RURAL ROADS INVESTMENT PROGRAM (RRIP) MOZAMBIQUE

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The Message

- 75% of the national road network comprising gravel roads;
- ‘Unhealthy’ and unsustainable reliance on gravel roads to solve the access problems of poor rural communities;
- Unreliable travel or impassability, especially in the rains seasons;
- High unit transport costs for goods, services & people;
- Severe lack of funding or investment on rural roads, thus:
  - A new approach required, using a ‘menu’ of more durable, low cost, local-resource-based surfaces, and even engineered natural surfaces. Using gravel only where appropriate;
  - Easy techniques for use by local Contractors required.
ANE`S STRATEGY FOR RURAL ROAD

- ACCESSIBILITY ALL YEAR ROUND;
- ROADS MAINTAINABLE THROUGH ROUTINE MAINTENANCE “ONLY”
- SURVEY & CLASSIFY ROAD INTO DIFFERENT INTERVENTION PRIORITY SECTIONS (P1, P2 & P3);
- P1 – SECTIONS OF ROAD WHICH BECOME NON PASSABLE –EVERY YEAR NORMALLY DURING RAINS
- P2 – SECTIONS PASSABLE WITH DIFFICULTY(4x4) DURING CERTAIN TIMES OF THE YEAR;
ANE`S STRATEGY FOR RURAL ROAD

- P3 – SECTIONS PASSABLE ALL YEAR ROUND;
- QUALIFY & QUANTIFY INTERVENTIONS FOR P1&P2 SECTIONS;

- EXPERIENCE SHOWS:
  P1 – VARIES BETWEEN 12 & 15% OF TOTAL LENGTH OF THE ROAD;
PROPOSAL:

- USE FIRSTLY AVAILABLE FUNDS IN ACCORDANCE WITH INTERVENTION PRIORITY – P1;

- REMINISCENT FUNDS (IF ANY) TO BE USED ON SECTIONS P2 & SO FORTH;

- DIFFERENT TYPES OF FINAL SURFACE (SURFACED & UN-SURFaced) FOR ASSET PRESERVATION
ANE`S STRATEGY FOR RURAL ROAD

Section P1

Section P2
Regional Roads Investment Program (RRIP)

- As part of Integrated Road Sector Program – PRISE(2009-2014), the National Roads Administration (ANE), embarked on a Regional Road Investment Program;

- This is a 4 years program (2008-2011) and aims to rehabilitate and upgrade a number of regional unpaved roads/sections of roads using more durable and cost effective solutions from the perspective of project life cycle cost with focus on transitability.
The program is funded by SIDA, AFCAP and Government of Mozambique, comprising the following components:

- Civil works on selected regional roads;
- Research;
- Training.
Scope of RRIP

- Carry out a series of pilot projects in each of the 10 provinces with a total investment of 9.2 million dollars over the first phase and 6 million USD during the second phase.

- Introduce a ‘targeted interventions’ approach;

- Prioritise problematic roads / sections and identify solutions for critical sections (P1 & P2).
ANE has decided to execute the works:

- Through small scale contractors supervised by independent consultants;
- Using labour based technology where feasible;
- Making optimal use of locally available materials and regional specifications.
Surfacing options

- Slurry seal
- Sand Seal
- Otta Seal
- Single surface dressing
- Double surface dressing
- Geo cells
- Calcrete
- Concrete slabs
- Cobble Stone
- Fired clay bricks
Surfacing options

Cabo Delgado Province
Concrete Slabs, Xitaxi Slope, Mueda Xitaxi-Road
Surfacing options

Tete Province
Stone Paving at Cachombo Slope, Bene-Zumbo Road
Surfacing options

Manica Province
Otta Seal, Inhacufera-Machaze Road
Surfacing options

Sofala Province
Beira-Savana Road, various options for pavement structure
Surfacing options

Inhambane Province – Calcrete mixed with sand
Recognizing the need for capacity building and training, 3 alternative operational strategies for program management were considered;  
- An in-house strategy (program management by ANE),  
- Program management by an established Management Contractor;  
- Program management by a Consultancy Firm
The in-house strategy, which is a ‘process oriented’ (learning by doing) approach, was adopted;

This followed existing procedures for the planning, design, supervision and implementation of maintenance works on unpaved roads with the main responsibility anchored at provincial level.

However, ANE at central level is responsible for overall management and provide technical support and training.
Training and capacity building

- Various activities are being done as training and capacity building efforts of ANE staff, local consultants and small-scale contractors, through the firm Scott Wilson;

- TRL is giving its input on design, investigation of different solutions and monitoring of the sites.
Conclusions

- There are opportunities to use locally available materials more extensively in Mozambique and more research work need to be done to find other sources of materials.

- The research component will help Mozambique develop specifications which suit materials found in the country.
ANE recognizes that the introduction of low cost surfacing technology requires a long-term capacity building effort;

Present challenges for purchase of appropriate equipment and use of bituminous materials by inexperienced contractors.
The various solutions identified can reduce construction costs significantly if proper specifications and work norms are developed for the Mozambique situation.

In order to enhance the research component from 2011, the sector will earmark on its annual plans funds for research component.
THANK YOU

MUITO OBRIGADO!