

The Africa Community Access Programme (AFCAP)

AFCAP



Overview of AFCAP

...and a Vision for the Future

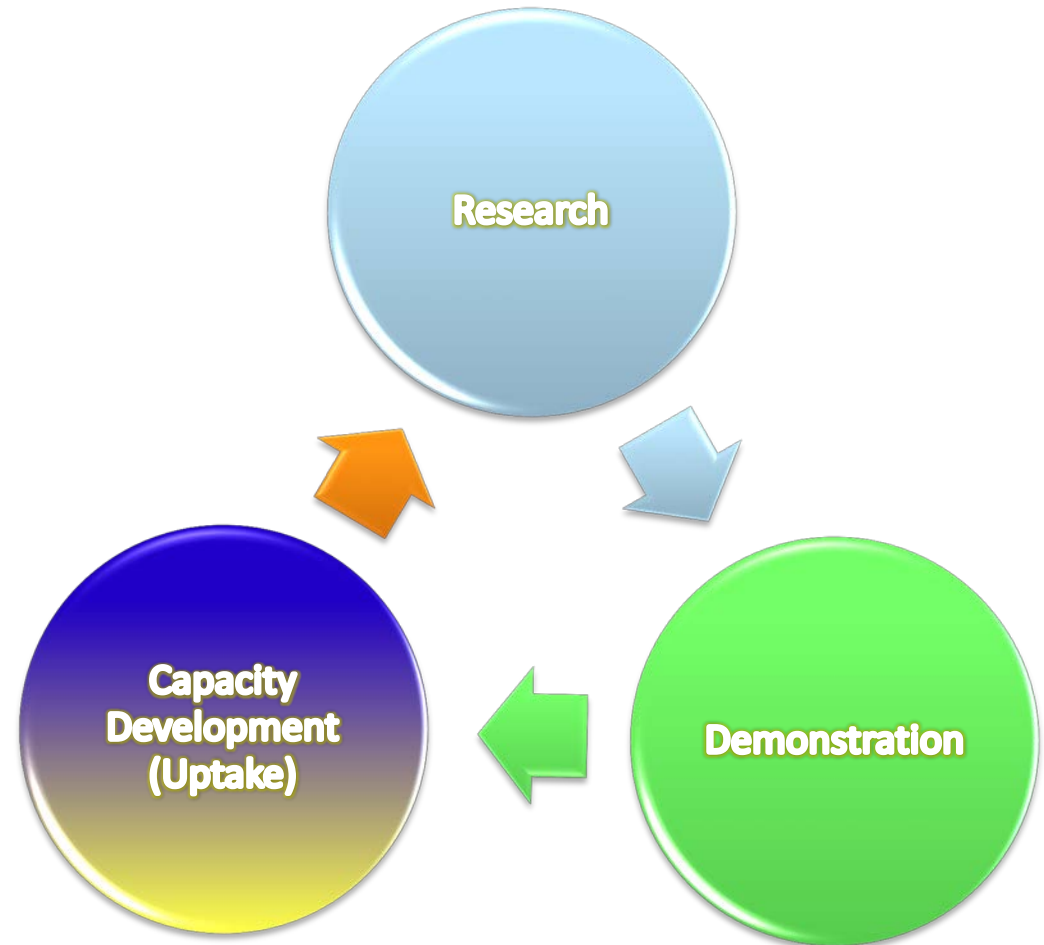
Rob Geddes
AFCAP Technical Manager

Low Volume Roads Symposium

26th November 2013

What is AFCAP?

- Knowledge and research programme for the rural transport sector in Africa.
- June 2008 to 2014
- Core countries: Mozambique, Ethiopia, Malawi, Tanzania, Kenya, South Sudan, DRC.
- Also projects in SA, Zambia, Ghana, Nigeria and SADC.
- Crown Agents management contract.
- DFID budget £14.4 million (low cost high impact).
- AFCAP 2 under preparation and also ASCAP.



AFCAP Activities



Research- Knowledge Generated

1. Use of non-standard materials in upper pavement layers (LVSRs)

- Unstabilised sands
- Calcrete



2. Alternative surfacings

- Cold mix asphalt
- Otta Seals (fine quartz gravels, calcrete, weathered basalt, cinder gravel).



