



ROAD DEVELOPMENT
— CORPORATION LIMITED —

JICA ROAD MAINTENANCE 2025

Inception Report



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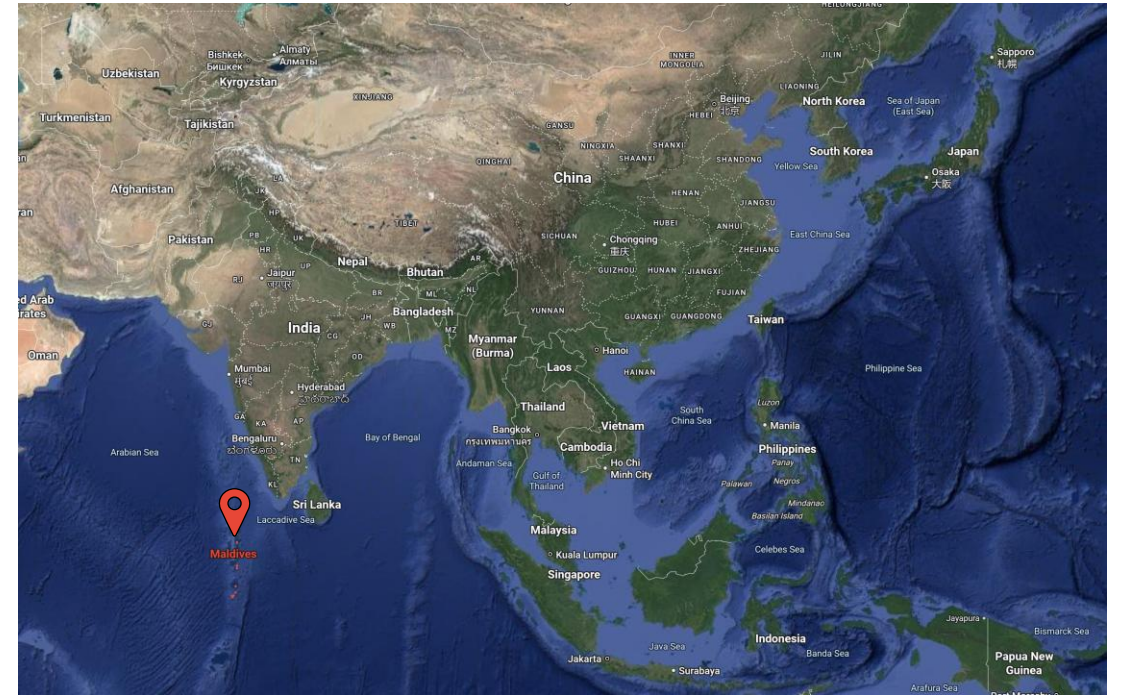
Engineer, Road Development Corporation Ltd. (RDC)

