Republic of MALDIVES

Aishath Ifa Mohamed
NATIONAL DISASTER MANAGEMENT AUTHORITY
Senior Officer, Resource Management

ASIAN DISATER REDUCTION CENTER
Visiting Researcher Program FY2023

Table of Contents

DISCLAIMER

This report was compiled by an ADRC visiting researcher (VR) from ADRC member countries.

The views expressed in the report do not necessarily reflect the views of the ADRC. The boundaries and names shown and the designations used on the maps in the report also do not imply official endorsement or acceptance by the ADRC.

1. GENERAL DESCRIPTION

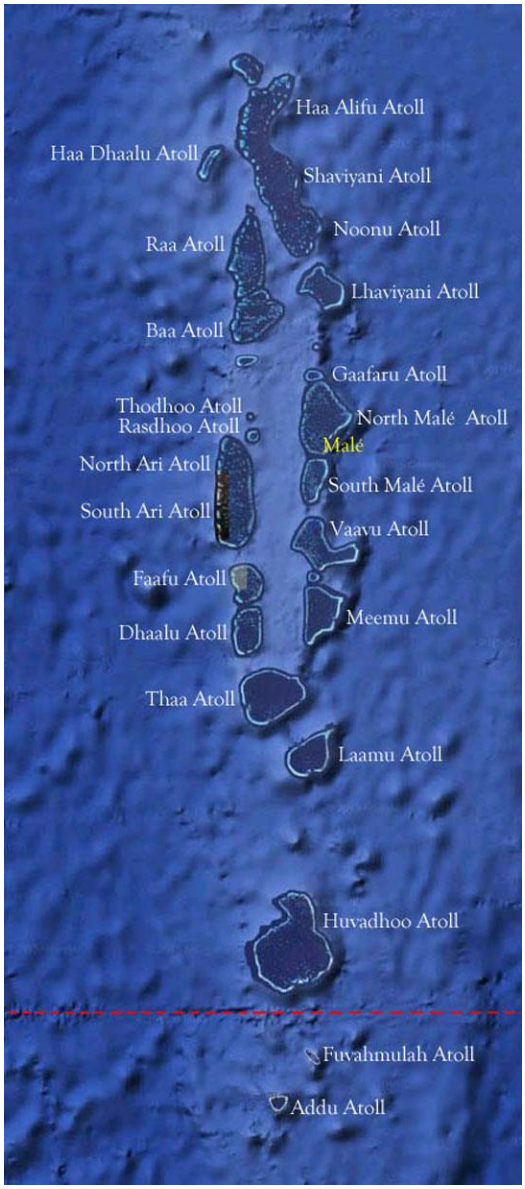


Figure 1: Map of Maldives

The Republic of Maldives, lying about 420 miles southwest of Sri Lanka, lies between Minicoy Island (the southernmost part of Lakshadweep, India) and the Chagos Archipelago. Being an Island Country of unique geographic and oceanic characteristics, Maldives consists of 26 natural coral atolls with 1,190 coral islands with only 16% (187 islands) spread over roughly 90,000 square kilometers (35,000 sq. mi), making it one of the world's most dispersed countries in the world (9th smallest country in the world). Of this only 190 are inhabited and another 105 are registered as resorts or marinas. The largest island of Maldives is Gan, which belongs to Laamu Atoll or Hahdhummathi Atoll. The capital Malé is an area of under 2 square kilometers Maldives is the lowest country in the world, with a maximum natural ground level of only 2.4 meters (7 ft. 10 in), with the average being only 1.5 meters (4 ft. 11 in) above sea level.

The Maldives are a group of scattered islands in the Indian Ocean, located to the south west of Sri Lanka. It consists of approximately 1,190 coral islands grouped in a double chain of 26 atolls, spread over roughly 90,000 square kilometers, making this one of the most disparate countries in the world.

Composed of live coral reefs and sandbars, the atolls are situated atop a submarine ridge 960 kilometers long that rises abruptly from the depths of the Indian Ocean and runs from north to south. Most Atolls of the Maldives consist of a large, ring-shaped coral reef supporting numerous small islands.

Islands average only one to two square kilometers in area, and lie between one and 1.5 meters above mean sea level. Although some of the larger atolls are approximately 50 kilometers long from north to south, and 30 kilometers wide from east to west, no individual island is longer than 8 kilometers. Maldives has no hills, but some islands have dunes

which can reach 2.4 meters / 8 feet above sea level. Maldives largest attraction is the underwater coral gardens, with its colorful inhabitants the richest collection of multicolored fish and live coral reefs which add up to a diver's paradise.

Figure 2: A coral reef in the central area of Maldives

Figure 3: Banyan Tree Maldives

1.1 GEOGRAPHY

The Maldives archipelago stretches 823 km north to south and 130 km east to west. Over 99% of the Maldives is made up of the sea; only 0.331% (115 square miles) of its 35,000 square mile surface area is dry land. How the islands actually formed is something of a mystery. The theory that has the most support was first suggested by Charles Darwin in 1842 (after he had studied similar atolls in the Pacific and Atlantic Oceans). Darwin's theory suggests that the islands were formed when volcanoes rose from the sea and coral reefs grew around their edges.

