

# ENVIRONMENTALLY SUSTAINABLE TRANSPORT (EST) FORUM IN ASIA

2-5 OCTOBER 2018, ULAANBAATAR,  
MONGOLIA



*PRESENTATION OF MALDIVES*



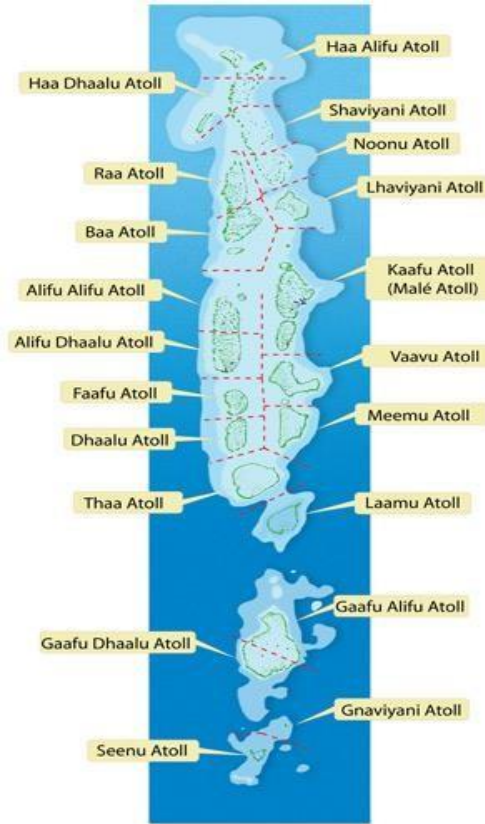
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# **MALDIVES PROFILE**

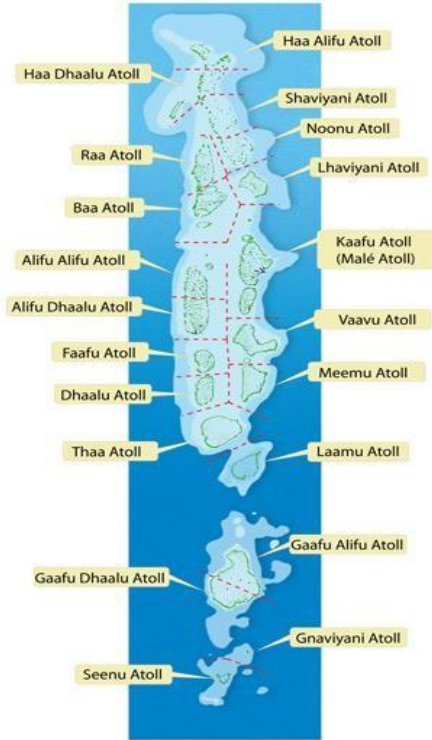
# GEOGRAPHY



- The Republic of Maldives is a **Small Island Developing State (SIDS)** located in the Indian Ocean.

- Stretching over 8000 km, our country is made up of 26 natural atolls with 1,292 islands
- Maldives is **1 % LAND** and **99% SEA**
- We have 20 administrative atolls  
194 of the islands are inhabited.

# A TYPICAL ATOLL



## MEEMU ATOLL



## LAAMU ATOLL



## ADDU ATOLL



# ECONOMY

- The **TOURISM** and **FISHERIES** industries make up 40 % of the GDP, the majority of it in exports and employment.
- Maldives relies almost entirely on **IMPORTED FOSSIL FUELS** for energy needs.



# POPULATION DISTRIBUTION

- Maldives has a resident population of about 400,000 (2014 census) which is mostly concentrated (about 38%) in the **Greater Male' Region**, specifically in the capital, **MALE' CITY** and the reclaimed island of **HULHUMALE'** and the rest distributed in the other islands.



