

# Road Water Management for Resilience

Roads rather than being the cause of local floods and droughts and amplifying the effects of climate imbalance, can also be used systematically to harvest and retain water, to prevent erosion and contribute to buffer soil moisture in landscapes thus contributing to more stable micro-climate. Roads can route water to storage ponds or recharge areas which help to retain water in dry riverbeds, and ensure systematic spreading of floodwater.

It is beneficial to integrate water harvesting in road design and development.



Roads are a major global investment. Roads can be systematically used as instruments for water harvesting and as such contribute to resilience and water security. Making systematic use of roads for water management can moreover prepare road infrastructure for climate change and reduce maintenance costs and optimize the impact of their services.

Understanding the potential of harvesting the water from roads, several solutions can be implemented to overcome gully erosion, flooding of farmlands and waterlogging caused by road runoff. The implementation will bring together road and water practitioners, local governments and roadside communities. There is a range of technologies to be implemented. What these will do is that:

- Moisture levels in soils along the road will increase
- Shallow groundwater levels will increase
- Farmland productivity will increase
- Gully expansion has been halted
- Reduction of road maintenance costs
- Reduction in flooding of dwelling houses and farmlands



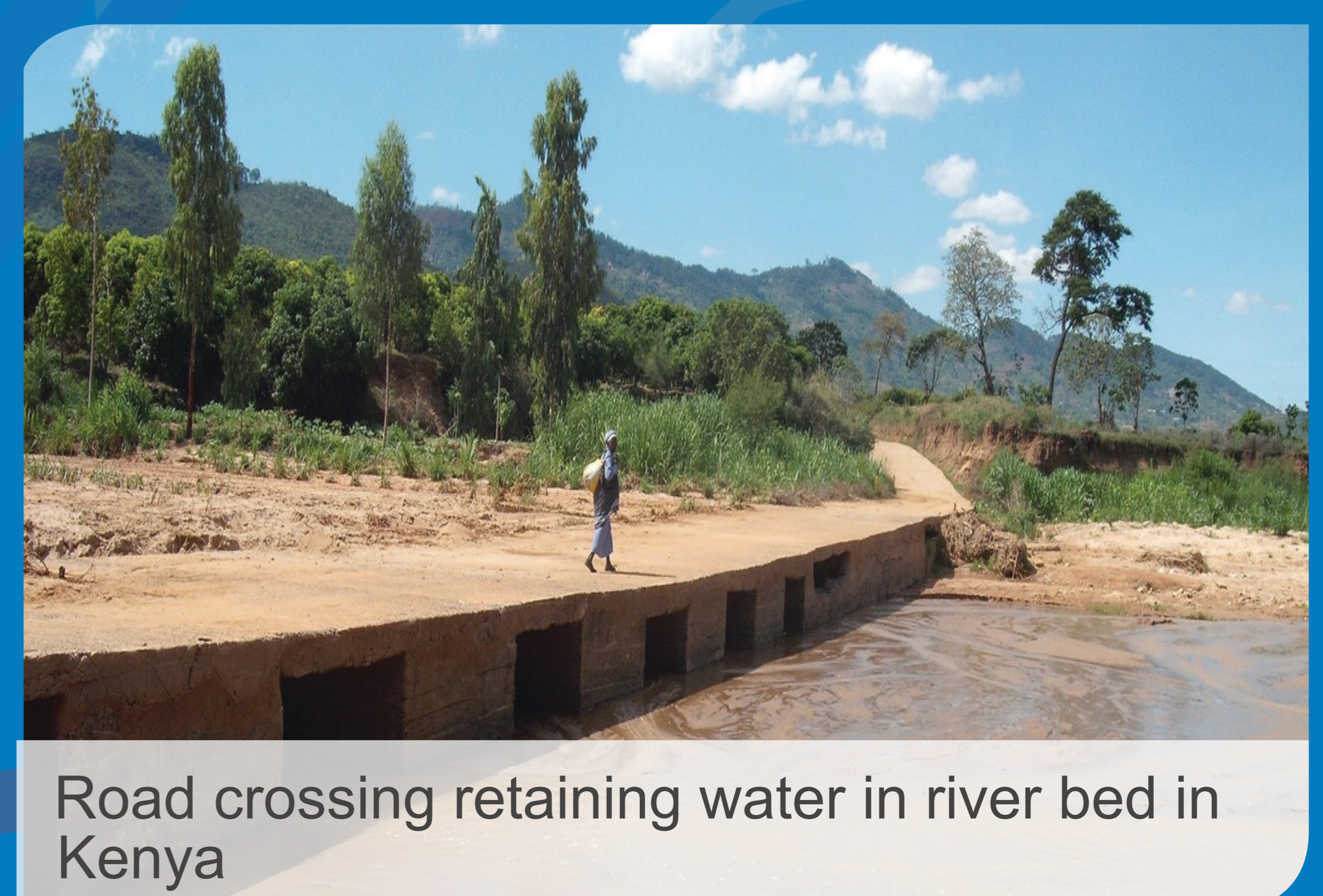
Water is the main cause of damage to road infrastructure



Storage reservoirs can be planned to harvest road run-off



Roadside drainage can be diverted to groundwater percolation ponds



Road crossing retaining water in river bed in Kenya

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