



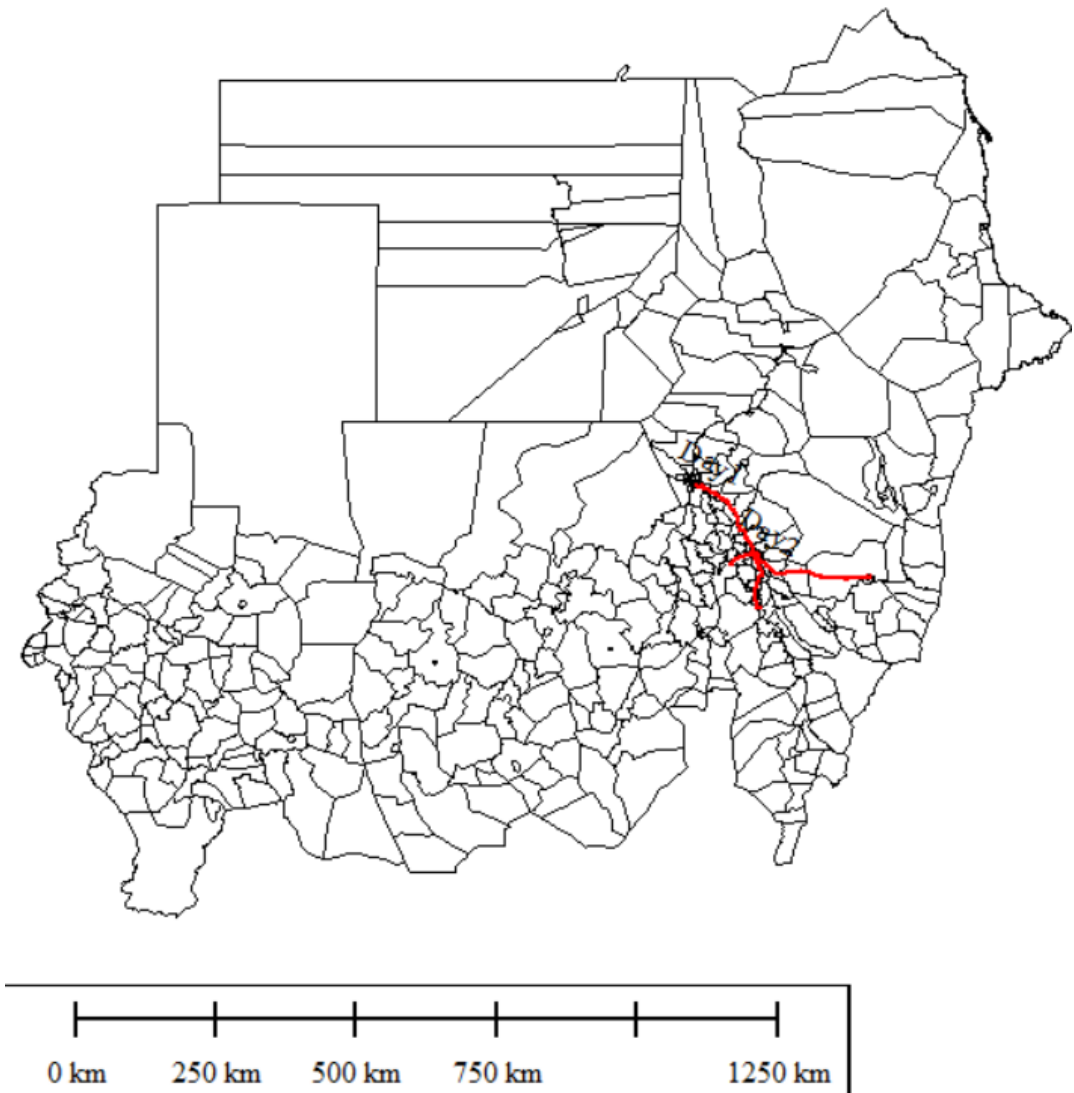
Green Roads for Water Training in Sudan

Wad Madani, 15-20 January 2023

Field - Visit



The assessment routes



Road 1 – Khartoum to Wad Madani



Road 1 – Khartoum to Wad Madani

- Watertight road without drainage – all water and moisture is retained upstream of the road living the downstream dry
- Hydraulic connectivity is cut



Road 1 – Khartoum to Wad Madani

- Farmers block the culverts to either retain the flood water to their fields upstream of the road or to protect their fields from floods downstream of the road during peak flows



Road 1 – Khartoum to Wad Madani

- Gully erosion at the outlet of culverts because of not adequate number of culverts and spacing between them



Road 1 – Khartoum to Wad Madani

- Road damage because of high level of water in the canals



Road 1 – Khartoum to Wad Madani

- Large private borrow pit close the road with potential for water storage
- Innovative interventions (fish farms, livestock drinking water, tourism)



Road 2 –Wad Madani to Manage



Road 2 – Wad Madani to Manage

- Bridge



Road 2 – Wad Madani to Manage

- Conflict between farmers upstream and downstream of the roads
- Upstream farmers broke the road to drain their field from flood water



Road 2 – Wad Madani to Manage

- Flood water erodes the roadsides posing roads and communities into risk
- Weak coordination between Electricity road and state.



Road 2 – Wad Madani to Manage

- Small capacity of road drainage (culvert) to hold runoff causes flooding/erosion and loss of farmland



Road 3 –Wad Madani to Gadariff



Road 3 – Wad Madani to Gadaroff

- Rainfed agriculture is practiced around the road – road water can be harvested and used for agriculture during dry season



Road 3 – Wad Madani to Gadaroff

- Water-related road damage



Road 3 – Wad Madani to Gadariff

- Not adequate size and spacing of culvert boxes – 5 big box culverts in 700 m road stretch only at the downstream part



Road 3 – Wad Madani to Gadariff

- Soil erosion and gullies downstream of the road



Road 3 – Wad Madani to Gadariff

- Pastoralist area – huge need for water for livestock



Road 3 – Wad Madani to Gadariff

- Series of ponds for flood water storage upstream of the road (used for livestock drinking water and for domestic purposes of communities around)





Thank you!

For more information visit www.roadsforwater.org
or send an email to adeligianni@metameta.nl