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COUNTRY PRESENTATION

MALDIVES

Captain Mohamed Inayath

Director, Programs

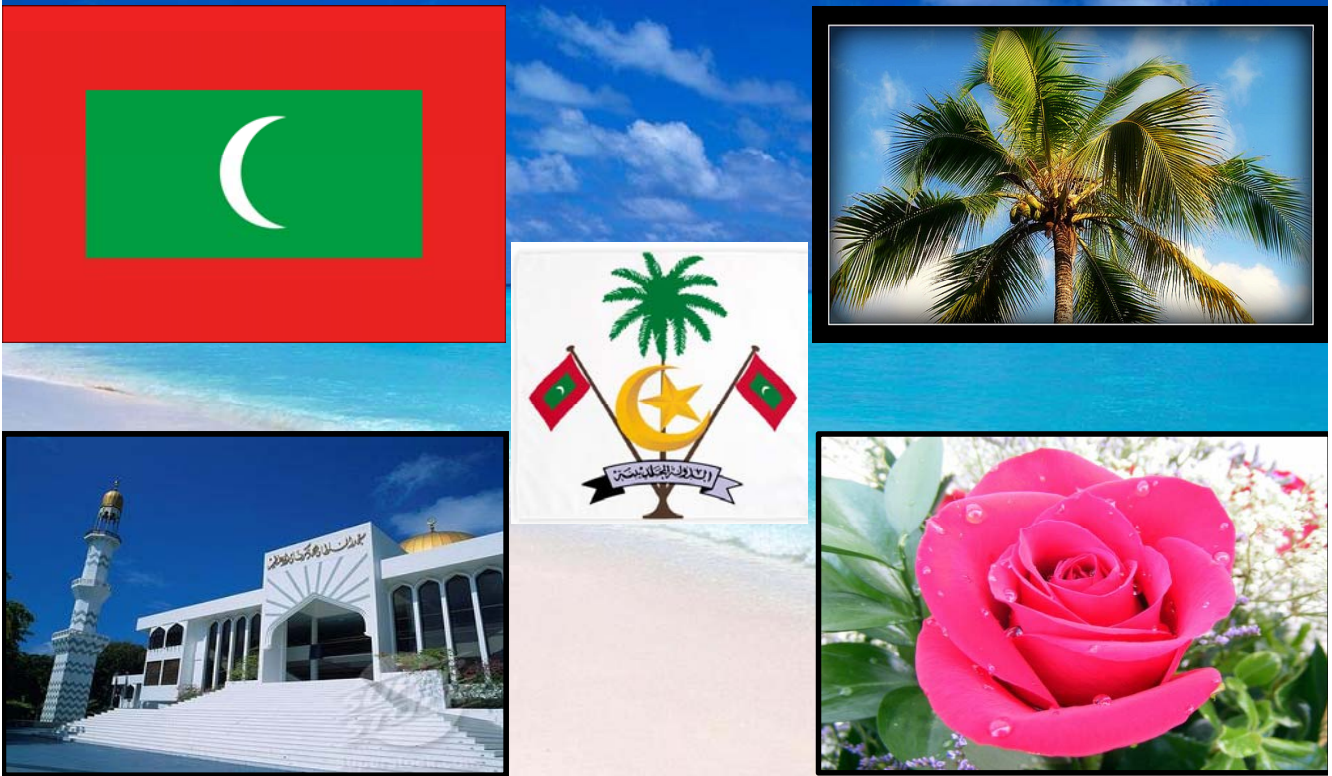
Early Warning and Emergency Response
National Disaster Management Authority

