



# LIBERIA TRANSPORT PORTFOLIO

Asset Management Approach

**Transport and ICT**  
**Global Practice**  
Smart Connections for All

Kulwinder Singh Rao  
Senior Highway Engineer  
February 5, 2016

# Liberia

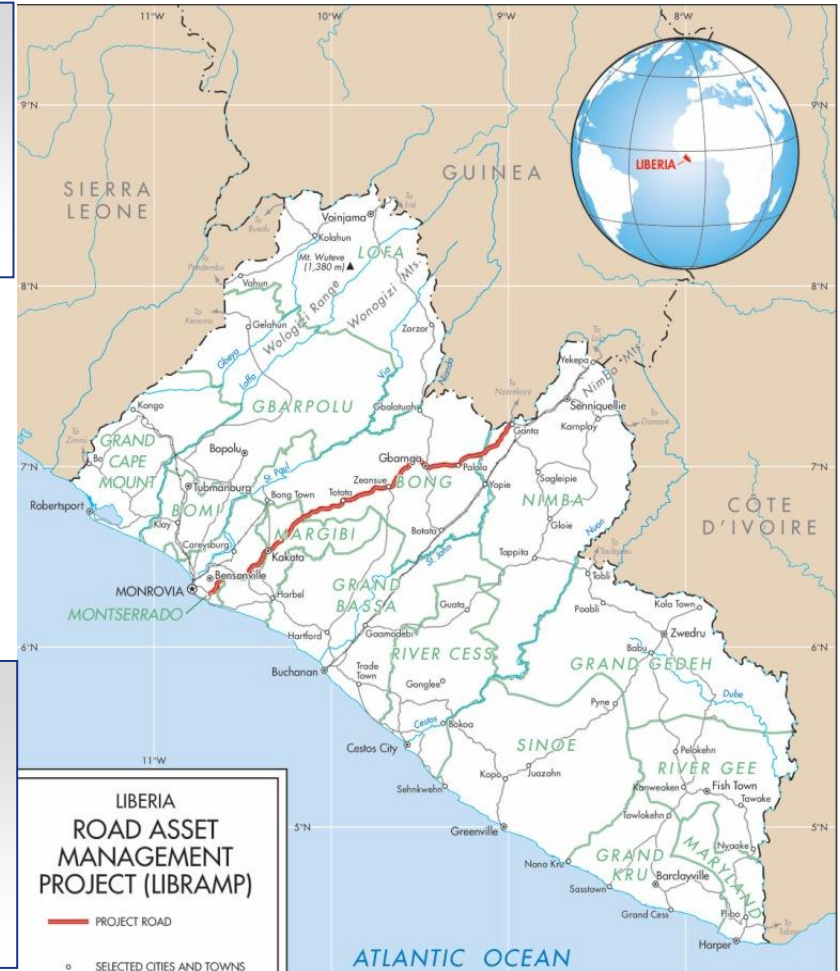
## CLIMATE

- Tropical ave. temp:  $\sim 27^{\circ}$  C
- Dry season: November to April
- Wet season: May to October
- Ave. humidity: 78%
- Annual rainfall: 1,600 to 4,000 mm



## GEOTECHNICAL

- Reddish and yellow residual soils
- Silty and sandy clayey soils; medium to high plasticity.
- Estimated average CBR of 6,0
- Average resilient modulus of 60Mpa.



# Major Civil Works in Liberia Utilizing Performance-Based Contracting

❖	Red Light to Gbanga Road	US\$ 166 Million
❖	Gbanga to Ganta Road	US\$ 70 Million
❖	Cotton Tree Buchanan Road	US\$ 50 Million
❖	Monrovia City Streets	US\$ 19.6 Million
❖	Vai Town Bridge	US\$ 18.1 Million
❖	Caldwell Bridge	US\$ 8.3 Million
❖	Fuel Unloading Facility	US\$ 11.3 Million

**Plus Monrovia Port Concession (Private Investment US\$ 120 million)**

**US\$ 450 million+ in a  
Post-Conflict Fragile State**

# Liberia Key features

## Long Term Contracts (DBMOT methodology)

### *Road Segment:*

**Monrovia to Gbarnga Lot 1**

**Gbarnga to Ganta Lot 2**

Length (KM)	Rehabilitation Period (including 6 months mobilization)	Maintenance period (after Rehabilitation period)	Periodic maintenance
180	36 months	7 years	At the 8 <sup>th</sup> year of the project
69	18 months	8.5 years	At the 8 <sup>th</sup> year of the project

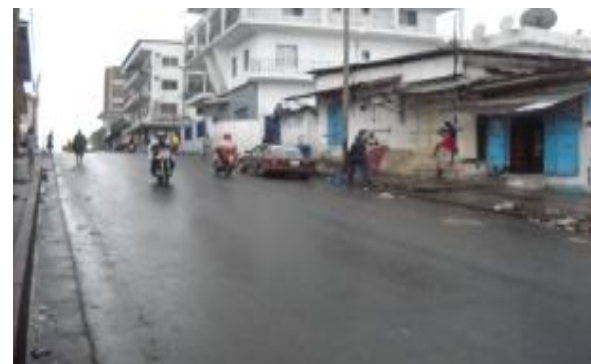
**Duration of 10 years with handing over under agreed conditions**

# Results ...

Before



After



**Monrovia City Streets**



**Cotton Tree To Buchanan Road**

# Results ....

## Before



## After



**Vai Town Bridge in Monrovia**



**Red Light - Ganta - Guinea Border Road**