Kiribati Road Rehabilitation Project

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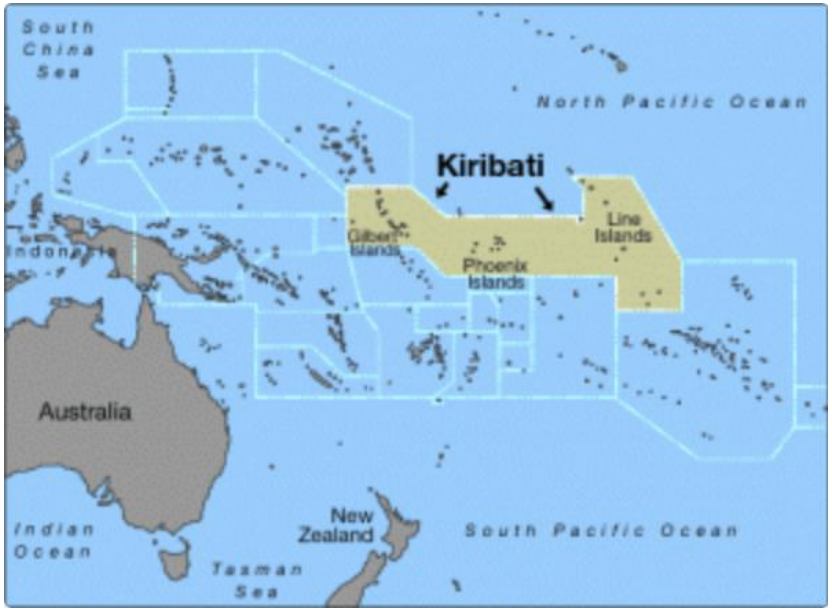
A few words on Kiribati



- One of the most remote and dispersed countries in the world.
- 33 atolls and reef islands, total land area of 726 km^2 scattered over an ocean area of 3.5 million km^2.
- Fragile state because of its geography and the effects of climate change (sea level rise, storm surge, coastal erosion)
- Population of 110,000 (44 % in South Tarawa)
- South Tarawa : highest incidence of basic needs poverty in Kiribati: 24.2 % of the population

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The road in 2011

- Communities linked by a single main sealed road and four causeways
- Ribbon development along the road
- Pot holes, cracks, and inadequate drainage
- Low maintenance capacity, limited funding
- Average travel speed of 20 km/h.
- Potholes and pooled water presented health risks from mosquito-borne diseases.
- In the dry periods, dust from the road led to pulmonary diseases
- No major civil works donor-funded projects in Kiribati prior to KRRP.

Scope of Works and costs

- Rehabilitation of 32.7 km of non-rural roads consisting of : main road, airport road, feeder roads.
- Rehabilitation of 5.8 km of rural roads
- Road Safety Improvements
- Technical Assistance (Road Safety)
- Supervision Consulting Services

	US$m
IDA (WB)	25.0
Australia through PRIF	18.7
ADB	22.4
Borrower	6.8
Total Project Cost	**72.9**

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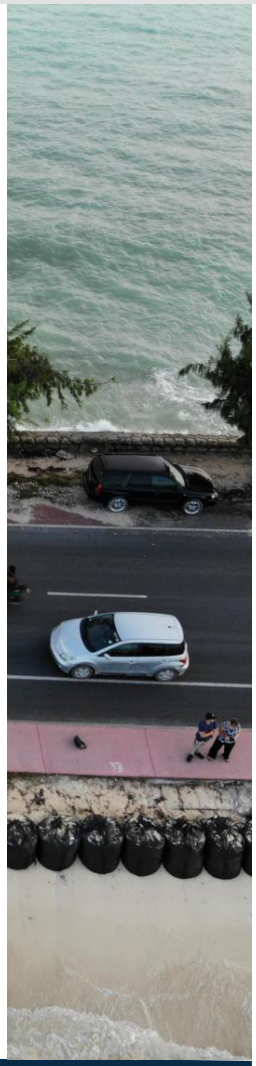
Results and Outcomes

- The targets for rural and non-rural roads rehabilitation were achieved.
- Average travel speed increased from 20km/h to 31km/h at the end of the project, within acceptable road safety norms.
- Significant improvement in travel times.
- Reduced vehicle operating costs and vehicle damages.
- Vulnerable users (pedestrians, cyclists) are provided better protection through footpaths and traffic calming measures.
- Reduction in dust levels, more stalls along the road
- More reliable and frequent public transport services (much quicker and comfortable rides and shorter wait less at bus stops), increased profitability for bus operators

Ex-post Economic Rate of Return of 17.4%
Half the country's population are direct beneficiaries



Before / After

Before / After

Before / After

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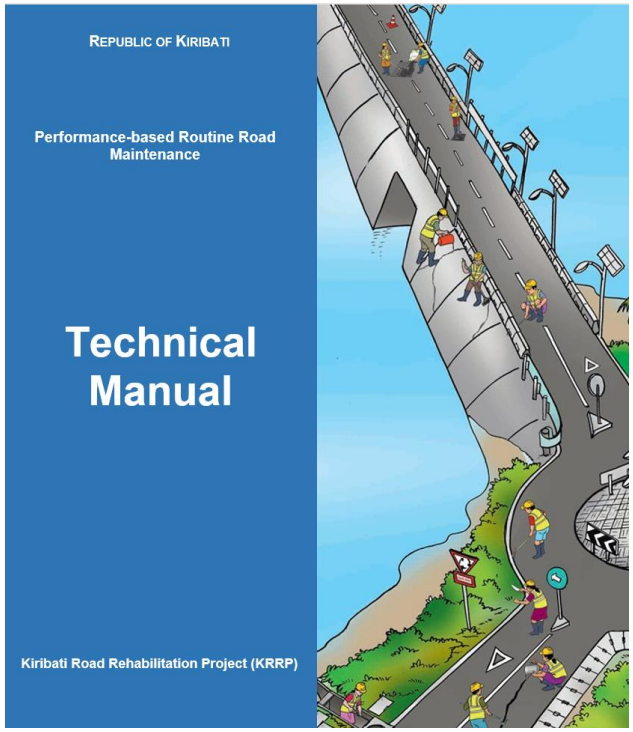
Road Safety