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Outline

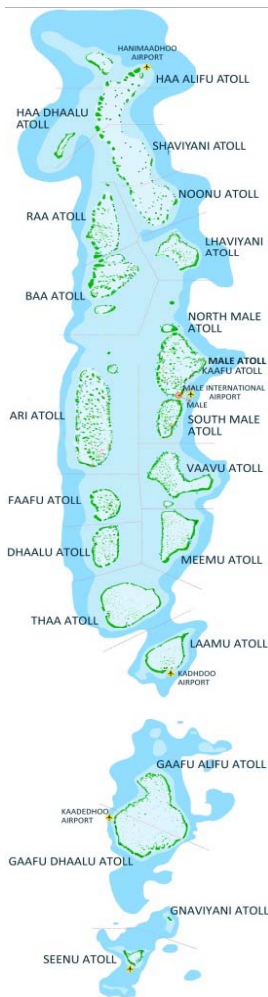
- General Information
- Geography
- Climate and Weather
- Demography
- Economy
- Governance
- Risk Profile
- Disaster History
- Disaster Management System
- Challenges in DM and Way Forward

General Information



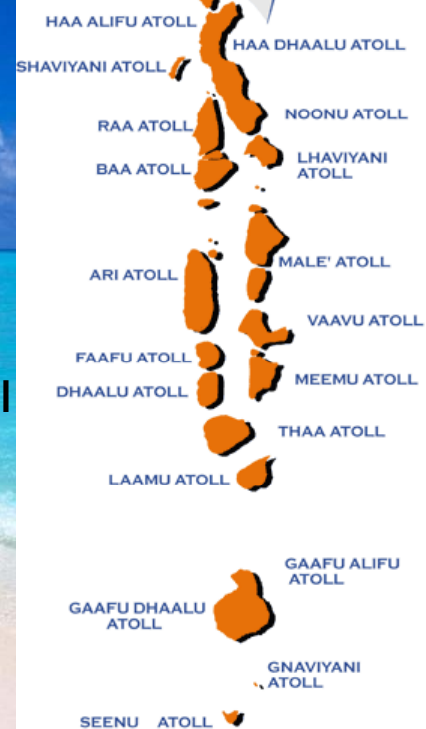
- Ethnicity: South Indians, Sinhalese, and Arabs
- Religion: Islam
- Language: Dhivehi(English is spoken by majority)
- Script: Thaana

Location



Geography

- Official name: Republic of Maldives
- Capital: Male'
- Division: 1192 islands into 26 natural atolls
- Inhabited islands: 188,
- Land area: 298 square kilometers
- Exclusive economic zone: 200 nautical miles
- Largest Island: 6 square kilometers
- Highest elevation: 2.4 meters
- Terrain: Flat, coastal vegetation and white sandy beaches.