The volcanoes subsequently sank back into the sea, leaving the coral reefs to circle a shallow, water-filled lagoon. Islands then formed when currents and tides swept dead coral and other organic debris into the lagoons, which in turn became filled in and were eventually colonized by plants and trees.

Figure 4: Islands of the Maldives

The islands that make up the Maldives are very small (most can be walked across in 10 minutes; only a few are longer than 2 kilometers) and low-lying (they rarely reach more than six feet above sea level). This makes them particularly vulnerable to sea erosion. In 1812 and again in 1955, devastating gales destroyed many northern islands, while in 1987 the capital, Male, was flooded by a severe storm. If, as some scientists predict, global sea levels continue to rise as a consequence of global warming, it will pose a particular risk to the Maldives.

1.2 CLIMATE

The climate of Maldives is greatly influenced by its tropical monsoon weather and the islands experience a warm and humid climate throughout the year. The historical mean annual temperature was 27.6°C with little inter-seasonal variability — average monthly temperatures vary by at most 1°C throughout the year and the country has relatively high rates of precipitation, Figure 6, showing the latest climatology, 1991–2020. The seasonal cycle is strongest in the northern atolls recording an average maximum temperature of around 29.3°C just prior to the onset of the southwest monsoons (April–May) and an average minimum temperature of around 27.4°C prior to the onset of the northeast monsoons (December–January). The southern equatorial regions experience precipitation throughout the year and do not experience a very significant dry spell related to the northeast monsoons.

Figure 5: Monsoon Period (May - November)

