

Session 1a: Road Maintenance Issues in CAREC - Brainstorming

Welcome to all participants

Common road maintenance issues globally:

- Road network condition
- Funding and its efficient use
- Government and private sector capacity
- Quality of maintenance
- Country environmental conditions
- Environmental impacts of road maintenance

Road Network Asset Management

- Road network is a key national asset
- Significant share of government development and recurrent budgets
- Road agencies have a major responsibility for managing road assets:
 - Connectivity and accessibility
 - Right level of service for traffic
 - Efficient use of public funds

Funding for Road Maintenance

- Sufficient funding for road maintenance is a common challenge for all road agencies
- Roads compete with education, health, agriculture and other sectors for limited public funds
- Relatively easy for government treasury to reduce road maintenance funding
- Challenge for road agencies:
 - Make a convincing case for sufficient maintenance funds
 - Ensure the funds are sustainable
 - Make efficient use of those funds

Efficient Use of Road Maintenance Funds

- Portion of funding spent on directly on the road is too low:
 - <50% on direct materials, equipment, labour
 - >50% on road agency establishment (staff, offices, administration, pensions)
- Challenge for road agencies is to reverse this:
 - Replace in-house force account maintenance with outsourcing i.e. contracting
 - Improve contract procedures to reduce contract administration
- Move to modern contracting methods:
 - Away from quantities (input)-based contracts to performance-based contracts

Road Agency vs. Private Sector Capacity

- Road agency:
 - Large organisation with experienced technical staff
 - Long-established network of maintenance facilities and materials sources
 - Equipment fleet often old and with high un-serviceability rates
 - Government administration rules – low flexibility
- Private sector:
 - Core of competent road construction contractors with financial capacity
 - Large number of smaller contractors with limited capacity
 - Newer equipment but may lack road maintenance equipment
 - Experienced construction staff but lack maintenance experience
 - Competent contractors have good works management
- Educational institutes:
 - Source of new technical staff

Construction and Maintenance Quality

- Design and Construction:
 - Proven design methods and construction specifications
 - Quality management systems in place
 - Reliable Materials testing equipment and facilities
- Maintenance:
 - Effective Inspection and testing procedures for road condition
 - Proven Maintenance works manual and specifications
 - Quality management system in place
- Enforcement:
 - Right-of-way encroachment
 - Utilities within roadway
 - Interference with drainage
 - Vehicle weights and dimensions

Natural Environment in CAREC

- Terrain:
 - Variety of topography
 - Extensive mountainous areas
- Extreme climates:
 - Sub-zero to very high temperatures
 - High rain and snow falls
 - High risk of floods, land slides and avalanches
 - High winter maintenance
 - Shortened construction season

Environmental Impacts of Road Maintenance

- Road safety
- Air quality
- Water quality
- Soil contamination
- Impacts on health, wildlife and agriculture

CAREC Experience

- Covered main issues
- Participants have extensive experience in their countries
- Invite participants to share their views and experiences

Thank You