Through:

- Back-analysis of existing pavements
- Construction of experimental sections

Use of Sand in Road Construction



Hoopstad-Bultfontein Experimental Section (1962):
Neat sand base
Potential Saving: >\$50,000 per km (cement)
for countries like Mozambique



Otta Seal Research Ethiopia



Kombelte Village - finished road

Nearest crusher > 150km



How transport services operate in rural areas:

- For the aged
- For people needing emergency medical care
- Small farmers
- Using motorcycle taxis.



Demonstration of Best Practice



Unstabilised laterite road bases



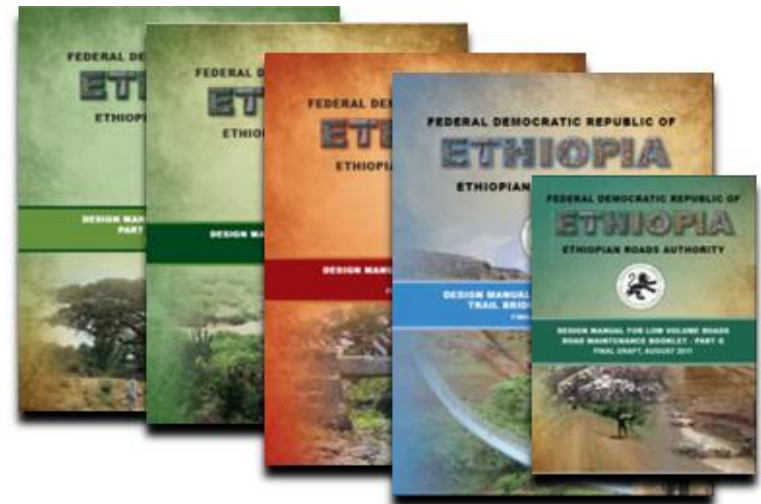
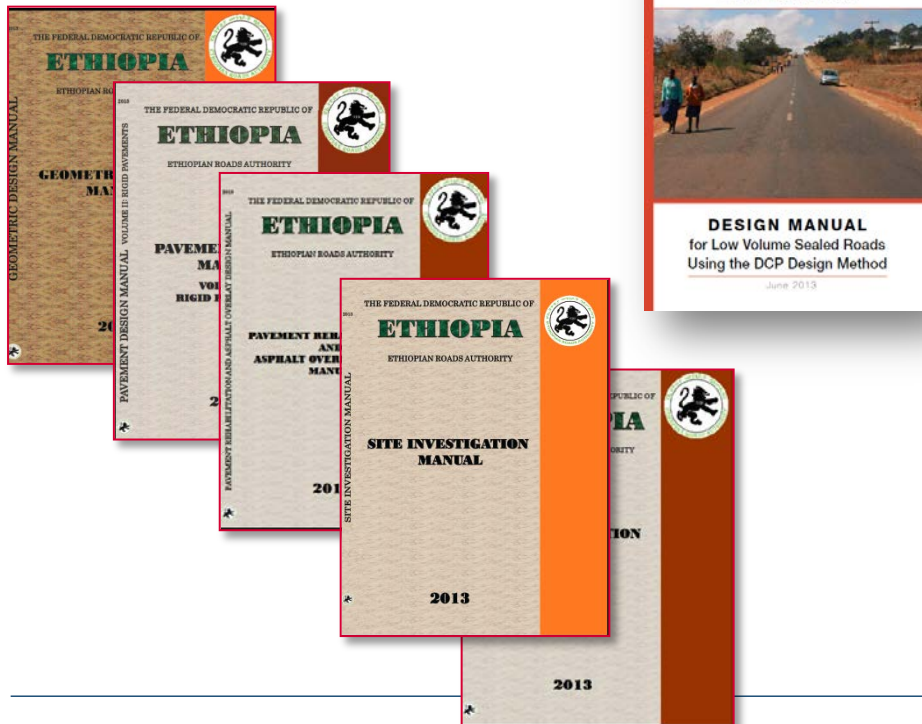
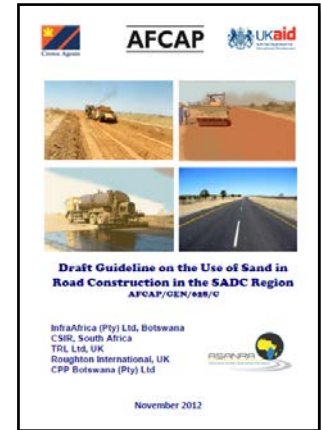
Thin cold mix asphalt

