The Need for Climate Resilience Policies in Road Asset Management
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25 November 2019, Vic Falls, Zimbabwe
Sub-Saharan Africa Perspective
Past hydro-meteorological impacts & trends

- Sub-Saharan African countries are particularly susceptible to weather related disasters

- The most affected are often rural communities and their livelihoods
- Droughts cause the most deaths (> 95%) – making timely aid distribution to these communities vital
- Flooding & storms are particular damaging accounting for > 63% of recorded damages to infrastructure. Damaging infrastructure, isolating communities, reversing development gains & impeding economic productivity

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Definition of the problem – Sub-Saharan Africa perspective

- Lack of knowledge on how climate change will affect African Government’s roads and transport sector
- Lack of the appreciation of the vast impacts that this can/will cause
- Severe lack of guidance on how to deal with these emerging climate effects & challenges
- Climate change science features to a very limited extent in the rural roads sector
- Inadequate drainage on low volume roads – money spent on structure and not drainage
- Infrastructure design based on historical observations not predictive values
- Lack of embedment of CCA resulting in unsystematic and ineffective approaches to dealing with these extreme climate events.

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Climate Adaptation challenges – SSA perspective

- Dealing with the magnitude of current limitations (lack of adequate road infrastructure, long commuter distance, far way away from meeting the SDG goal on Rural access.
- Sub-optimal rural access roads (affecting already vulnerable)
- Inconsistencies between quality and quantity of available data – making prioritisation investment more difficult
- Lack of decision-ready data
- Restrictive institutional policies (sharing data protocols, assigning data custodians, data sources)
- Expertise lacking in construction, maintenance and management of roads
- In-country collaboration between sectors working with climate change science is lacking
- Inadequate budgets for maintenance & rehabilitation
- Response (Emergency) eats into maintenance budgets
- Insufficient maintenance

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Sub-Saharan Africa Perspective

Advances made in risk management & resilience optimisation for vulnerable access roads in Africa

- It’s been acknowledged and recognised that regional guidance is needed on the development of climate-resilient road infrastructure.

- It’s recognised that there is a critical need for embedding and mainstreaming CCA not just into the road engineering practices but also into national policies, information systems, thinking and local capacities.

- The recent (2019) development of a Climate Adaptation handbook provides a 5 stage methodology to support resilience and adaptation building in the roads sector through; Screening climate risks, doing impact assessments, prioritisation and evaluation of investment, design and implementation and the monitoring and evaluation thereof.

- Underpinned by appropriate RAM policies, the Guidelines should assist in the future development of a resilient, climate-proof road network.
Sub-Saharan Africa Perspective
Advances made in risk management & resilience optimisation for vulnerable access roads in Africa
Climate Adaptation Guidelines

The Climate Adaptation Handbook
✓ provides a methodology for carrying out a climate adaptation assessment for rural access to assist socio-economic development
✓ focuses on those activities and actions that conventional engineering standards and procedures do not necessarily cover
✓ is supported by detailed guidance through guidelines

▪ Change Management Guideline, covers:
✓ policy and planning
✓ stakeholder and asset management
✓ recommendations for the formulation of strategies and programmes for improvement.

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– **Climate Risk and Vulnerability Assessment Guideline**

✓ takes users through the steps involved in conducting a risk and vulnerability assessment at national/district-level as well as local project-level risk and vulnerability study when implementing new or maintaining/retrofitting existing infrastructure

– **Engineering Adaptation Guideline**

✓ introduces primary climatic attributes and the potential effects of these, followed by the provision of suggested adaptation measures for each infrastructure component

✓ also highlights the critical importance of effective drainage provision and of timely and appropriate maintenance of road assets.
Sub-Saharan Africa Perspective
Concrete actions for sustainable way forward

• Science-based research to identify climate hazards, vulnerability and impacts on roads

• In addition to having robust discussions about how we think about, act, plan and design sustainable climate resilient rural access roads we need to test, trial, evaluate and monitor these new approaches and share these lessons (demonstration sites)

• Mainstreaming climate change adaptation into government's planning policies, plans, processes and systems requires buy-in, uptake and extensive capacity development

• Climate change adaptation is a long-term country commitment and involves multiple role-players and stakeholders across various domains.

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Sub-Saharan Africa Perspective
Concrete actions for sustainable way forward

• Climate change adaptation in the roads sector needs to be embedded in a range of levels spanning national policies, planning instruments, monitoring and asset management systems, information systems, down to an engineering project level

• Policies relating to Climate Change adaptation should be embedded in the entire life-cycle of rural access roads

• Climate Change adaptation is a proactive initiative that aims to support the long-term development of resilient, sustainable and hazards resistant rural access roads.

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Sub-Saharan Africa Perspective
Concrete actions for sustainable way forward

• Provide platform for design engineers to access credible climate data

• Move from crisis management to effective response approaches: prevention (precautionary measures), preparation, adaptation, recovery

• Rebuild in anticipation of next event and not just restoration to previous state

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Methodology for embedment of CCA into policy & planning processes in Road Asset Management

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Goals:
- Goal 1 – NO POVERTY
- Goal 2 – ZERO HUNGER
- Goal 3 – GOOD HEALTH AND WELL-BEING
- Goal 4 – QUALITY EDUCATION
- Goal 8 – DECENT WORK AND ECONOMIC GROWTH

SDG TARGET 9.1
Develop sustainable, resilient & inclusive infrastructure
Thank you for your attention

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