National Capital

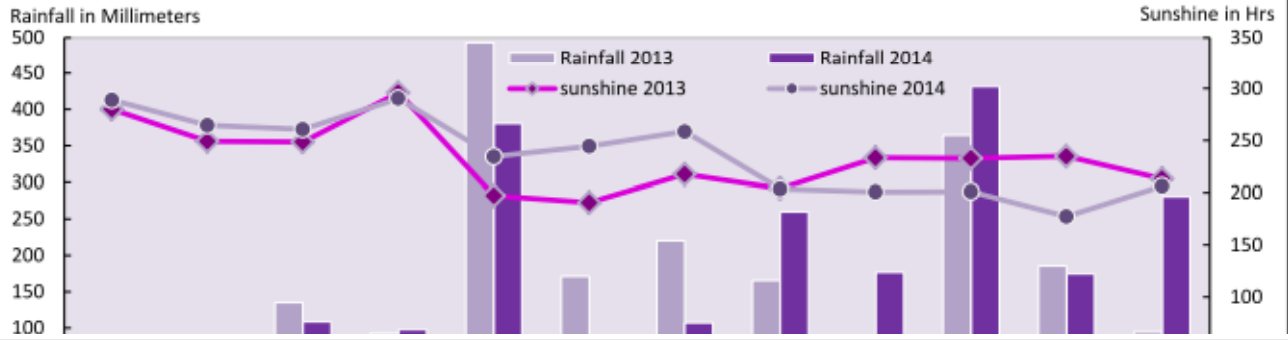


Climate and Weather

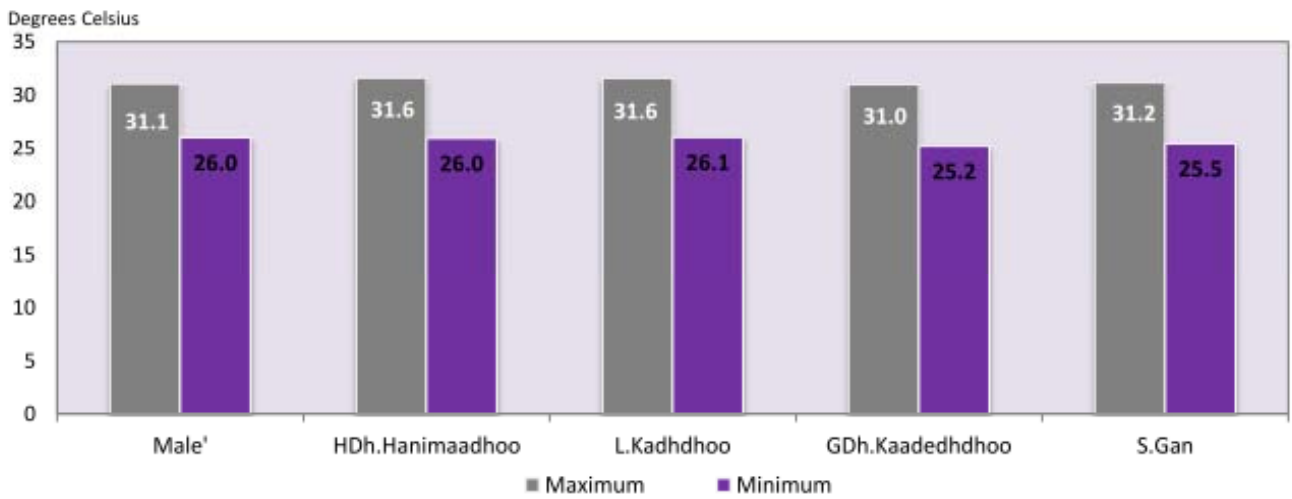


- Warm and humid tropical climate
- Two seasons; dry season (from December to April, northwest monsoon) and rainy season (from May to November, southwest monsoon)
- Yearly temperatures: 24°C to 34°C

Figure 1.1: Sunshine & rainfall for Male' by month, 2013 - 2014



Yearly Average of daily maximum and minimum temperature, 2014



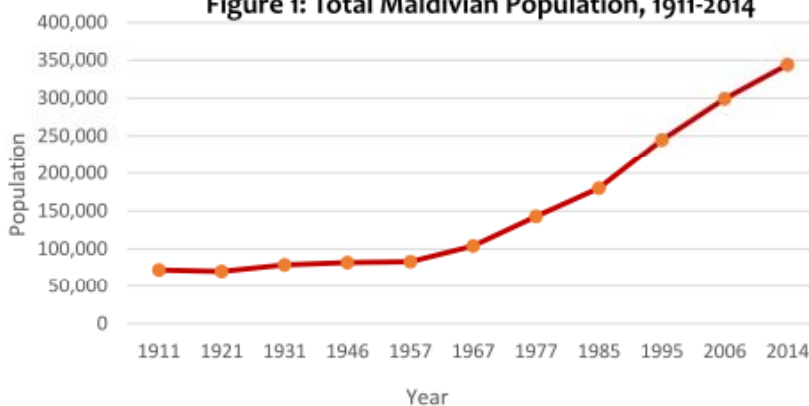
Demography

Table 1: Total Population Enumerated in Census 2014, by Sex

Population	Both Sexes	Male	Female
Total Population	407,660	230,453	177,207
Resident Population	402,071	227,749	174,322
Maldivian	338,434	171,962	166,472
Foreign 1_/	63,637	55,787	7,850
Non-Resident Maldivian	5,589	2,704	2,885