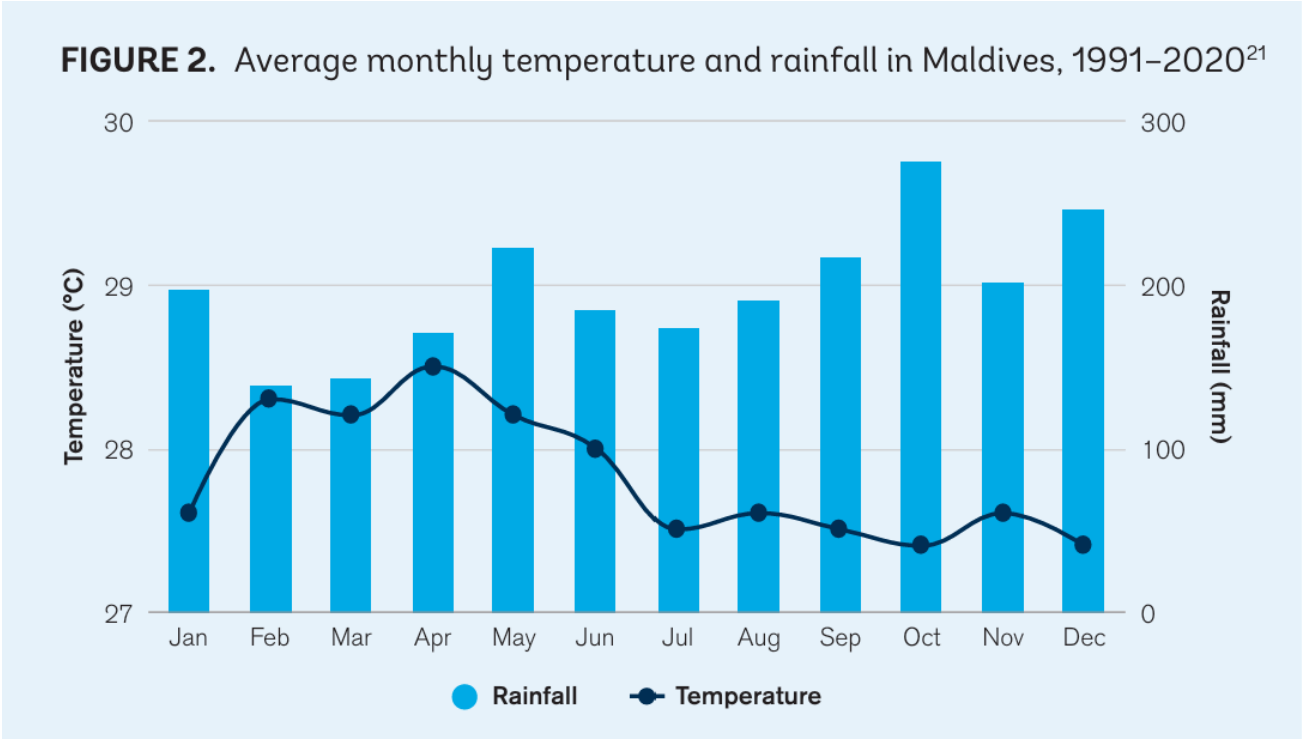


Figure 6: Average monthly temperature and rainfall in Maldives, 1991-2020

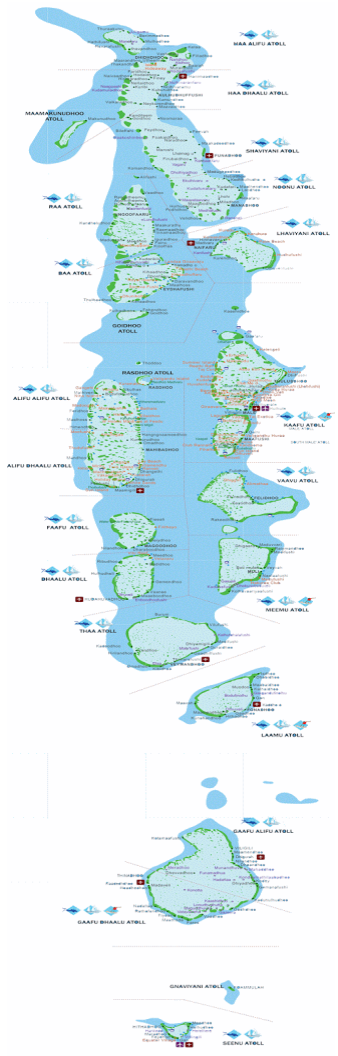
1.3 DEMOGRAPHY

Ethnically from South Indians, Sinhalese, And Arabs

National Language: Dhivehi

Script used in Maldives - Thaana, derived from Arabic

Religion of State - Islam



Est Population (2022)
515,132

Unemployment Population

9,244 (3%)
(2022)

Even though not officially quoted, English is the second language of the Maldivesand the majority of the populace can speak and write in English.

Population Contribution

Source: Maldives Bureau of Statistics, Census 2022

1.4 GOVERMENT

The Maldives received its independence from the British on July 26, 1965. We have been a presidential republic country with the given name 'Republic of the Maldives'. The government's organizational structure comprises the president's office, parliament, and judiciary[1]. The public elects the president, and there must be at least 51% in favor for an individual to take office. Presidents are limited to five-year, two-term terms with the introduction of the new constitution in 2008. The cabinet is elected by the president and approved by the Maldives Parliament, also known as the People's Majlis.

Members of Majlis serve five-year terms, with the total number of members determined by atoll populations. At the 2019 election, 87 members were elected. However, the number has been reduced to 80 as of December 18, 2023, since some former members of the ruling PPM-PNC coalition were appointed to the government's posts. The People's Majlis, located in Male, houses members from all over 20 administrative divisions (atolls), each headed by an atoll council with the exception of Addu Atoll (Seenu Atoll), which, along with it, has been declared a city. Addu City, Fuvammulah City, Thinadhoo City, Male' City, and Kulhudhuffushi City have a city council. Every other island has an island council and operates under a decentralized system. All the councilors are elected at their respective levels.

Figure 7: Parliament / Peoples Majlis

Figure 8: Past and Present Presidents (from left to right)

PRESIDENT SOLIH, PRESIDENT YAMEEN, PRESIDENT DR WAHEED, PRESIDENT NASHEED, PRESIDENT UZ MAUMOOM, PRESIDENT NASIR AND PRESIDENT AMEEN (LEFT TO RIGHT)

The current is His Excellency President Dr Mohamed Muizzu elected on 17 November 2023. President Dr. Mohamed Muizzu is the 8th President of the Republic of Maldives.

Figure 9: The newly elected president of Maldives President Dr Mohamed Muizzu

1 Organization Structure of Government of Maldives - https://www.presidencymaldives.gov.mv/Home/

1.5 ECONOMY

The population of the Maldives has grown from 407,660 in 2014 to 515,132 in 2022. The Maldives economy has grown over the years, reaching a GDP of MVR 92,679 million in 2022. The tourism sector covers 29.9%, being the largest sector that contributes to the Maldives GDP.

The Maldivian economy is heavily dependent on tourism (NEOP, 2018) while fisheries sector covers 1.3%. Exporting fish and fish products has been the real deal for the country for years. From the islands contribution agriculture sector contributes 1.6% of the GDP[2].

Currency: Rufiyaa (1 USD = 15.42 MVR)

Overall government deficit (including grants)for the year 2016 is 4,304.1 (In Million MVR)

NBS, 2016

Figure 10: A resort in Maldives

Out of the total fish produced during the year 2016, majority of the fish was exported (52.9%)

NBS, 2016

Figure 11: Traditional Pole and Line fishing

2 State of the environment report, MoEE, page 24

2. OVERVIEW OF HAZARDS AND DISASTRE RISK

The Maldives is a low-lying island nation comprising over a thousand tiny islands. All islands are subjected to physical vulnerability due to the country's extremely low elevation and flat topography. The wide dispersal of its population of 3 hundred thousand across the islands is also a significant contributing factor. The frequency of natural disaster of large scale is relatively low in Maldives. However, the 2004 Indian Ocean Tsunami had a devastating impact on the lives of its people, the economy, and development progress.