Republic of Maldives

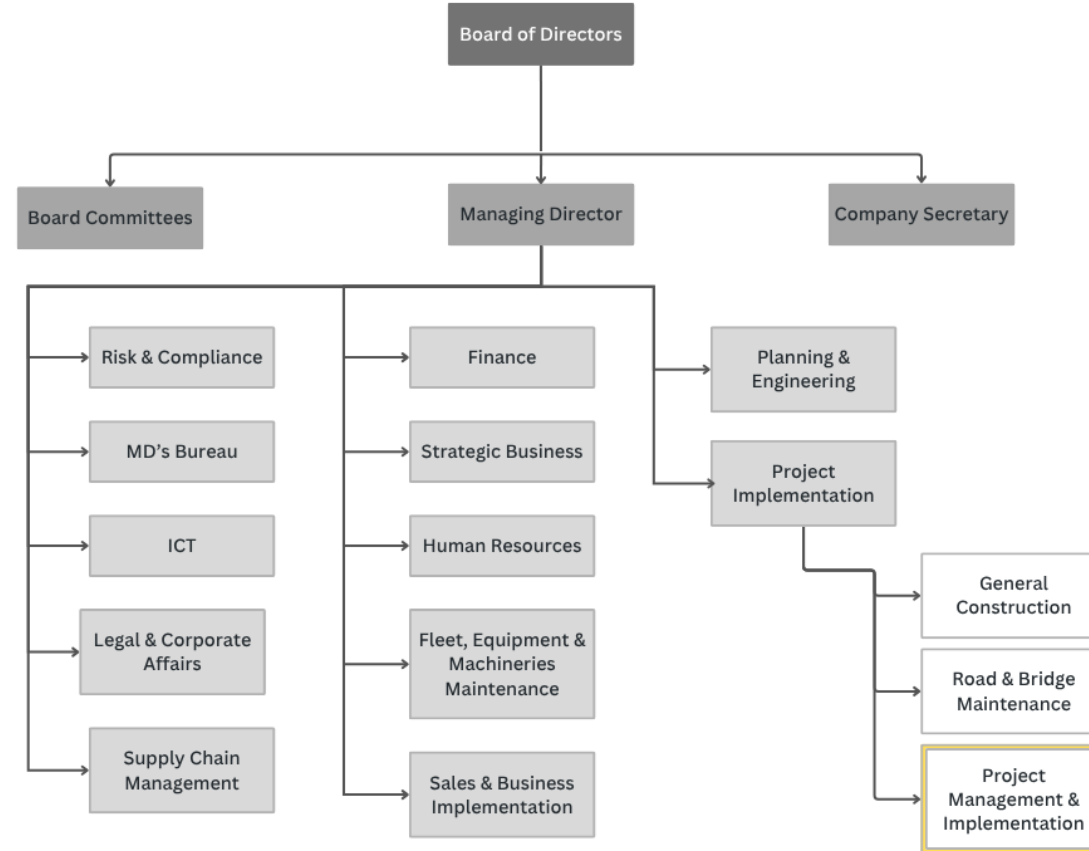
Organisation

Road Development Corporation Ltd. (RDC)

- State Owned Enterprise (SOE)
- Responsible for delivering infrastructure projects contracted by Maldivian government
- Mainly contracted for Design & Build of new roads projects in Maldivian islands. Scope includes:
 - Establishment of utility network and sidewalks (including paving and installation of curbs)
 - Establishment of stormwater management system – using gravity system for stormwater runoff collection and a pumping system for discharging into the sea
 - Paving of carriageway – asphalt or concrete paver blocks depending on the width of the road and stakeholder consultation
 - Installation of road safety components such as road marking & signage, speed breakers (asphalt) and streetlights
 - Rarely resurfacing works for an island where roads were previously developed
 - Road maintenance during the defect liability period