1_/ Foreign population enumerated in Census 2014 is less than the official figures recorded in Immigration documents

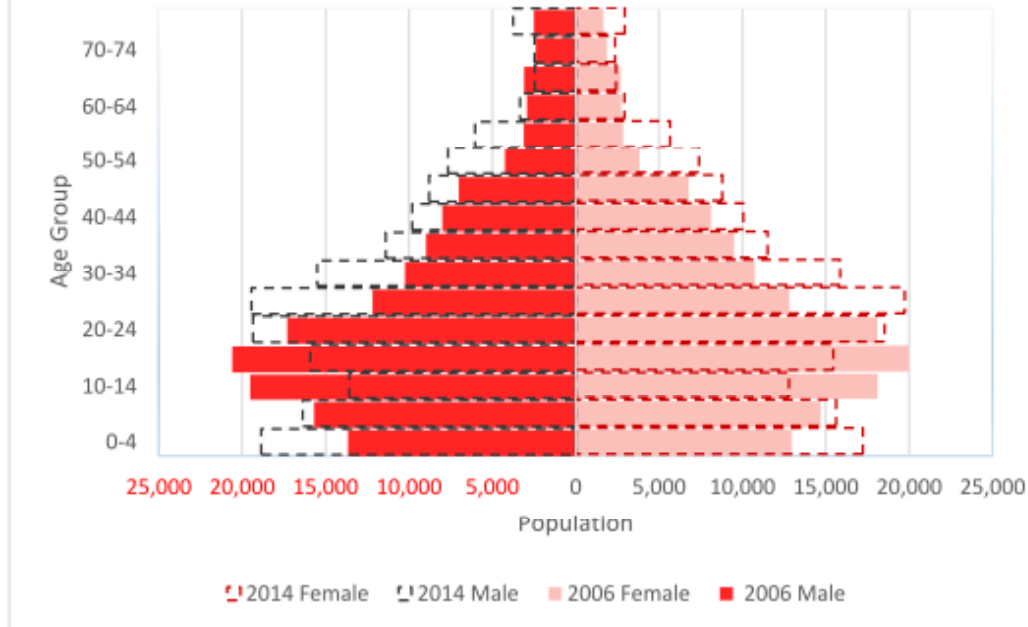
Figure 1: Total Maldivian Population, 1911-2014



■ Total Population: 344,023 (Census, 2014)

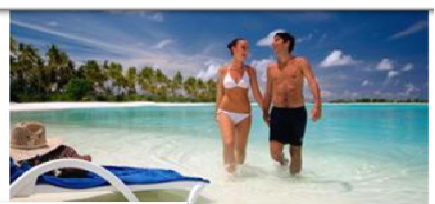
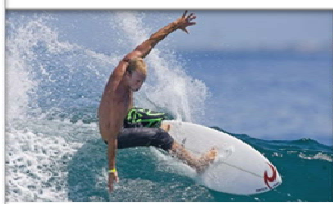
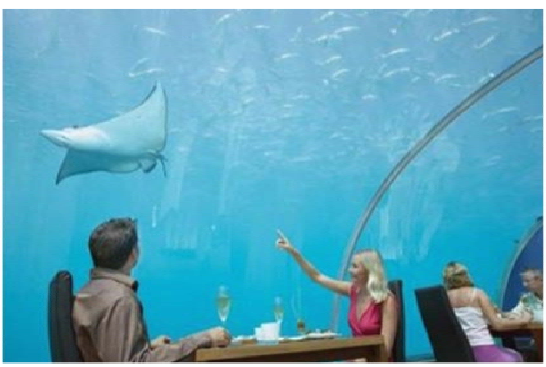
Demography

Figure 6: Population Pyramid of Maldives, Censuses 2006 & 2014



Economy

- Currency: Rufiyaa (1 USD = 15.42 MVR)
- GDP: 3.06 billion USD
- GDP per capita: USD 7,375 (2014)
- Main export: Tuna (frozen, canned, dried, salted)
- Main industries: Tourism, fishing, agriculture
- Heavily dependant on imports



Governance

- Unitary republic
- Head of State : President
- Unicameral legislature: At present 85 members
- Independence: July 26, 1965 (from the British)
- Decentralized local government: Local government authority, city councils and island councils.
- Administrative divisions: 2 cities, 20 atolls and 188 islands.