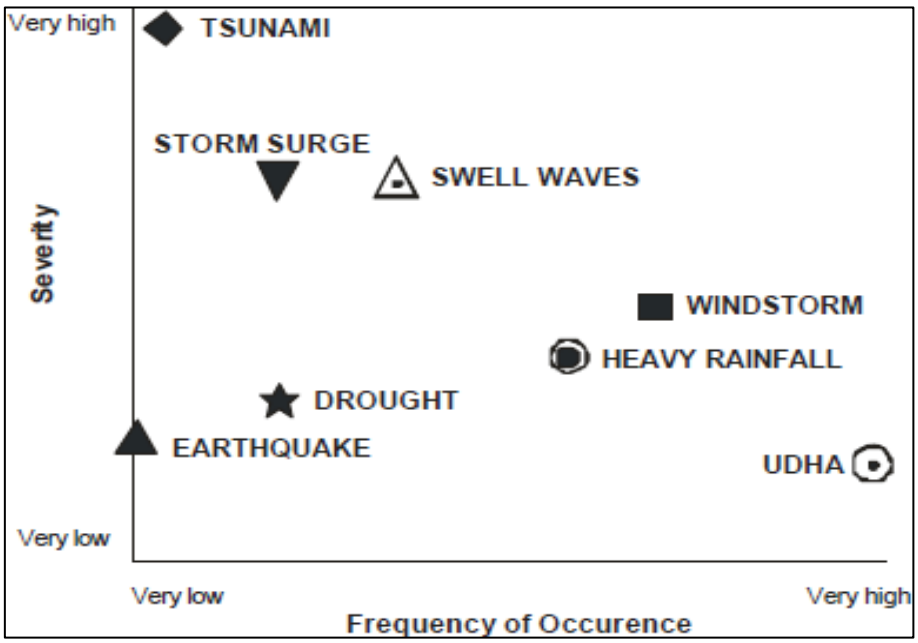


Figure 12: Hazards and Patterns in Maldives, Diagram 2007

The impact of a hazard in higher population concentration areas will be likely higher than in less populated areas. The Haa Dhaalu, Seenu, Raa, Haa Alifu, and Kaafu (Figure 11) are having higher population concentration and are exposed to various levels of hazards. It has to be noted that the islands in Seenu Atoll and Malé island in Kaafu atoll are densely populated, which increases the probable chances of impacts to the exposed hazards.

Generally, the Maldives, regularly get affected by high frequent low impact seasonal events such as monsoonal flooding, coastal erosion, salt water intrusion and intense sea surges related flooding dueto sea level rise.

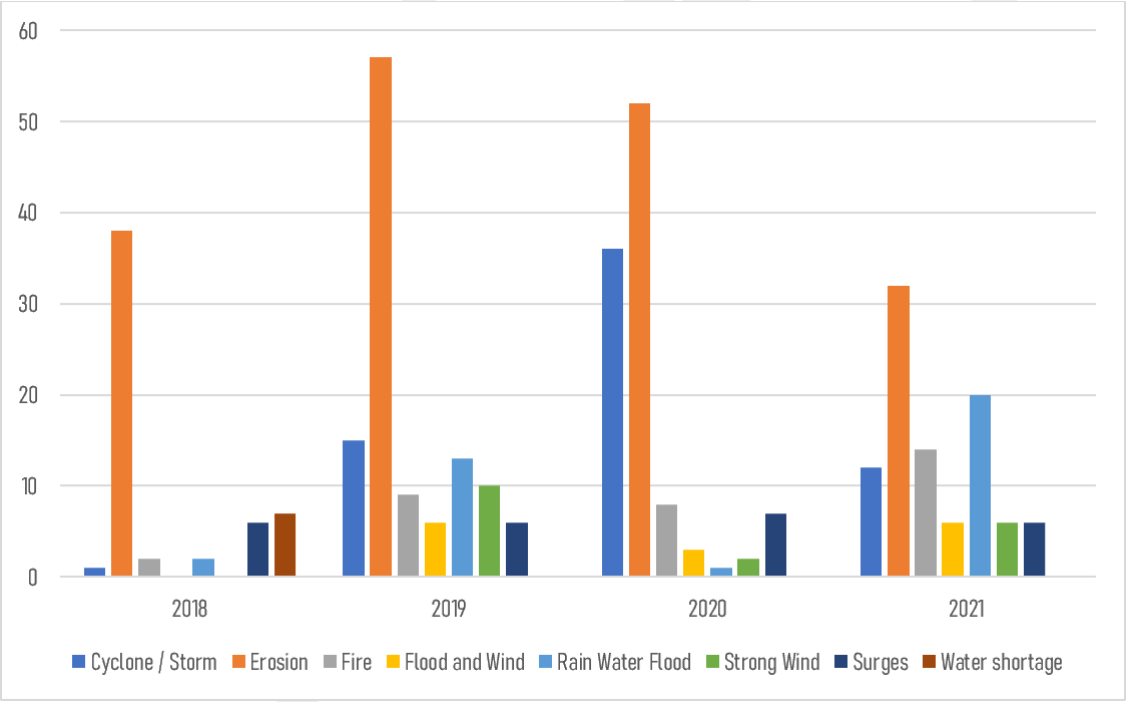


Figure 13: Types of hazards by year occurrences (Source; NDMA statistical report from 2018-2021)