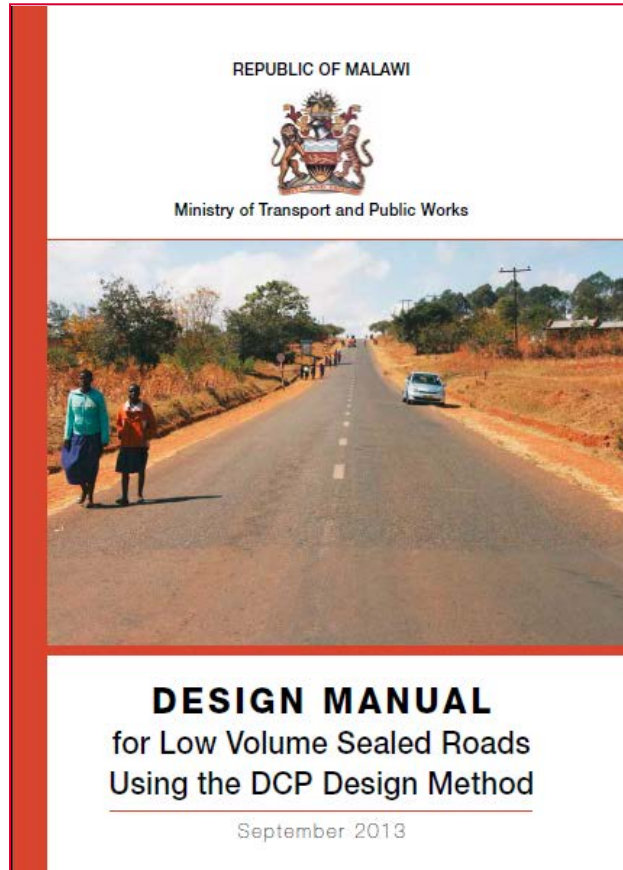


Environmentally Optimised Design

Uptake of Knowledge

New knowledge must be brought into practice by updating design manuals, Standard Specifications etc.







- Builds on pioneering work done in RSA (and Australia)
- Calibrated DCP catalogue for Malawi conditions
- Reduced reliance on conventional testing
- Supports an existing design approach
- Malawi plans to construct 100km LVSRs annually
- Also for design of LVSRs in Kenya and DRC.


LVR Design Manuals -Ethiopia

- Published in 2011 for Universal Rural Roads Access Programme
- 70,000km gravel roads over 5 years
- Includes design catalogue for low volume sealed roads from 1990s research.




  Department for International Development

COLLABORATIVE RESEARCH PROGRAMME ON HIGHWAY ENGINEERING MATERIALS IN THE SADC REGION



Volume 1

Performance of Low Volume Sealed Roads: Results and Recommendations from Studies in Southern Africa



Transport Research Laboratory, Crowthorne, Berkshire, United Kingdom

Independent review findings:

- About 7,000 individuals in 2,000 organisations using manual.
- 3,600 professionals trained in LVR design using the Manual
- 28,000km upgraded to gravel all weather standard.
- 170km sealed roads designed through 15 villages.



AFCAP supporting development of research centres for rural transport in:

- Ethiopia
- Mozambique
- Kenya
- South Sudan
- Tanzania



- Contributed to the attainment of new knowledge
- Enabled the uptake of knowledge (new and existing) with benefits for local communities
- Demonstrated the value of research
- Created awareness of the need for more in-country research.

Vision

“Vibrant research community for the rural transport sector in Africa”

www.afcap.org



Thank you