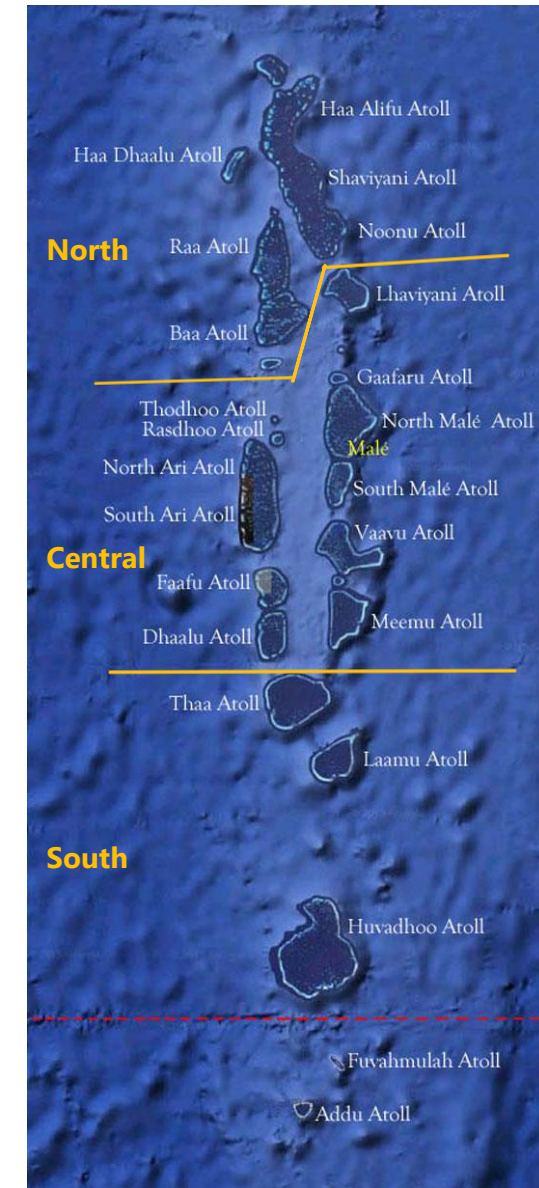


Organisation Chart



Present Post

- Engineer for Central Region projects
- Based in Male'
- Responsibilities include:
 - Assisting quantity surveyors with project take-offs
 - Aid and assist materials engineer with quality control for materials and project works
 - Preparing Terms of Reference for construction materials and subcontracting construction works
 - Coordinating traffic surveys to aid road pavement design processes
 - Setting up systems to improve processes, documentation and track project data



Road/Bridge Maintenance in Maldives

- Legal requirements for road / bridge administration
 - Local government authorities such as island councils and city councils are responsible for the routine maintenance of roads while Ministry of Construction, Housing and Infrastructure (MCHI) are responsible for resurfacing and road construction projects
 - MCHI is responsible for bridge maintenance



Sinamale' Bridge- first inter-island bridge in Maldives

Road/Bridge Maintenance in Maldives

- Road standards & ToR for Road maintenance
 - MCHI specifies that British Standard (BS) for most works and that BS will apply for works that has no specified standard in the technical specifications for road construction projects.
 - Works for sub base and base course layers are to comply with Specification for Highway Works : 1986 Department of Transport
 - There is no set standard for road maintenance in Maldives currently. Only guidelines given by the MCHI during the tendering stage



Asphalt laying in Ameen Magu 2022. This was part of the redevelopment of roads in the capital, Male'

Road/Bridge Maintenance in Maldives

- Road Budget
 - As most roads in Maldives are undeveloped, a small budget is allocated for road maintenance.
 - Budget for new roads construction has been steadily increasing over the last few years as citizens have voiced concerns about road safety especially during the rainy seasons.
 - RDC has been contracted for 69 D&B new road projects (27 projects signed in 2025).

Road Construction (MVR)			
Year	Budgeted	Revised	Actual
2020	N/A	N/A	495,742,247.00
2021	N/A	1,017,320,523.00	745,171,488.00
2022	1,007,919,491.00	2,414,621,652.00	2,576,942,725.00
2023	1,271,164,770.00	2,012,960,832.00	2,395,938,644.00
2024	1,664,856,267.00	1,848,101,997.00	N/A
2025	2,088,253,095.00	N/A	N/A

Road & Bridge Maintenance (MVR)			
Year	Budgeted	Revised	Actual
2020	N/A	N/A	920,892.00
2021	N/A	459,000.00	324,527.00
2022	9,000,000.00	1,166,944.00	929,617.00
2023	8,700,000.00	140,122.00	135,624.00
2024	8,000,000.00	2,291,252.00	N/A
2025	1,600,000.00	N/A	N/A

Road/Bridge Maintenance in Maldives

- Existing programs for road/bridge maintenance
 - Routine maintenance of roads are local councils' responsibility. However, it is not clear if there is a routine plan for maintenance as capacity of each council varies.
 - Maintenance of Sinamale' Bridge is outsourced to a foreign company for 3 years and funded by a free grant by the Chinese government. Areas of focus are on road engineering, safety systems, landscaping, and overall bridge maintenance.
 - RDC has one ongoing road maintenance contract: Operation and Maintenance of Male' Stormwater Management System. Performance based contract signed for a year.
 - Cleaning of stormwater collection and conveyance system twice a year
 - Cleaning/replacement of manhole covers, catchpit covers and other chamber covers
 - Cleaning and maintenance done in segments
 - Only few roads are included in the scope of work under this contract
 - RDC has to maintain roads for the contracted projects during the defect liability period.