2.1 CYCLONIC WIND

The northern atolls are exposed to higher hazard levels from cyclonic winds and their associated storm surge. The hazard level reduces gradually to very low in the southern atolls. The maximum probable wind speed expected in zone 5 is 96.8 knots (180 kmph) over the Maldives region, which is lower than the cyclonic storm category 3 on a Saffir-Simpson scale. At this speed, high damage is expected from wind, rain, and storm surge hazards.

The islands of the Maldives are less prone to tropical cyclones. The northern islands of the country were affected by weak cyclones that formed in the southern part of the Bay of Bengal and the Arabian Sea. The number of cyclones directly crossing the Maldives is small.

The vulnerability of the islands in the northern atolls is heightened due to their poor accessibility compared to other parts of the country. In a post-cyclone situation, affected areas are inaccessible for several days due to poor weather and rough sea conditions. In cyclones, the risk to livelihoods in the primary sectors, such as agriculture and fishing, and in the service sectors is high.

2.2 SEA LEVEL RISE

Sea level rise due to climate change threatens the entire country. Estimations are that the projected sea level rise of 0.09m to 0.88 m is going to take place between 1990 and 2100. As three-quarters of the land area of the Maldives is less than a meter above mean sea level, the slightest rise in sea level will prove extremely threatening. As per an estimate, 15% of the land area of Male will be inundated by 2025 and 50% by 2100. For people living on low-lying islands, a rise in sea levels by 50 cm could see significant portions of the islands being inundated or washed away by erosion.

As a result of the rise in sea level, a variety of impacts may be expected in the Maldives. These include loss of land, flooding of low-lying coastal areas, displacement of population, loss of crop yield, impacts on coastal aquaculture, and erosion of sandy beaches. As most of the economic activities in the Maldives are heavily dependent on the coastal ecosystem, sea level rise will impact Male' in the year 2050; 31% of Male' will be inundated under the IPCC worst-case scenario (IS92e)[3].

Damage caused to the beach due to sea level rise. Damages caused to the livelihood of people due to sea level rise the social and economic development of the country. Residential areas, industry, and vital infrastructure of the country lie close to the shoreline[4], within 0.8 to 2m of the mean sea level. Even now, some islands are seriously affected by the loss not only of shoreline but also of houses, schools, and other infrastructure, compelling the government to initiate urgent coastal protection measures.

