



global Transport
Knowledge Partnership



Rural Transport Overview – Achievements and Challenges

Robert Petts

Rural Transport Theme Champion

Global Transport Knowledge Partnership

www.gtkp.com

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The Presentation

- **The Context**
- **Sector Achievements**
- **Challenges for the Future**



The Context

The World Bank Transport Business Strategy (2008-2012) advises:

- **1.2 billion of the world's poor still lack access to an all-weather road**
- **Between 40 and 60 percent of people in developing countries live more than 8 km from a healthcare facility. Few transport services exist**
- **In some regions less than 15% of roads are paved**

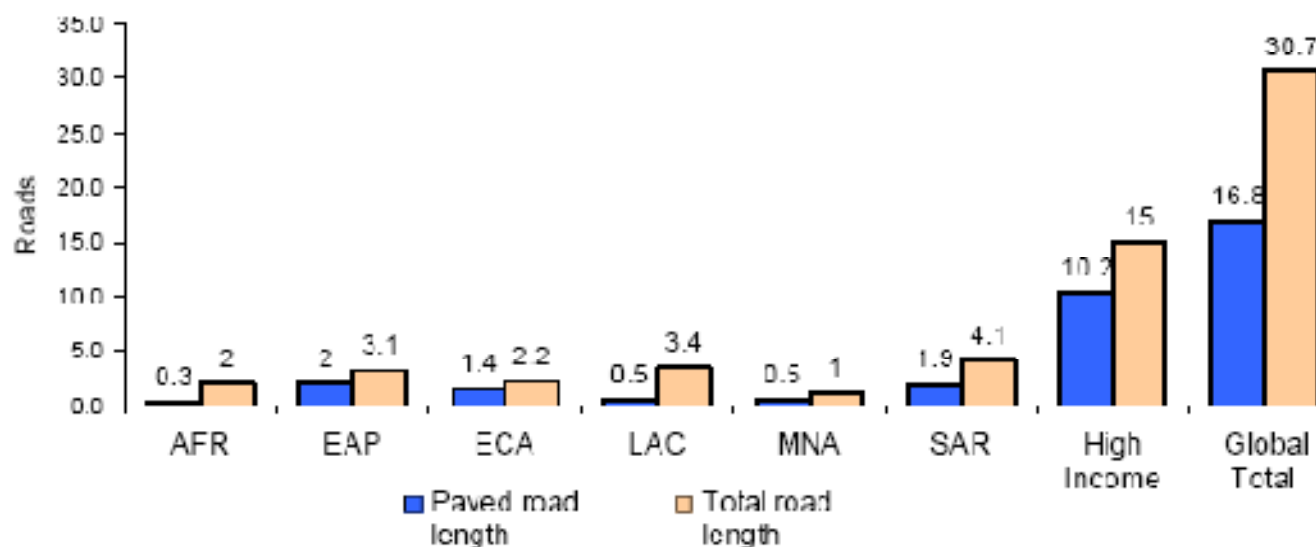
Without effective rural transport systems, the MDGs and ALL rural development & poverty initiatives, agriculture & growth are substantially constrained

There are serious concerns that the MDGs may not be achieved in many regions, unless radical new initiatives are taken

The 'Undeveloped' Road Asset



Figure 4-1. Length of the road network, by region, 2005



Note: Road lengths are in millions of kilometers.

See Annex D for listing of World Bank regions.

Source: International Road Federation Statistics 2005 and World Bank analysis.

Source: World Bank Transport Business Strategy (2008-2012)

The Context (cont.)



- About 2.0 million km of classified roads in Sub Saharan Africa; of which approx. 14% paved
- Latin America 3.4 million km, 15% paved