# OTHER CITIES

- **ADDU CITY** - Most islands are connected through Addu Link Road





# OTHER CITIES

- **FUVAHMULAH CITY** is unique in that it is a single geographic atoll and island



# **TRANSPORTATION IN MALDIVES**

# TRANSPORTATION IN MALDIVES

- Maldives depends heavily on **SEA**, **LAND** and **AIR** transportation due to its geographical distribution.
- Transport sector alone accounts for 31% of overall energy consumption.
- Transport sector in Maldives is expected to account for 90,000 tons of CO<sub>2</sub> emissions by 2020\* (ADB, 2012) as motorization and urbanization continue to rise.

# SEA & LAND TRANSPORT

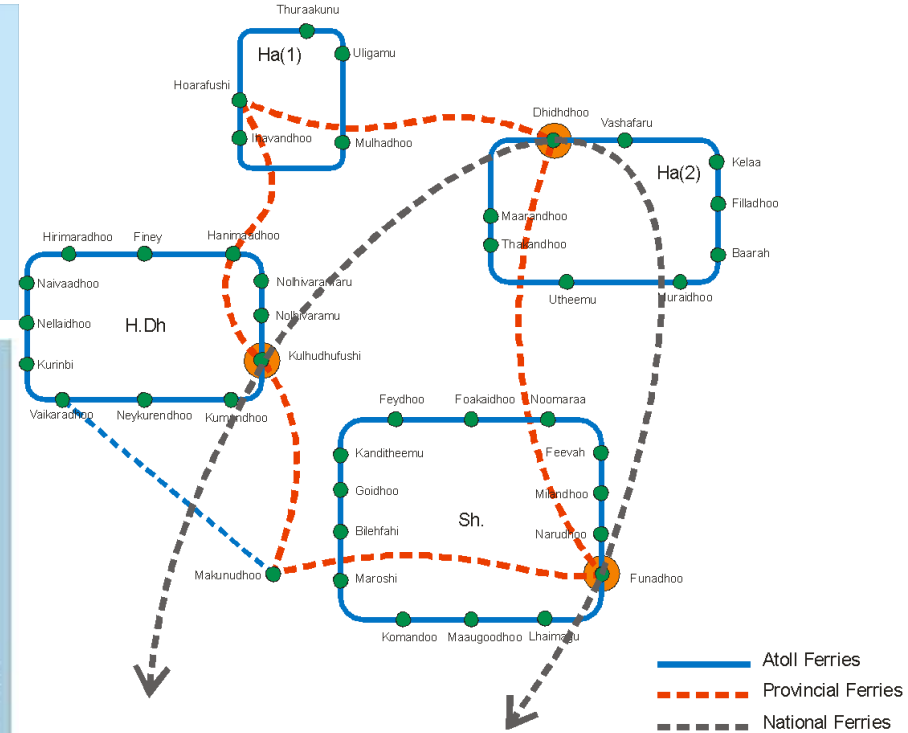
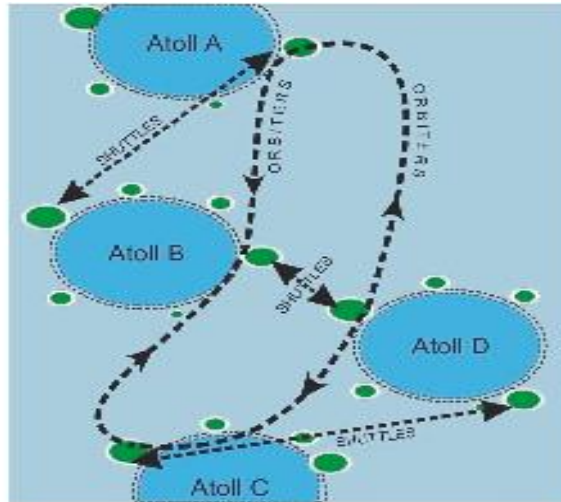
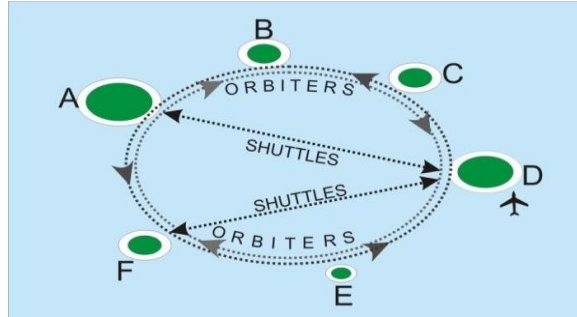
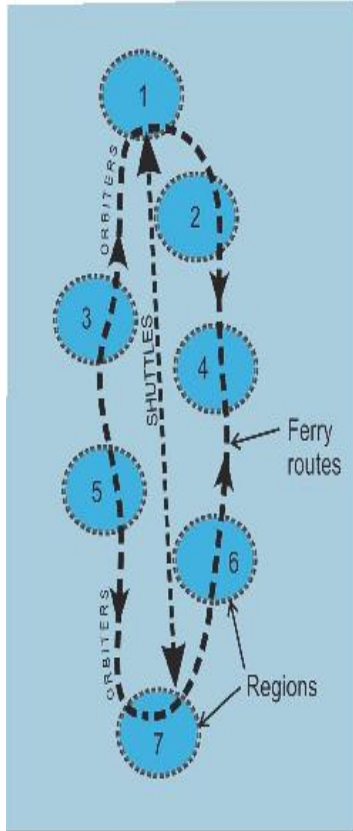
- **Ferry boats, speed launches, cargo boats and landing crafts are used in sea transport**