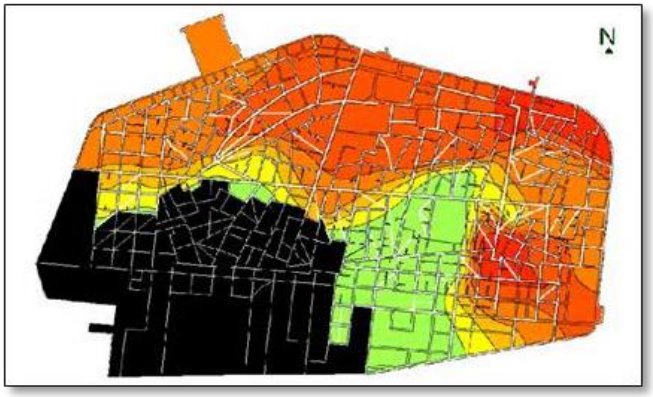
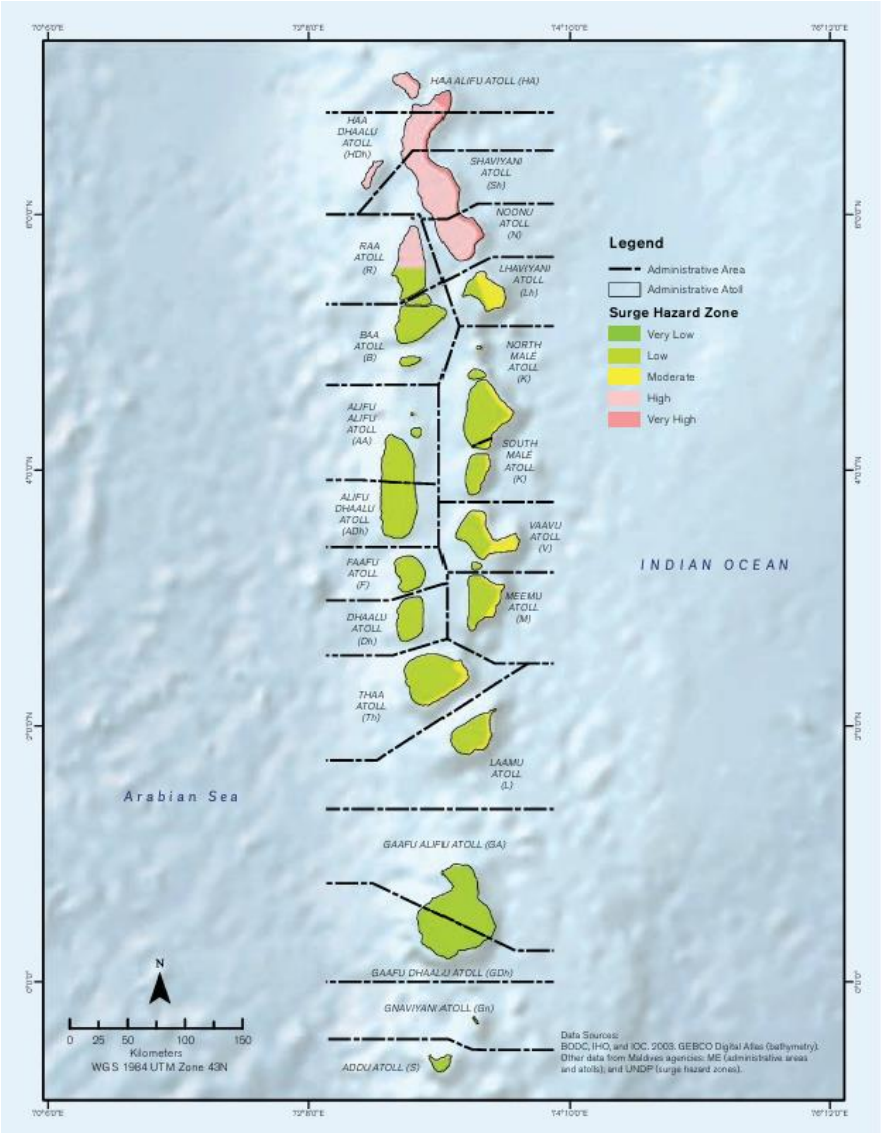


Figure: 14

Figure: 15

2 Figure 14, 4 Figure 15

2.3 COASTAL FLOODING



It is important to note that due to the geographical layout of the islands, there is a variation in impact across the country. The 2007 UNDP risk assessment highlights that there is a higher likelihood of storm surges in the northern area due to its higher possibility of cyclones. This is confirmed in the mapping by ADB shown in Figure 16.

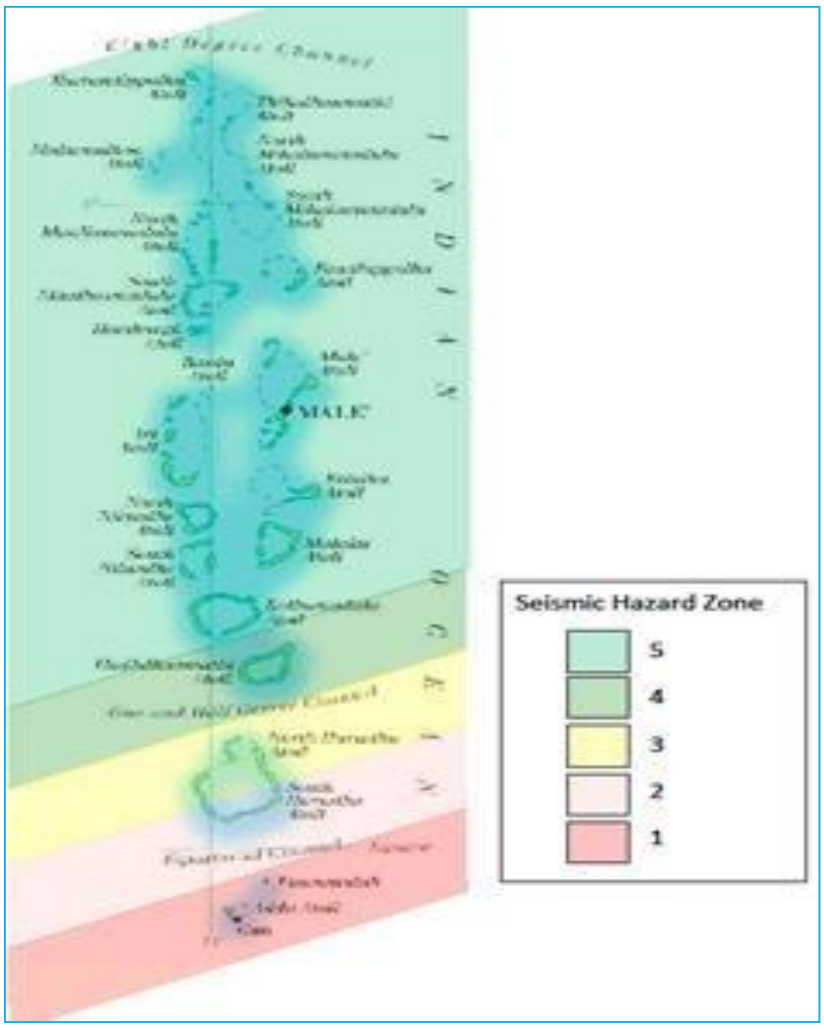
Figure 16: Maldives surge hazard zone (source; CLIMATE RISK COUNTRY PROFILE: MALDIVES)

