Appropriate LVRR Standards and Specifications for Lao PDR

Presented by
Bounta Meksavanh
Key Aims

The development & mainstreaming of appropriate rural road standards based on road function & available resources

Formal STANDARDS are essential to provide the framework within which resource-based LVRR options can be mainstreamed with appropriate technical SPECIFICATIONS.
The Requirement
Key Issues

Designs or options need to meet road task requirements (Task-Based)

- Designs based on available human; budget; materials and construction resources (Resource-Based)
- Designs appropriate to the road environment (Environmentally Optimised)
Standards: Three Key Points

- Compatible with Lao PDR Road Law
- Based firmly on the road function NOT administration
- Falling within the Low Volume Rural Road traffic envelope
LVRR Envelope

The LVRR classification

Upper axle load of 4.5T

Upper limit of an equivalent ADT of 150 motor vehicles

Traffic analysis based on assessment of key vehicles
Key Function Issue: Safety

LVRRs are very likely to carry mixed traffic; from light trucks to pedestrians. Safety is a key issue in mixed traffic environment. Need to keep traffic slow (40km/hr) rather than designing for maximizing speed. Wider shoulders is also an option.
The use of local construction materials is essential: specifications and design must suit the available materials.

Specifications and design options aimed at an Environmentally Optimised Design (EOD) and Spot Improvement strategy; best use of available budget resources.
The key delivered outputs are:

- A new LVRR Classification with a suitable set of Geometric Specifications
- A matrix of pavement and surfacing design options
- A guideline document associated with (1) and (2) above.
Key Pavement Outcomes

1: Reduction in pavement thickness

2: Allows variation in material quality

3: Use of capping layer material
Whole-Life Costed & Environmentally Optimised Design (EOD)

Utilising the available resources of budget and materials in the most cost-effective manner.
EOD: Spot Improvement to Whole Length Improvement
Regional variation in Standards & Specifications – Design Exceptions
Research into Practice through appropriate Standards and Specifications