Road/Bridge Maintenance in Maldives

- Road Statistics
 - According to Asian Transport Observatory organization, 2 wheelers dominate the majority of vehicles in Maldives.
 - Bicycles and motorcycles dominate the vehicle volume in sub-urban areas. However, in urban areas like Greater Male' and Addu City, other vehicles such as cars, pickups, and heavier vehicles such as dump trucks are greater in number compared to the sub-urban areas.
 - Such traffic survey studies have not been conducted thoroughly as surveys are conducted manually due to the lack of specialized equipment.

Vehicle share by type (2022)



(ATO, 2024)

Road/Bridge Maintenance in Maldives

- Road Statistics

- Asphalt roads are made from hot mix asphalt laid on an aggregate base course for older projects.
- Newly signed projects are for asphalt roads made from hot mix asphalt laid on compacted subgrade.
- However, depending on stakeholder consultations and the width of the roads, narrow roads have concrete paver block carriageways.
- This data is limited as it was obtained from the 58 projects contracted to RDC. This type of data isn't properly compiled in Maldives and is a weakness that needs to be addressed.

Total number of road projects	58
Average road length proposed for projects (m)	4,096.70
Average road width (m)	7.33
Maximum road width (m)	30.00
Minimum road width (m)	1.50
Average carriageway width (m)	4.98
Maximum carriageway width (m)	19.00
Minimum carriageway width (m)	0.70
% asphalt roads	96%
% paved roads	4%

Maldivian Construction Industry

- Procurement of construction materials
 - All construction materials are imported including cement, aggregates, asphalt materials
 - Materials like asphalt and raw materials for concrete must often be shipped to individual islands, increasing cost and complexity in logistics
- Level of domestic construction companies
 - Most road projects are contracted to SOEs such as RDC and Maldives Transport and Contracting Company (MTCC).
 - Some components of road projects such as asphalting works are subcontracted to foreign companies due to lack of asphalting plants, heavy vehicles and human resources
 - However, major projects such as bridges and link roads have been contracted to foreign companies due to the lack of specific technical expertise and capacity within the domestic construction industry.

Individual Focus

- Technical and Administrative Issues faced within RDC
 - Inadequate traffic data collection systems – Traffic volume and vehicle-type data are collected manually. However, due to lack of human resources and equipment, surveys lack the accuracy needed to understand vehicle loading on the roads.
 - Reactive maintenance is prioritised over preventive maintenance due to lack of road condition monitoring, allocation of budget and human resources.
 - Due to the absence of a road asset management system and lack of a priority system based on road condition, maintenance is done after complaints or visible failures instead of routine inspections.
 - Limited number of trained engineers, inspectors and technicians combined with a lack of capacity building programs have stunted improving road maintenance processes in RDC.