The southern and western islands of the Maldives may experience more swell waves due to their proximity to the Southern Indian Ocean and the predominant westerly approach of the swell waves, but the eastern rim islands may still experience impacts due to the propagation of swell waves through reef passes within the atoll lagoon. 34 Eastern rim islands are predicted to experience more frequent tsunami waves and their impacts due to their direct exposure to waves, while western rim and atoll lagoon islands are offered protection by the atoll formations. Swells and tidal waves cause flooding in the Maldives islands, causing extensive damage to critical infrastructure, properties, household goods, saltwater intrusion into the groundwater aquifer, coastal erosion, and livelihood.

2.4 HEAVY RAINFALL EVENTS

Sudden downpours associated with low-pressure systems and thunderstorm activities result in flooding. The southern atolls receive abundant rainfall and are exposed to heavier rainfall than the central and northern atolls. The northern atolls are exposed to heavy rainfall episodes associated with cyclonic storms. Northern and central atolls experience more drought conditions (uneven rainfall distribution or suppressed seasonal rainfall quantity) when compared to southern atolls.

2.5 EARTHQUAKE



Situated on the Indo-Australian plate, the Maldives is tectonically very stable and aseismic. It is located far away from high-seismicity regions. But trauma has been felt by people across a wide area and on many islands. These traumas, it is said, were not caused by nearby seismic events but by the relatively large events that have occurred in the western Indian and Sumatra regions. But it is possible for a major earthquake to suddenly occur in a region that has not been seismically active in the past.

Figure 17: Earthquake seismic hazard zones

And attention is given to the possibility of a tsunami generated from the active seismic zones around Sumatra, Western India, and in the waters west and south of the Maldives. The waters of the ocean lie south of the Maldives and the Carlsberg oceanic ridge zone, which has a high level of seismic activity.

2.6 TSUNAMI

The Maldives has tsunami hazards largely coming from the east (Sumatra), and relatively low hazards are also present from the north (Makran) and south (Carlsberg Transform fault zone). Islands along the eastern fringe of eastern atolls are more exposed compared to the islands along the western fringe of western atolls.

The probable maximum tsunami wave height is estimated at 5.2m. The return period of the 26 December 2004 tsunami is found to be one in 219 years (one of numerous probable events).

Except for Seenu, Gnaviyani, and Gaafu atolls, the earthquake hazard is low across the country. The probable maximum Modified Mercali Intensity (MMI) is estimated at 7–8 in zone 5. This level of MMI can cause moderate-to-high damage. And it is possible that a tsunami will be generated from the active seismic zones around Sumatra, Western India, and in the waters west and south of the Maldives. The waters of the ocean lie south of the Maldives and the Carlsberg oceanic ridge zone, which has a high level of seismic activity.

Figure 17 and 18: After math of 2004 Tsunami

3. RECENT MAJOR DISASTERS IN MALDIVES

3.1 2022 FLOOD AND SURGES

In July, the weather in the Maldives got severe, and it affected all the areas of the country. During this month, heavy rainfall and sea surges happened all over the Maldives, resulting in 277 households causing various damages. Also, due to the heavy rain and sea surges, more than 110 agriculture crop fields were severely affected and damaged, but GDh. Hoadedhdhoo, GDh. Fiyoari, GDh. Madaveli, and Th. Thimarafushi reported to the NDMA regarding the agricultural damage.

Figure 19: Effects of 2022 July weather

3.2 MALE' CITY FIRE INCIDENT ON 10TH NOVEMBER 2022

On 10th November 2022 early morning, fire broke in a garage and it affected 3 buildings and affected 74 people. Among them, 33 people were provided relief aid (shelter, food, and clothing). In this fire incident, eight households were affected, causing damage to the infrastructure and household items. Regrettably, 10 people lost their lives in the incident.

Figure 20: Outside of the affected area

3.3 COVID-19

On March 7, 2020, the Maldives reported its first positive “imported cases” from two foreign nationals holidaying at a resort. As of July 1, 2023, the total reported and confirmed cases were 186,687; out of these, 316 were deaths. As of July 9, 2023, 399,362 people have been vaccinated with the first doze, and 385,255 people have been vaccinated with the second doze in the Maldives.

The Greater Male’ region (Male’ City, Villingili, and Hulhumale) continues to be the most affected active cases. New cases have links to known cases or clusters, and the majority of cases on inhabited islands have links to travel from Male's area.