- 115 speed bumps, 181 dedicated bus stops with shelters, 56.8km of footpaths, improved drainage, road signs and street lights.
- Road Safety Action Plan completed by March 2014, but implementation very limited since then
- Road Safety Legislation enacted by parliament into law in November 2017
- The NZ and Queensland Police Service (QPS) conducted training workshops on the use of breathalyzers and speed radars, and equipment was provided

Challenges ahead: Maintenance



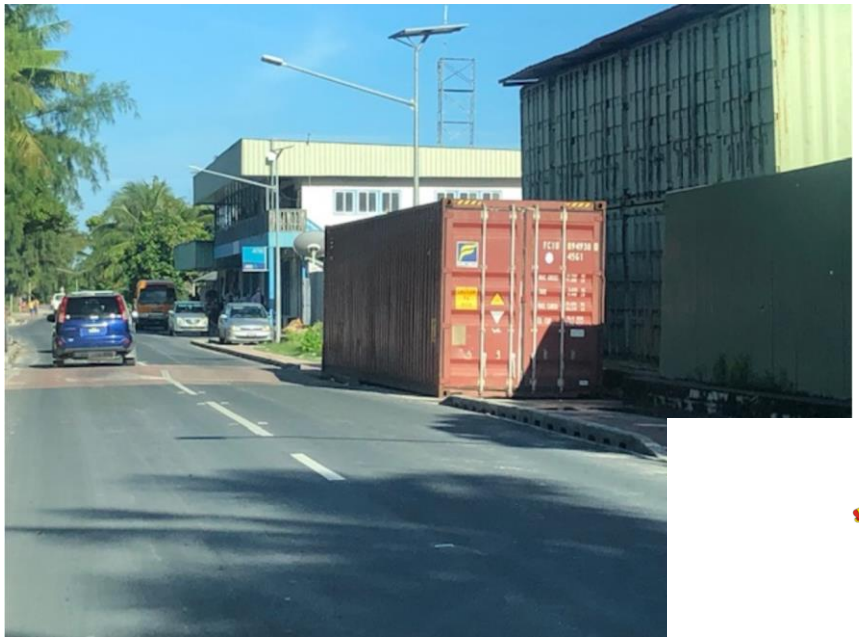
- Technical assistance provided to tender performance-based routine maintenance contracts to local contractors
- Pilot maintenance contracts during the Defect Liability Period proved successful
- Unfortunately, new tender was suspended and road remained without maintenance for about 6 months until June 2019

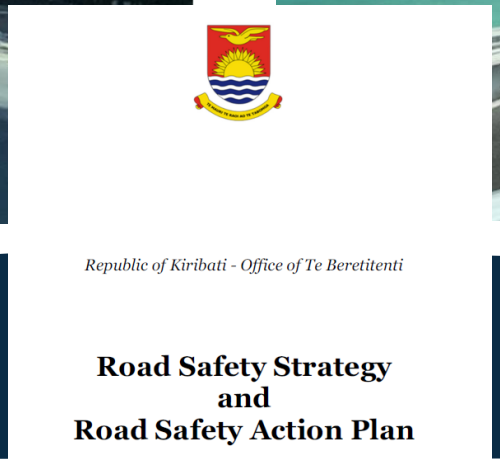
Challenges ahead: Resilience

- Coastal hazards (shoreline change and coastal flooding) affect transport infrastructure
- Traditional response has been the construction of seawalls with variable results
- Magnitude of sea-level rise expected to be too great for current approaches to be effective or affordable other than for fixed, “unmovable” infrastructure (road, airport)
- Need to move away from low-cost, poorly constructed seawalls that are prone to failure; long-term coastal security won’t come at a low cost…

Challenges ahead: Road Safety

- Containers on sidewalks, unsafe behaviors, defective street lights, speeding…
- No or little ownership of the Road Safety Action Plan
- Poor statistics to analyze and monitor accidents





Lessons Learned

- **Factoring in the impact of Climate Change when selecting pavements**: high uncertainty around future maintenance as well as around the impact of climate change on pavement performance led to select a high standard asphaltic concrete pavement, not justified by the expected levels of traffic alone.
- **In remote places, higher cost contingencies need to be accounted for**: remoteness has a significant and often unpredictable impact on costs. At the time of bidding for the road works, the contractors priced the remoteness and risk of the project very differently (highest bid 30% higher than lowest), as evidenced by the bids.
- **Move towards a mentoring technical assistance support when capacity is severely constrained** in addition to more realistic timelines, capacity building, support from country-based int'l technical assistant and more frequent donors' missions
- **Expect the unexpected**: there were multiple unexpected complexities (such as unmapped underground services; delays in importing materials, etc.) that emerged throughout implementation

That's all folks!

Vinaka!

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