Beyond the PDF

Supporting Decision Making for Resilient Transport

developmentSEED

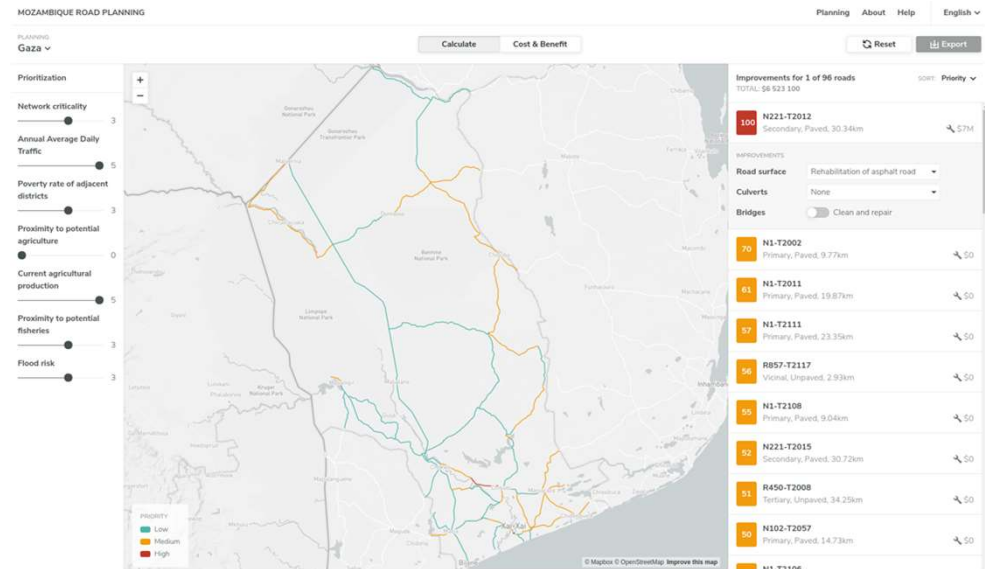# Beyond the PDF

Building tools and models that ...

- ... have open and repeatable science.
- ... users can interact with and tailor to their context.
- ... can be updated as bigger and better data gets collected.

Mozambique

Introduce climate resilience in the investment process:

1. Prioritize
2. Select investment package
3. See cost benefit

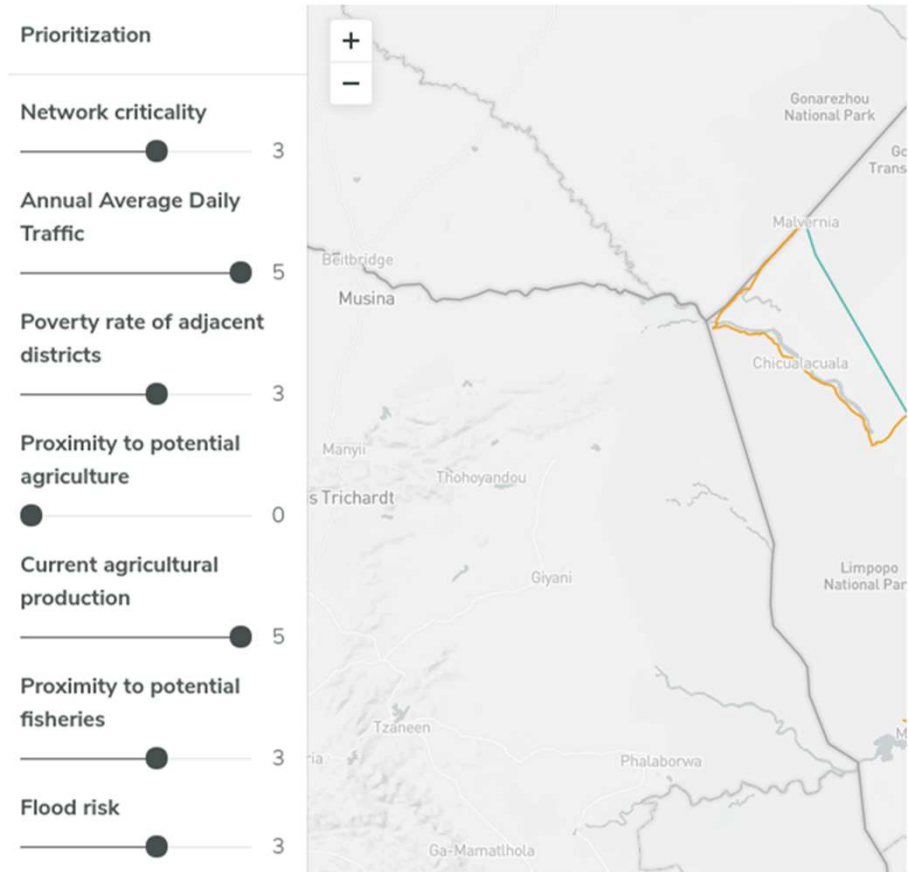https://road-planning.devseed.com/

Prioritization

Users can adjust the weights of the to prioritize road segments based on what's important to them.

Network criticality

Measure redundancy of a segment. Requires road network and Origin Destination pairs.

Steps:

1. Calculate baseline travel time for all OD pairs
2. Remove segment one-by-one and calculate new travel time
3. Compare baseline with disruption

Select investments

Compile the investment package that makes sense to the user.

Cost Benefit Analysis

Four benefits:

1. Decreased user cost
2. Decreased maintenance cost
3. Reduction in flood risk for user
4. Reduction in flood risk for agency

Benefits		Cost	
DECREASED USER COST	$308 105	UPGRADE TO ASPHALT - 3KM	$1 611 500
DECREASED MAINTENANCE COST	$-118 172	TOTAL	$1 611 500
REDUCTION IN FLOOD RISK FOR USERS	$0		
REDUCTION IN FLOOD RISK FOR ANE	$0		
TOTAL	$189 933		
NET BENEFIT	$-1 421 567		

What's next

1. Replicate this in other countries
2. Provide users with more control over underlying assumptions
3. Sensitivity analysis

Want to know more?

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