Individual Focus

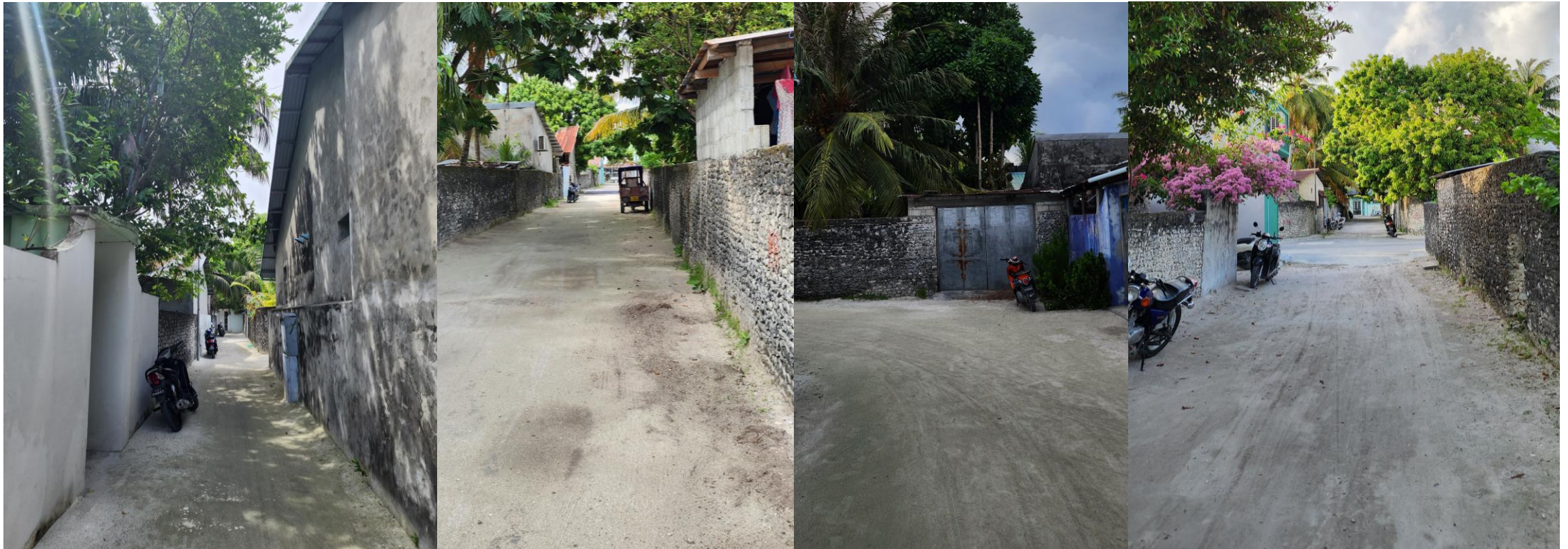
- Expectation to KCCP for solving the problems
 - Understand how a road asset management system works and how it is implemented within an organisation
 - Understand how road conditions are monitored, assessed and evaluated for prioritising maintenance works
 - Understand how data is collected for a road asset database
 - Tools, apps and software used for data collection
 - Frequency of sampling, organisation of data
 - Types of assets monitored and how they are monitored
 - Understand how maintenance scheduling and budgeting are done based on the manuals and regulations.
 - Understand how maintenance and repair history affects future maintenance scheduling and budgeting
 - Understand how training programs are set up for acquiring the skills required for road monitoring and maintenance

Individual Focus

- Proposed Themes for Action Plan
 - Road Asset Management System – understand what data needs to be collected, how it can be collected and frequency of updating to set up a road asset management system
 - Road Condition Monitoring – understand how this will aid and inform maintenance schedule and budgeting, and how to set up such a process
 - Maintenance scheduling and budgeting – how to evaluate and prioritise which maintenance works to proceed on a limited budget and focus more on preventive maintenance rather than reactive
 - Maintenance and inspection history – how these can be organised in an accessible way so that even when handed over to another party/organisation, this can be used to inform decisions regarding repair and maintenance work.

Roads in Maldives

For most islands, this is the natural state of roads. During rainy season, it's muddy and slippery. This has been the cause of most accidents, for both drivers and pedestrians, making it hard to travel within the island.





Current state of most of the roads in the capital, Malé. These roads were first paved in 1990s with concrete paver blocks. Since then, Ameeney Magu and large section of Boduthakurufaanu Magu has been redeveloped and paved with asphalt.



The 2 existing bridges in Maldives: Sinamale' bridge (above) located in Male' and Hankede bridge (below) located in Addu City.



The 2 existing inter-island roads (also known as link roads): Laamu Link Road (above) and Addu link Road (below).

THANK YOU