- **Motorcycles, cars, public taxis, logistics vehicles, public transport buses, electric vehicles and bicycles are used in land transport**



# PUBLIC TRANSPORTATION NETWORK



# PUBLIC TRANSPORTATION NETWORK

## Hulhumale' Public Bus Services

## Hulhumale'-Hulhule'-Male' Public Bus Services

SOUTH REGION



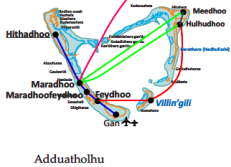
## Addu Public Bus Services

## Laamu Public Bus Services



Foamulah  
(Gnaviyani Atoll)  
Fuvahmulaku  
**705 Fuvahmulaku**

- 701 Fuvahmulaku - Feydhoo**
- 702 Maradhoo - Hulhumeedhoo**
- 703 Gan - Hithadhoo (BUS)**
- 704 Hulhudhoo - Meedhoo (BUS)**
- 706 Feydhoo - Hulhudhoo**



# AIR TRANSPORT

- We have total 12 airports distributed within the country with 4 international airports. Velana International Airport of the Greater Male' Region is the main international airport in Maldives

- Velanaa International Airport
- Gan International Airport
- Hanimaadhoo International Airport
- Maamigili International Airport
- Dharavandhoo Airport
- Fuvahmulah Airport
- Ifuru Airport
- Kaadehdhoo Airport
- Kadhdhoo Airport
- Kooddoo Airport
- Kudahuvadhoo Airport
- Thimarafushi Airport



# AIR TRANSPORT

- Velana International Airport in the Greater Male' Region is the main International airport in Maldives
- Scheduled services from Male' to all domestic airports
- Seaplanes travel from Male' to Resorts, and it is the most preferred method for tourist transfer
- Government has a policy of establishing AIR transfer services within 20-30 MINUTES distance from EACH INHABITED ISLAND





**WORK TOWARDS A  
SUSTAINABLE  
TRANSPORTATION  
MODEL**

# GENERAL MEASURES

- Controlled vehicle speed (less than 30 km/h) on all roads except a few.
- Works to promote environment friendly vehicles/vessels.
  - Increased import duty rates for motorized vehicles imported to the country. (100 –200%)
  - Zero duty rates for import of electrically operated vehicles
- Almost all the resorts and some islands especially islands involved in local tourism use electrically operated vehicles.



# GENERAL MEASURES

- Public Transport Network established with sea and land links which needs to be improved for more efficiency, reliability and environmental sustainability.
- Some of the roads in capital island declared as pedestrian-only zones.
- No-vehicle days declared for some of the public holidays.