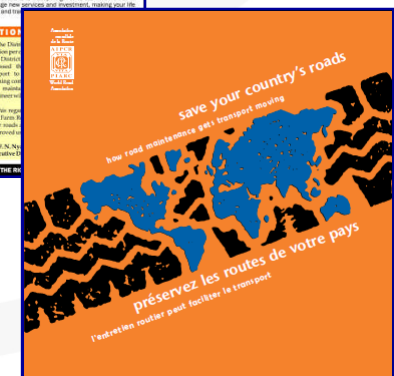
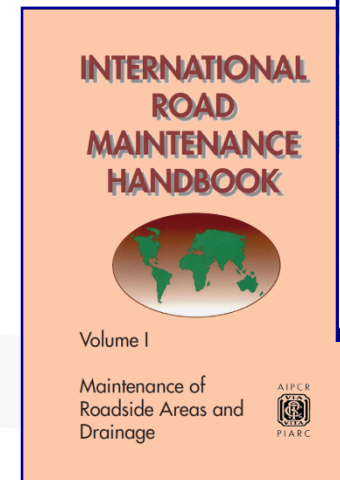
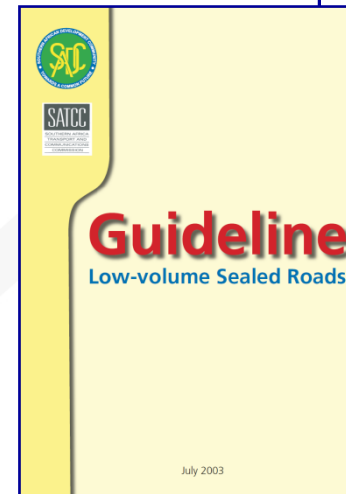
Maintenance is a fairly universal problem, so that means about 14 million km of unpaved roads still need to be converted into Sustainable routes globally

Plus unclassified routes!



Sector Achievements

- Extensive sector knowledge bank
- Established international 'Good Practice' Guidelines e.g. ORNs
- Improved appreciation of economic, social, governance etc. issues
- Moves towards improved management and funding
- Local Resource Based Strategies
- Basic Access Strategies

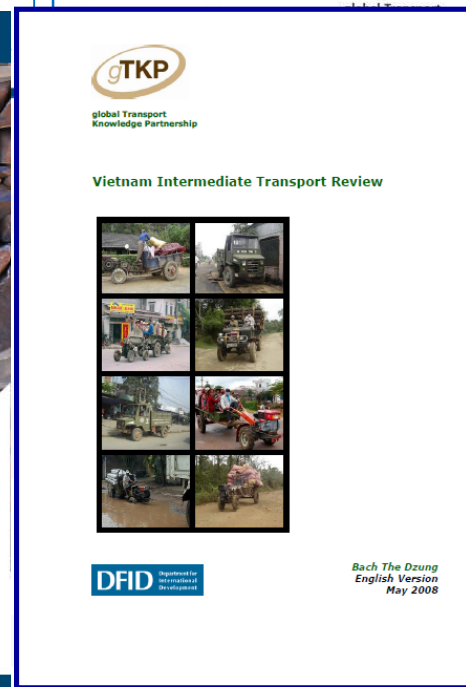
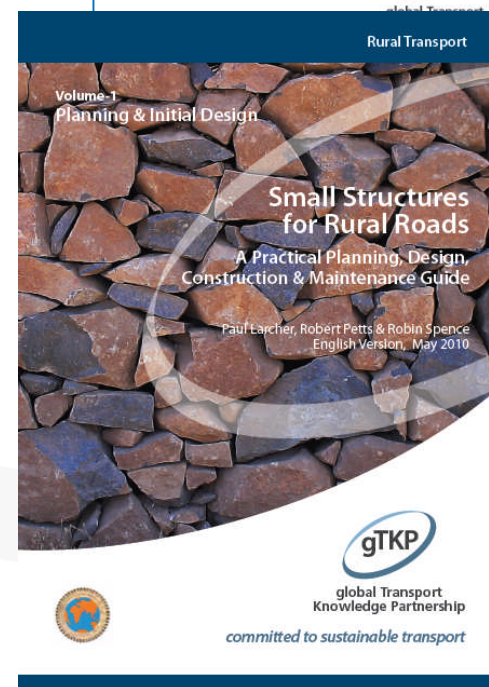
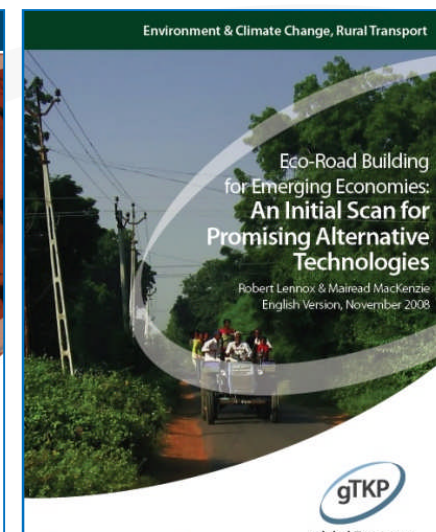
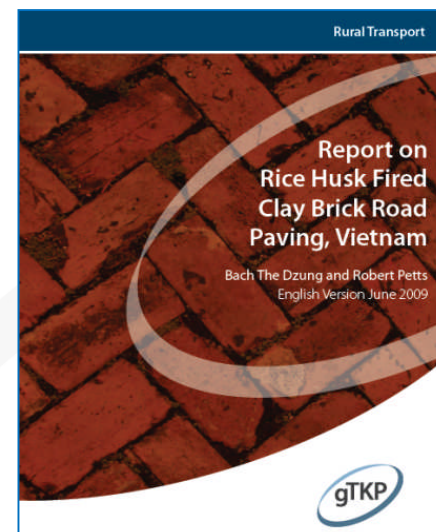


gTKP Contributions

- Website with more than 20 Rural Transport topic pages
- About 400 Rural Transport documents for downloading
- Specialist documents commissioned