Risk Profile

- Maldives is one of the most vulnerable countries in the world.
- The most flat and the lowest elevated nation with average height of 1.5 meters.
- Maldives faces multi-hazard risks and threats from the global warming and climate change induced sea level rise and extreme weather events.



Risk Profile

- Indian Ocean Tsunami 2004 was an eye-opener and it was the first ever disaster of cataclysmic magnitude to hit the Island country.
- Generally, urban or rural, all the islands are coastal communities. All the human settlements, industries and critical infrastructure are located near the shoreline.



Risk Profile

- The country's geographic location, physical and geo-climatic features of its islands near the equator in the Indian Ocean exposes the country to different natural hazards from earthquakes (particularly the Southern region), tropical cyclones, storms, thunderstorms, heavy rainfall, dry spell, floods induced by heavy rainfall to storm surges, swell waves and tsunami.

Hazard Inventory

Natural Hazards

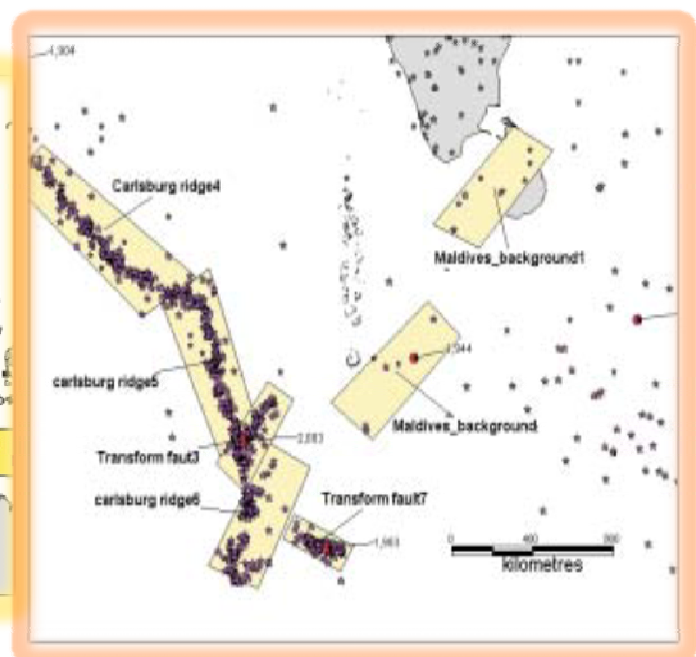
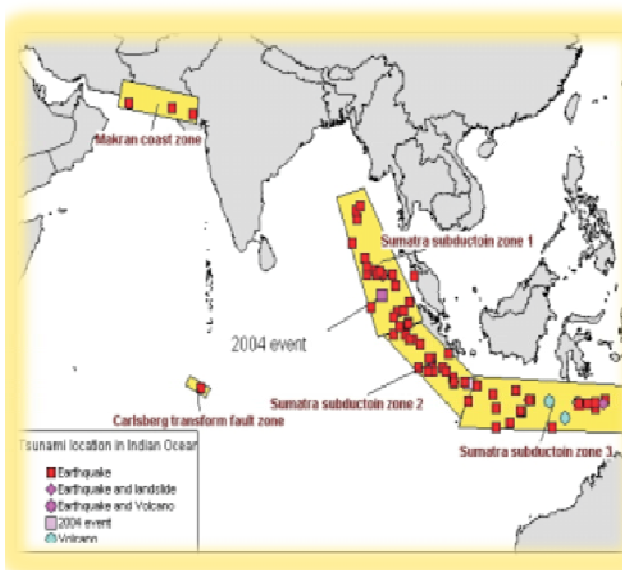
- Tsunami
- Floods
- Tropical Storms
- Cyclones
- Sea surge
- Drought / Water shortage
- Sea level rise
- Earthquake