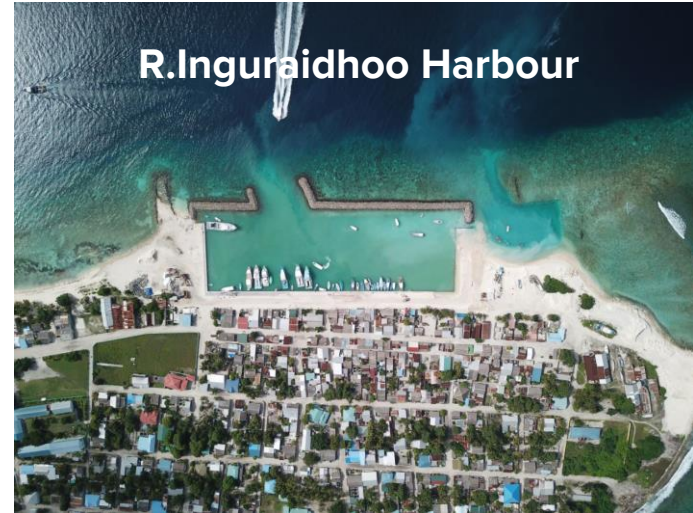


# K.Villingili – Pedestrian Friendly Island



# FROM RECENTLY ACCOMPLISHED PROJECTS..

- Some of the recently completed **HARBOUR PROJECTS**
  - HDh. Nolvivaranfaru Harbour
  - R.Inguraidhoo Harbour
  - R. Hulhudhuffaaru Harbour
  - Sh.Maaungoodhoo Harbour
  - N.Fohdhoo Jetty



# FROM RECENTLY ACCOMPLISHED PROJECTS..

- Some of the recently completed **ROAD PROJECTS**
  - HDh. Kulhudhuffushi Road - 5.81 km
  - HA.Dhihdhoo Road - 4.54 km
  - ADh. Mahibadhoo Road - 3 km



HDh. Kulhudhuffushi Road



# FROM RECENTLY ACCOMPLISHED PROJECTS..

## ● L. Fonadhoo Link Road Project

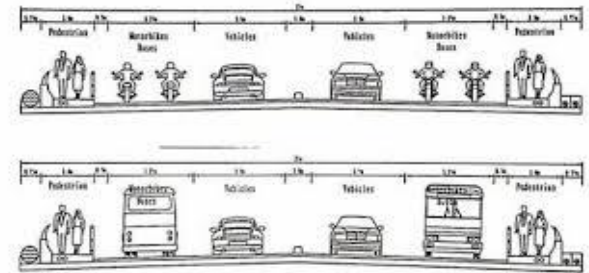
- Total 17 km in length and connects Gan, Maandhoo (industrial island), Kadhdhoo, Fonadhoo and Gaadhoo
- This is a regional hub that has been developed by the government as a population center through population consolidation
- Populations of several islands have been voluntarily relocated to Fonadhoo and Gan



# FROM RECENTLY ACCOMPLISHED PROJECTS..

- **China-Maldives Friendship Bridge Project (Sinamale' Bridge)**

- Connected the Capital City with Airport and Hulhumale'.
- Will reduce the difficulties in transportation between Male' and Hulhumale' in bad weather and increase efficiency of public transport through bus service
- Greater Male' Public Transport has commenced with the link





# FROM RECENTLY ACCOMPLISHED PROJECTS..

## ● Male' Road Upgrading Project

- Objectives of the project include enhancing the usability of the roads by improving the road conditions; make it more pedestrian friendly; and minimize drainage issues of the roads
- Completed Male' Ring Road Phase I
- Completed Majeedhee Magu (the central road of Male')



# FROM ONGOING PROJECTS AND PROGRAMMES..

## ● Hulhumale' Phase II Developments

- Developed based on a master plan.
- Transportation will be based on a Transport Master plan of Hulhumale
- Will include more pedestrian-friendly roads and also dedicated bicycle lanes.
- Buses will be used for the public transport network