In production:

- Low Cost Surfacing Guideline
- Basic Access Guideline
- Surfacing CO2 paper



Local-Resource-Based Strategy

The resource base is very different in developing countries:

- Labour wage rates typically **<US\$10/day** (instead of **>US\$100/day** in developed countries)
- Credit scarce and expensive **>20% p.a.** (instead of **<10% p.a.** and usually available in developed countries)
- Equipment management problematic > rationalize
- Abundant labour . Productive employment needs
- Some local materials do not meet normal international guidelines, however can provide affordable solutions
- Local carpentry, masonry skills and local community and enterprise resources available (but usually not effectively mobilized in rural road works)

We **cannot** directly transfer technology from developed countries

Spot Improvement Strategy

Conventional rural road provision usually costs
> US\$100,000/km

Basic Access could be provided to many rural communities for **<US\$10,000/km**

Using:

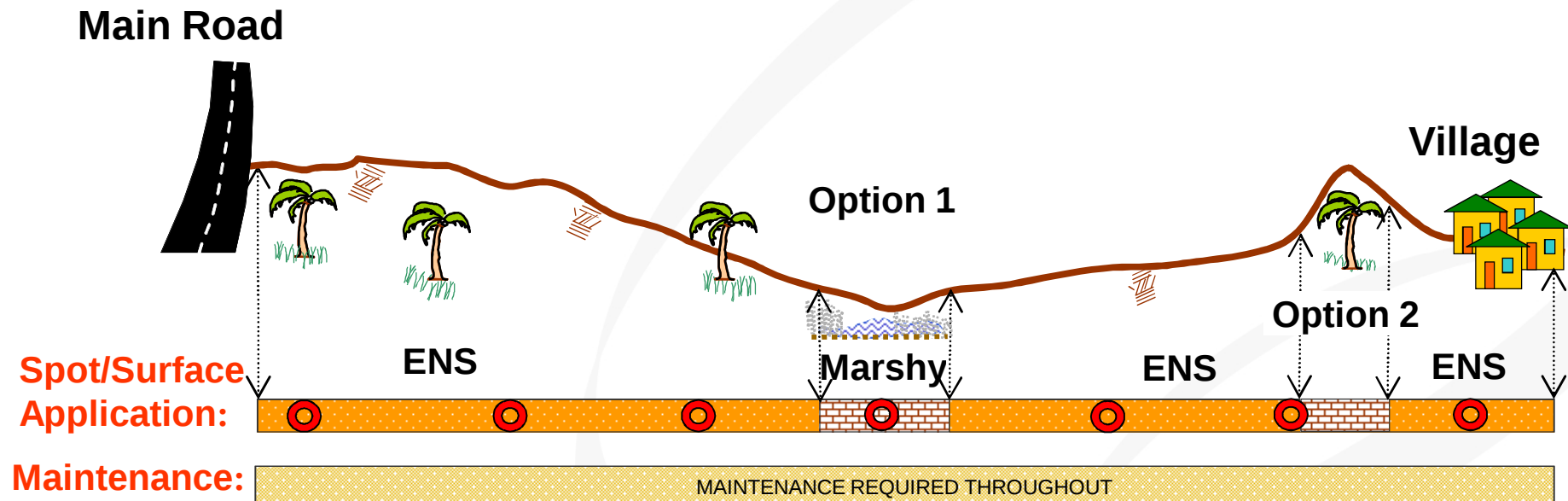
- In situ soils to form Engineered Natural Surface
- Improved surfaces for limited problem sections
- Provision of simple structures

to provide affordable
year round access



Spot improvement strategy

Example application over a typical rural route



Low Cost Structure or culvert

Surface Options

Engineered Natural Surface (ENS)

Maintenance



(Earth Road)