Man-made Hazards

- Fire
- Airport Emergencies
- Maritime Accidents
- Public Health Emergencies
- Oil Spill and Environmental Incidents

23

Earthquake/Tsunami



24

Maritime incidents



25

Maritime incidents



Flood



Flood



Fire



29

Water Shortage

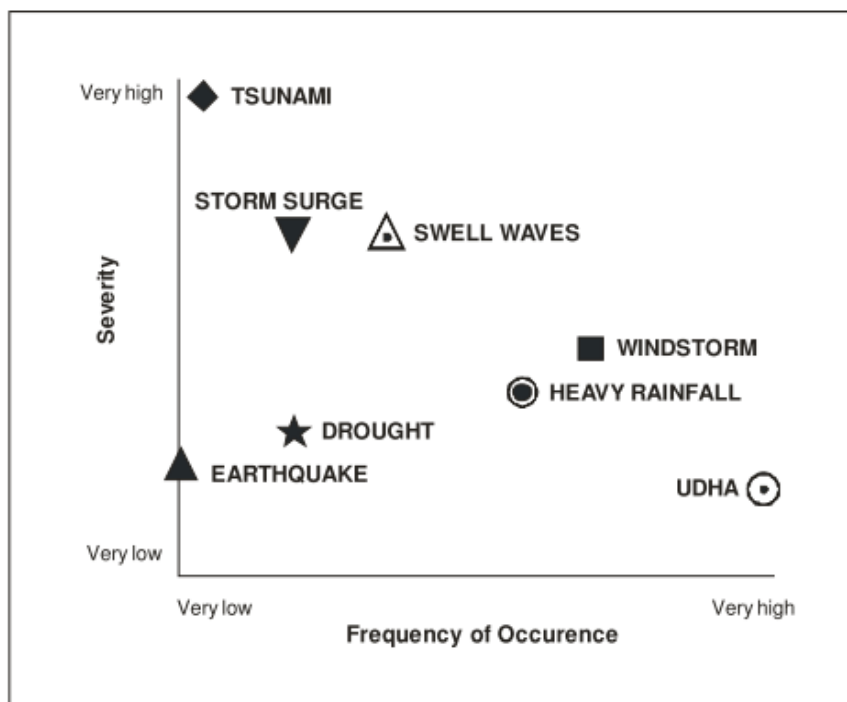


Water Shortage



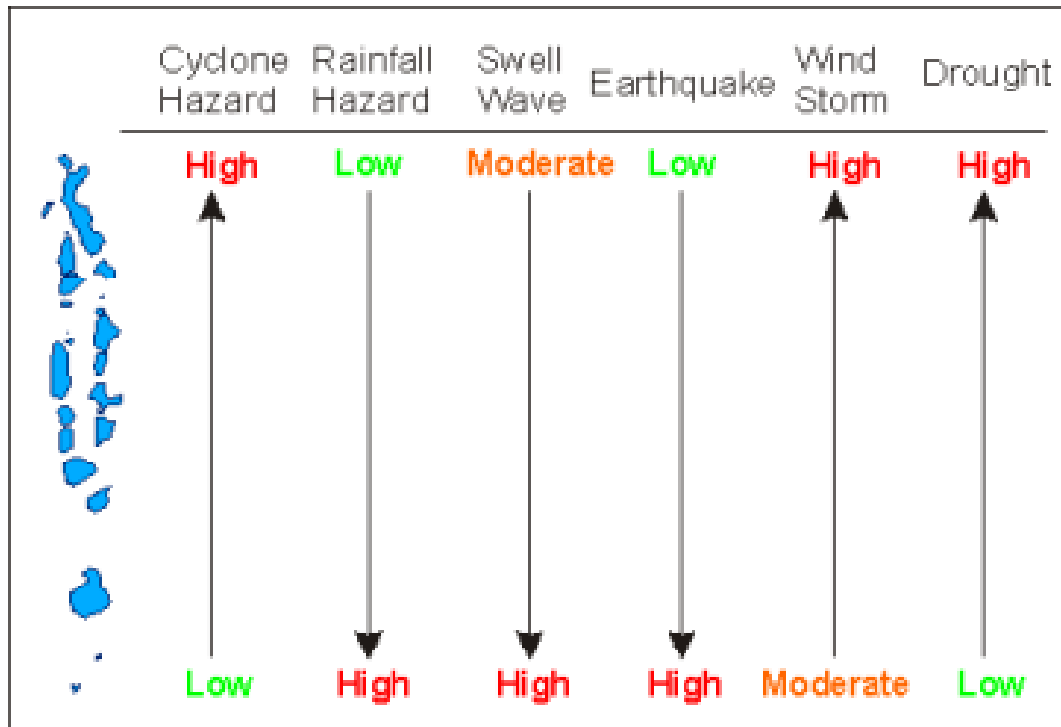


Disaster Risk



Source: DIRAM

Disaster Risk

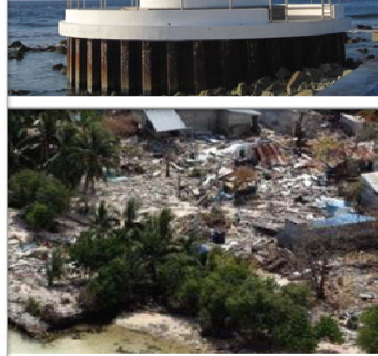
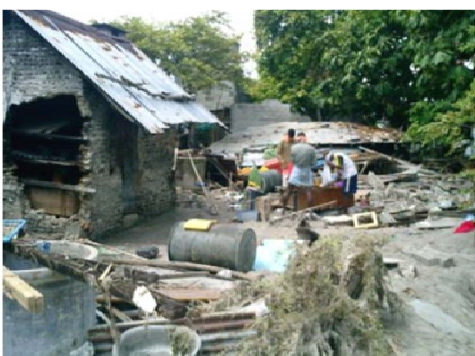
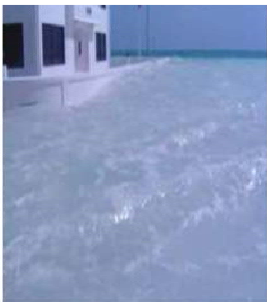


Source: DIRAM

Disaster History

Event/Year	Islands affected	People affected	Damage
Addu City Flood Crisis (24-25 Nov 2015)	03 Islands (Feydhoo, Maradhoofeydhoo and Maradhoo)	297 Households got severely flooded	US\$ 0.3 million
Male Water Crisis (4 Dec 2014)	Male City	159000 persons and 22000 households	US\$ 20 million
Cyclone Nilam (Oct-Nov 2012)	Caused flooding in 51 islands, 28 islands severe flooding, 4 islands critical	33,826	133,090.60 USD
Surge Waves (15- 17 May 2007)	68 Islands in 16 Atolls 600 m inundation inland	1649 Evacuated 579 Housing units damaged	-
Indian Ocean Tsunami (Dec 2004)	53 were severely damaged	Nearly 12,000 displaced.	470 million USD

Tsunami 2004



- **82 Died and 26 missing**
- **More than 15000 Internally Displace Persons (IDPs)**
- **3,997 building damaged**
- **62% of GDP (US\$ 470 million)**