# FROM ONGOING PROJECTS AND PROGRAMMES..

- Some ongoing **AIRPORT PROJECTS**

- HDh. Kulhudhuffushi Airport
- Sh. Funadhoo Airport
- N. Maafaru Airport
- GDh. Maavarulu Airport



# FROM PLANNED PROJECTS & PROGRAMMES..

- **Greater Male' Connectivity Project**

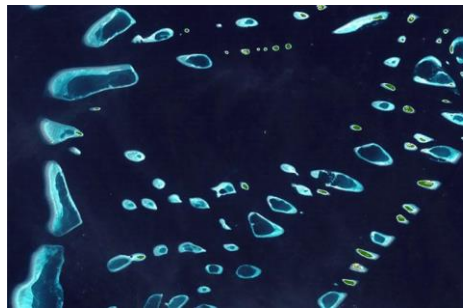
- Hulhumale'-Hulhule'- Male' connection is completed
- Planning to undertake Male'-Villingili-Gulhifalhu-Thilafushi connection



# CHALLENGES

# GENERAL CHALLENGES FOR SUSTAINABLE DEVELOPMENT

- Climate Change
- Geographic Dispersion
- Economies of scale
- Sea-locked nature
- Rapid Urbanisation



# CHALLENGES IN ENVIRONMENTAL SUSTAINABILITY OF TRANSPORT

- **Research and development barrier;** need studies on the local context to tailor policies, plans and programmes accordingly.
- **Technical, technological and financial barrier;** limited resources to undertake necessary research and development
- **Institutional capacity barrier;** need to strengthen the institutional framework/ inter and intra coordination and communication of the institutions/ limited resources

# CHALLENGES IN ENVIRONMENTAL SUSTAINABILITY OF TRANSPORT

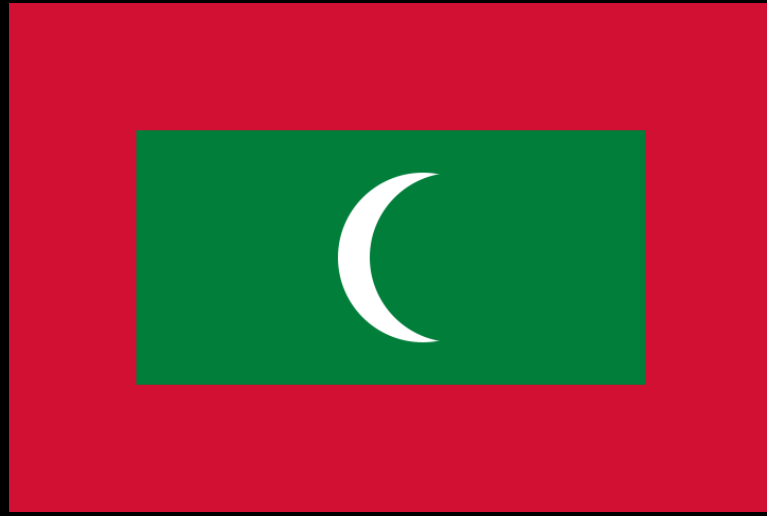
- **Policy and planning barrier;** lack of comprehensive laws on integrated, sustainable and low-emissions transport.
- **Investment and market barrier;** limited opportunities to access finance or create enabling partnerships for investment/ limited financial incentives such as grants and concessional financing schemes
- **Awareness and outreach barrier;** regarding the opportunities and scope for sustainable transport in the local context; within government, businesses and general public



# CHALLENGES IN ENVIRONMENTAL SUSTAINABILITY OF TRANSPORT

- Increasing number of motorized vehicles
- Managing parking spaces
- Creating pedestrian friendly roads and bicycle lanes due to small and unplanned nature of islands
- Drainage issues of roads- reduces usability of roads
- Tailoring bus services to small and congested areas such as Male' City.





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**THANK YOU !**