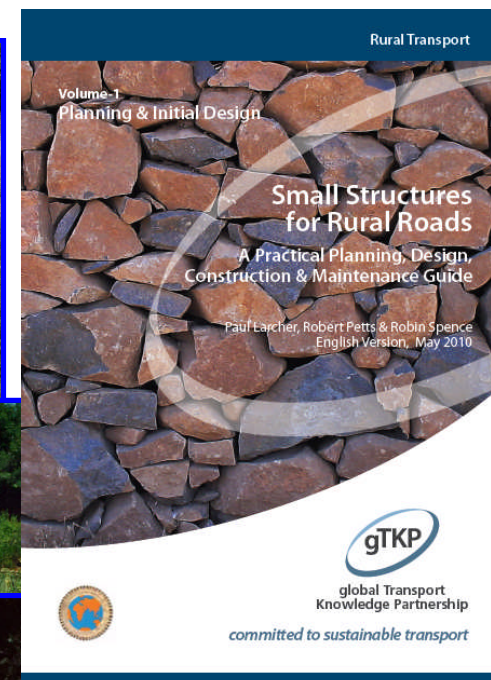
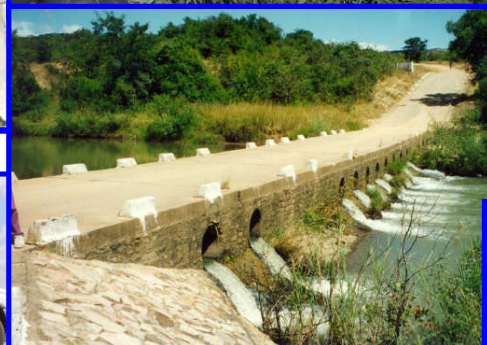
'Maintainable' Earth Roads plus Local Resource Based Spot Improvements

Problem sections on earth roads (e.g. weak soil/dust/hill/swamp) can be tackled using a wide range of proven low cost, local-resource-based spot improvement options and low cost structures.



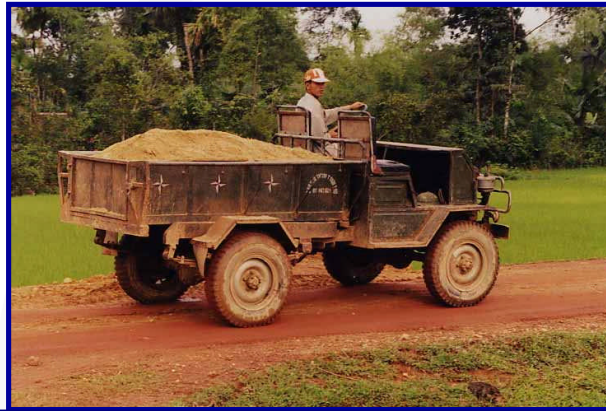
Low Cost Structures

Local materials & labour can be used to construct durable, low cost structures for the Road sector



