRTD Regional Coordinator for Western Africa – Cameroon



Traffic Hazards on rural roads



PRESENTATION 21:

SAFE RURAL ROADS AND THE SAFETY OF RURAL PEOPLE

Paul Starkey – Consultant in Rural Transport – United Kingdom



PRESENTATION 22:

**AN ASIAN PERSPECTIVE OF SAFE ACCESSIBILITY FOR ALL IN RURAL
TRANSPORT AND RURAL TRANSPORT INFRASTRUCTURE**

Ranjith de Silva - Regional Coordinator for Asia and the Pacific



Improved means of
carrying the immobile





An
immobilized
bridge



First Aid
Training

PRESENTATION 23:

SAFE SYSTEMS: A PRAGMATIC APPROACH TO INTEGRATING ROAD SAFETY AND ASSET MANAGEMENT

Tyrone Toole – Chief Consultant sustainable infrastructure management



Mr. Tyrone
Toole



Traffic hazards on a rural road



Overloaded vehicle on a rural road



Poorly maintained infrastructure in a rural setting

PRESENTATION 24:

NATIONAL POLICY ON FIRST AID FOR ROAD USERS IN AFRICA

Dr. David Oba (PhD) - Prompt Assistance to Victims of Road Accidents PATVORA – Nigeria



Mr. David
Oba

PRESENTATION 25:

ROAD SAFETY EDUCATION TO STAKEHOLDERS: ENFRTD'S INITIATIVE

*Taye Berhanu - Ethiopian National Forum for Rural
Transport and Development*

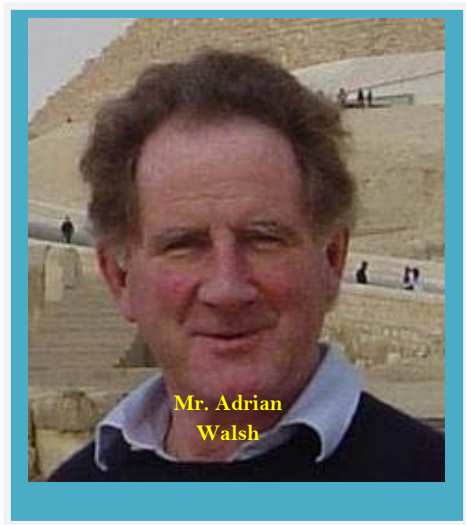


Mr. Taye
Berhanu



**PRESENTATION 26:
MOBILISING FOR A DECADE OF ACTION**

Adrian Walsh - gTKP Road Safety Theme Champion



Road safety management and information sharing in West Africa, Nigeria

**PRESENTATION 27:
MAKE ROADS SAFE: TIME FOR ACTION FOR ROAD SAFETY IN AFRICAN**

Paul Kwamusi – FIA Foundation - Uganda



A truck involved in an accident in West Africa

PLENARY DISCUSSION: SESSION 5

1. Among the issues which was strongly argued by one of the meeting participant which he termed it as *“the untouched area”* is about the relationship between three main parties



involved in transportation industry. These are the vehicle production companies, vehicle users and legislation authorities.

2. It was argued that, the perseverance road safety chaos is highly contributed by lack of cooperation between the parties. Most of the vehicles (Tanzanian experience) are designed with maximum speed of 180 km/h while road contractors put 120 km/h as speed limit the contradiction which makes it easy for the drivers to maneuver against the regulations. The Governments were urged to make efforts in creating a rapport to control the situation.
3. Since the road safety matter is now among the major concerns, it was proposed that the concerned authorities should consider including it in school curriculum to enable the road users to take necessary precautionary measures.
4. More clarification was needed concerning the 1ST aid motivation approach which is done in Nigeria as explained by Dr. Obba from PATVORA experience. It was expounded that this is a Ghana – Accra declaration not a Nigerian concern alone where the drivers are provided with special training package on 1st aid measures since in most cases they are the first to discover accidents on especially on the high ways. It is implemented as a community agenda as well where political will is very crucial component to its success.
5. Another contribution made on the road safety issue that there is a need for a rapid response unit which shall be responding in clearing the road and providing first aid services.
6. More information was needed concerning statistics on the causes for accidents e.g due to alcohol or drug influence and those involving expect mothers and school children. These statistics can be found online in the recent WHO report.

KEY ISSUES AND OBSERVATIONS: SESSION 5

KEY OBSERVATIONS

1. Human behavior as a critical and complex factor in enforcement and compliance to road safety rules, regulations, provisions in rural areas.
2. Speed management risk assessment as critical aspects in achievement of a safe road traffic system and maximizing community benefits of road infrastructure.
3. Most local transport inventions or alternative modes of transport have poor consideration of safety factors.
4. Engineering designs of rural roads, foot and trail bridges, bus stops and other transport services infrastructure or facilities not appropriately considerate of all road user types.



MAIN RECOMMENDATIONS

1. Adapt road safety regulations to local people's context and transport needs.
2. Road authorities need regularize the use of risk assessment approach in road asset planning and management for minimizing overall risks and enhance road safety for all users.
3. Integrated road infrastructure solutions deliver significant benefits if used as key planning points in increasing road safety and survivability and minimizing crash costs.
4. Dissemination of awareness and education on road safety methods that incorporate the needs of all community members especially those with disabilities or enhanced vulnerabilities.



**The Convention
Secretariat
Chairperson, Mr.
Joseph. O. Haule,
Manager of Roads
Fund Board,
Tanzania.**



Conference Wrap-Up and Closing

The closing address was made by **Mr. Abdul Awadh**, Chairman, Tanzania Roads Association (TARA) who among other issues thanked the delegates for their lively participation and for all the contributions made during the two-days meeting with special attention to paper presenters, session moderators and the overall moderator of the meeting.

Mr. Awadh further urged the meeting participants to use the excellent opportunity they have got in transforming all what has been presented into action for an improved, much safer and environmental friendly transportation industry especially for the rural roads which have magnified benefits to the whole society.



**Engineer A.
Awadh,
TARA
Chairperson**



Group photo with the Guest of Honour, Honourable Mizengo. K. P. Pinda, The Prime Minister of the United Republic of Tanzania