



SEMINAR

Climate Resilient Transport: Opportunities, practical applications, and tools

Date: **1 March 2016**

Location: AfDB Headquarters, Abidjan – **CCIA Building, Room 1G**

Organizing partners: African Development Bank (AfDB) & Nordic Development Fund (NDF)

Objectives of the Seminar

The seminar will show the implications of climate change on road transport infrastructure, and demonstrate through concrete project examples what can be done to address the impacts of climate change and what tools are available. Furthermore, the seminar will discuss how the AfDB transport team can become involved and address climate change in the design of new transport projects, what are current/future opportunities for investment, and how might the interventions be designed?

Background

Roads and other transport infrastructure are all highly vulnerable to the impacts of climate change, the consequences of which go far beyond the mere physical damage to the road network, and can affect a country's economy. Thus, adaptation measures are fundamental to avoiding threats, damage and accidents caused by the changing climate. Adaptation is about reducing vulnerabilities, and requires dealing with both the long-term effects of climate change and the more short-term or acute extreme events.

The assumption is that in order to develop realistic adaptation strategies, an understanding of the potential impacts of climate change on all types of transport networks is needed. Vulnerability mapping is an important adaptation activity that identifies sections or areas along or within the transport network that may be particularly affected by climate change. Thereafter, appropriate measures and actions can be identified. Furthermore, reviewing and revising policies and standards for transport infrastructure and training of relevant staff, help to ensure that climate change considerations are mainstreamed in all transport development plans.

Incorporating climate change considerations into transport network and infrastructure design can be expensive, but may create considerable cost savings both in the immediate and longer term. More costly initial climate-proofing investments may reduce future maintenance costs as the impacts of climate change events will be reduced due to the fact that the transport infrastructure has, from the beginning, been designed to withstand such events. In addition, it is essential to incorporate resilience strategies into all forms of transport operations to ensure that infrastructure investments can deliver reliable transport services to those who depend upon them.

The workshop on transport and climate change adaptation will bring together the AfDB transport team and NDF experts to discuss the implications of climate change on road transport networks, demonstrate through concrete project examples what can be done to address the impacts of climate change and what tools are available.



Seminar Program

1 March

08:30 Register, coffee, tea

Morning session: Overview and Framing

09:00 Opening remarks and welcome

Amadou Oumarou, Director, Transport, Urban Development, & ICT, African Development Bank
Aymen A. Osman Ali, Chief Transport Engineer at African Development Bank

09:30 Status of transport and climate change adaptation interventions

Aage Jorgensen, Country Program Manager, NDF

In recent years some national transport agencies and transport planners have started addressing climate variability and climate change. The presentation will provide an overview of recent activities and tools drawing on examples from a number of countries. The presentation will further highlight MDB efforts and recent NDF experience.

10:15 Costs of climate change on the transport sector

Stein Hansen, Transport Economist

Building climate resilient infrastructure can be expensive, but may create considerable cost savings both in the immediate and longer term. The presentation will focus on recent research on the economic costs of climate change in the transport sector in Sub-Saharan Africa and what it entails for maintenance and investments costs.

10:45 Coffee break

11:00 Case: Flooding, Mozambique

Atanasio Mugunhe, Director General, National Roads Agency, ANE, Mozambique

11:30 Case: Erosion and landslides, Rwanda

Olivier Kabera, Coordinator, Rwanda Transport Development Agency (RTDA)

12:00 Lunch



Afternoon session: Practical tools for climate change adaptation in transport sector

13:00 Vulnerability mapping of road transport systems in Cambodia

Markus Eek, Transport Engineer
Stein Hansen, Transport Economist

The AsDB-NDF Rural Roads Improvement Project undertook detailed vulnerability mapping of rural roads in Central Cambodia. The presentation will show how climate modelling using historical hydro-meteorological data led to mapping of climate hazards, vulnerable areas, and identification of adaptation options. The use of Cost Benefit Analysis (CBA) allows decision makers to appraise whether the adaptation investment is worth doing looking at both the benefits of having climate-proof roads and the adaptation costs of the priority adaptation measures.

13:45 Incorporation of climate change into road infrastructure (hard and soft solutions)

Markus Eek, Transport Engineer

The presentation will use the AsDB-NDF Rural Roads Improvement Project and present some engineering options for adapting to climate change events especially flooding which always causes damage to rural roads in Cambodia.

14:30 Design standards, maintenance and road asset management

Markus Eek, Transport Engineer

The presentation will show how climate change has been incorporated into the planning framework for rural roads in Cambodia. Furthermore, the role of maintenance procedures and road asset management will be highlighted plus some important insights regarding revising road design standards.

15:00 Coffee

15:30 Capacity needs and training options for national road agencies

Aage Jorgensen, Country Program Manager, NDF

What are the needs for strengthening capacity to tackle climate change? The presentation will focus on capacity needs assessments in transport adaptation projects covering operation, maintenance, construction and design aspects.

16:00 Q&A and discussion

17:00 Summary and Closure

Contact information

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