NDMC
NATIONAL DISASTER MANAGEMENT CENTER



26 9:36 AM



NDMC
NATIONAL DISASTER MANAGEMENT CENTRE





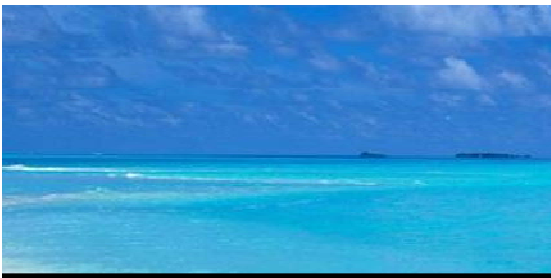


Swell Waves - 2007

- The unusual waves were originated from the extra-tropical system in the southern hemisphere, approximately 5630km southwest of Addu Atoll
- These waves flooded the some in the central and southern



Cyclone Nilam 2012



Water shortage

- After 2004 tsunami freshwater lens got contaminated and saline.
- During dry seasons, islands run out of fresh water.
- Government provides freshwater to many islands.



Disaster Management System

- The Disaster Management Act 28/2015, which was published in the government gazette on 6 September 2015, stipulates the basic tenets and principles that govern the disaster management in the Maldives.

Disaster Management System

- A presidential decree established the National Disaster Management Centre (NDMC) soon after the 2004 Indian Ocean Tsunami.
- Initially, its mandate was to coordinate the recovery process for the tsunami response and relief effort.
- However, as things progressed, the government handed the mandate of disaster preparedness and risk reduction as well to the NDMC.

NDMA

- NDMA serves as the national authority to lead disaster management and disaster risk reduction in the country.
- National platform to coordinate multi-sectorial disaster management activities
- Implementation of international standards such the HFA (2005-2015) and moving forward with SFA (2015-2030).
- Is under the Ministry of Defense and National Security.
- Maldives commemorates 26 December every year as the “National Unity Day”.

Basic Organisation of operations

Strategic Operations

Disaster Management Council

DM Steering Committee

Tactical Operations

National Emergency Operations Centre (within NDMA)

Disaster Management Units (based at Atoll, City and Island levels)

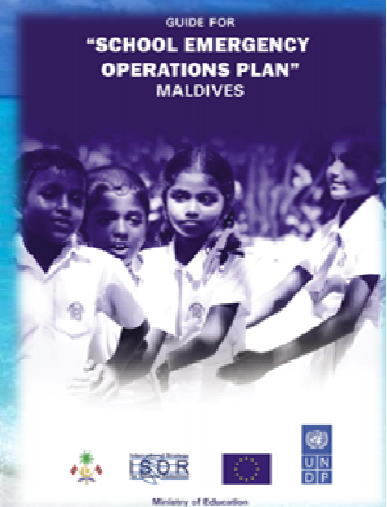
Field Operations

Local Emergency Response Force

National Emergency Response Force

Disaster Management Plans

- National Disaster Management Plan
- National Emergency Operational Plan
- National Multi-hazard Early Warning SOP
- National Framework for IDPs
- Guide Book and Manual for CBDRM
- National Relief Guideline
- Disaster Management Plan for Tourism Sector
- School emergency Operations Plan



First Responders



National Defense Force responds to all large scale and national emergencies

First Responders in Male' Water Crisis

2014



Challenges and Way Forward

- ❖ Large number of islands with small communities
- ❖ Distance between the islands
- ❖ High cost of transportation and logistical difficulties
- ❖ Difficulty in retaining volunteers
- ❖ Difficulty in creating public awareness

Challenges and Way Forward

- Lack of human resources and technical knowledge both at national and local levels
- Risk assessments not a mandatory for development planning
- Lack of DRR knowledge among law and policy makers results in isolation of DRR and CCA activities
- Lack of financial resources to fund and implement DM related activities both at national and local level.

Way Forward

- **City/Atoll/Island DM Units**
- **CBDRM Plans – Island Disaster Management Plans**
- **National Emergency Operations Plan**
- **National Relief Guideline**
- **National Framework for Managing IDPs**
- **National Early Warning SOP**
- **Integration and mainstreaming of DRR and CCA adaptation and into the resilient island development planning**
- **Disaster Resilient Resort Program**