Intermediate Equipment for services & roadworks

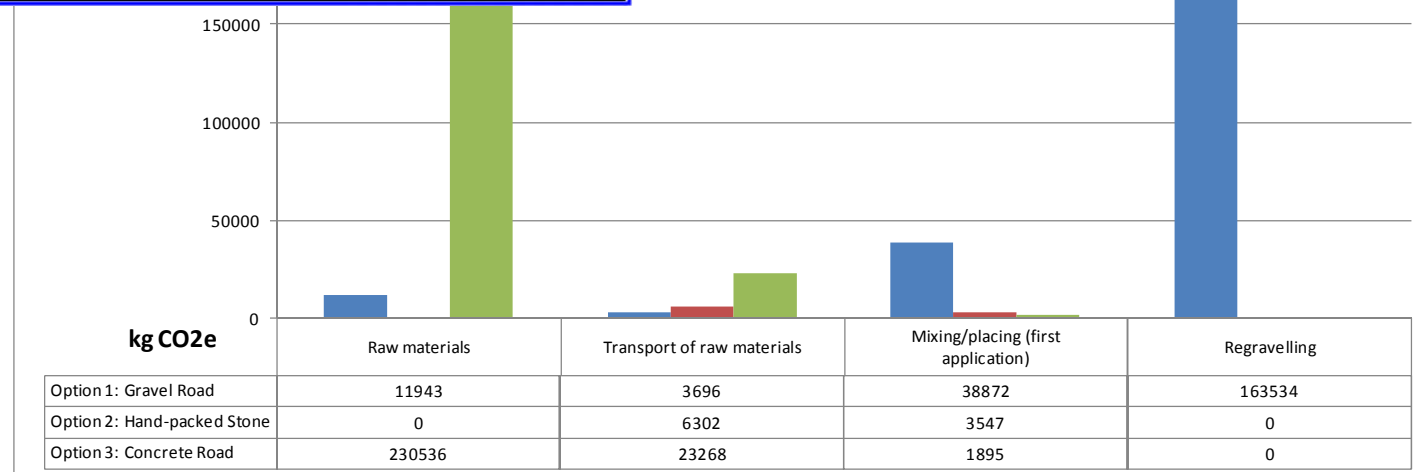
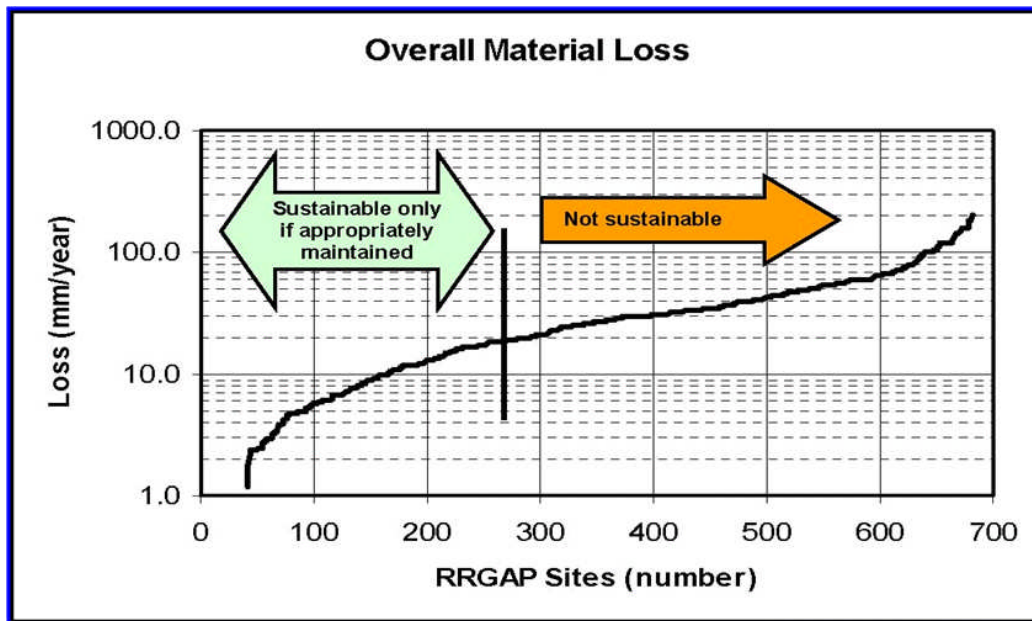
- Introduction of low cost, locally made or fabricated transport equipment can lower transportation costs for the agricultural and roads sectors
- Suitable support, regulatory & fiscal framework required



The Challenges for the Future

- **Create effective international knowledge networks**
- **Mainstream & 'embed' the available RT knowledge**
- **Facilitate incorporation into local standards, specifications, training, academic courses and everyday agency practice and community awareness**
- **Mainstream effective participative planning systems (e.g. IRAP): roads/services/facilities?**
- **Make Basic Access and safe, sustainable LRB road works a universal reality, using Life Cycle Assessment**
- **Aggressively tackle the 'Maintenance Problem'**
- **Wean ourselves from dependence on problematic gravel, to low maintenance surface strategies**

Gravel Road Issues: costs, carbon footprint etc.



The Challenges for the Future (cont.)

- **Create an 'enabling environment' for the local private sector**
- **Promote effective rural transport services**
- **Inclusive development: Mobilize all local resources & stakeholders**
- **Fund and implement effective and credible Human Resource Development programmes**
- **Cooperate with other rural sectors (agriculture etc.)**
- **Develop low-carbon alternatives to bitumen and cement**
- **'Sell' ourselves: demonstrate we are doing a good job!**
- **Continue to compile 'good practice' guidelines**
- **Mobilize appropriate levels of resources for vital knowledge compilation and mainstreaming**

Funding Research & Mainstreaming

- The value of the road network asset alone in the World Bank Group's regions of operation is of the order of US\$2 trillion (US\$2,000,000,000,000).
- What is the expenditure of developing country national governments and development agencies on transport research and dissemination?
- Would 0.1% of the asset value per year be a reasonable investment in research and dissemination as an **INSURANCE** against **poor practice** and **bad investment.....**

(i.e. US\$2 billion/year)?

Further Information

The following important dissemination forums are supporting Rural Roads & Transport knowledge:



global Transport Knowledge Partnership:
www.gtkp.com



International Road Federation
www.irf.org

Further information may be obtained from the above websites and the gTKP Rural Transport Theme Champion:
rob.petts@gtkp.com

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