In early March, the National Emergency Operations Center was established (cochaired by the Minister of Health and the defense minister) to oversee the activities of stakeholder agencies, and a National Emergency Preparedness, Readiness, and Response Plan for COVID-19 was developed. The government of the Maldives designated the National Disaster Management Authority (NDMA) and Health Protection Agency (HPA) to coordinate a nationwide multisectoral effort to safeguard the population from COVID-19.

The total government expenditure on COVID-19 response (as of June 2020) is approximately MVR 923.2 million (USD 59.4 million).

Figure 21: Taking random covid samples

3.4 MALE' FIRE INCIDENT- 2019

A fire broke out in the chemical warehouse in Male' City, H. Thilafushi House, on the evening of September 20, 2020, at approximately 19:37. Following the incident, people were relocated to Kalaafaanu School, which served as a rapid relief center, offering assistance to those affected. A total of 803 individuals were impacted, with 786 receiving prompt relief aid, including accommodation, food, and clothing. Regrettably, one person lost their life in the incident. Of the 93 households affected, 87 were evacuated. Seven chemical warehouses were damaged or destroyed due to the fire.

In response to the emergency, the Male' City Council Fire Relief Account was established to extend assistance to those in need. Generous donations from both individuals and the community resulted in a deposit of over 1 million MVR in the relief account.

Figure 22: Fire spreading in the area (September 2019)

3.5 HEAVY RAINFALL AND FLOODING/ TORNADO -2017

During the month of May 2017, G. Dh Thinadhoo experienced heavy rainfall, and 19 houses were affected. On May 17, 2017, S. Hithadhoo, a ward in Addu City, was affected, damaging 46 houses. A cyclone hit Nilandhoo in Faafu atoll on the 1st of June 2017, affecting 18 houses on F. Nilandhoo Island. Torrential rain and strong winds caused

damage to 14 islands as a result of the bad weather.

Continues to wreak havoc across the Maldives. MNDF (Maldives National Defense Force) southern area command helped clear fallen trees that were blocking roads. Noting that the usual rainfall with the onset of the south-west monsoon in mid-May is lasting longer than expected, the government advised islands to maintain food stores and to communicate shortages of staple food items. The Maldives Meteorology Service issued a yellow alert for northern and central atolls Thursday morning, advising against sea travel for four hours and warning of torrential rain, squally showers, and gusts of 55 miles per hour.

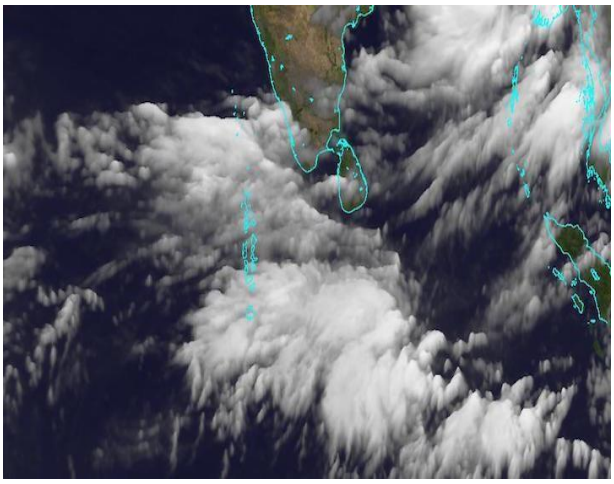


Figure 23: Satellite image released from MMS

Figure 24: Infrastructural damage

Flooding caused by heavy downpours meanwhile damaged farm fields on the northern islands of Uligamu in Haa Alif atoll and Vaikaradhoo in Haa Dhaal atoll. The prices of fruits and vegetables at the busy local market in Malé have soared in the first week of Ramadan due to reduced supply from farming islands affected by the bad weather. Demand for local produce such as watermelons is high during the fasting month. According to the met office, wind speeds in the capital reached 55 miles per hour Thursday morning. Some roads were inundated with water and branches fell off trees planted by the roadside.

3.6 FIRE INCIDENTS (2012-2016)

With urbanization, residential fire incidents are increasing. Among the different types of disasters, fire incidents pose a great risk and threat to life and property. Building fires, especially residential fires, remain a critical concern as the rate has increased over the past few years. To minimize the loss and damage to the property and buildings, two packages were introduced to the community in partnership with the Bank of the Maldives and Ayady Takaful. An insurance package has been formulated with Ayady Thakaful for the property and buildings, while a bank loan scheme is active with a small interest fee for the people's property and buildings that are directly affected by fire.

Records from 2012 to 2016 show that a total of 111 fires occurred in 2012, 109 in 2013, 54 in 2014, 97 in 2015, and

98 fire incidents in 2016. The most common type has been human-induced, intentional, and electrical fire incidents over the span of four years.

Over the years, society has responded to the fire threats with Maldives Fire and Rescue Service intervention. The table explains the data recorded by the MNDF Fire Department from 2012 to 2016.

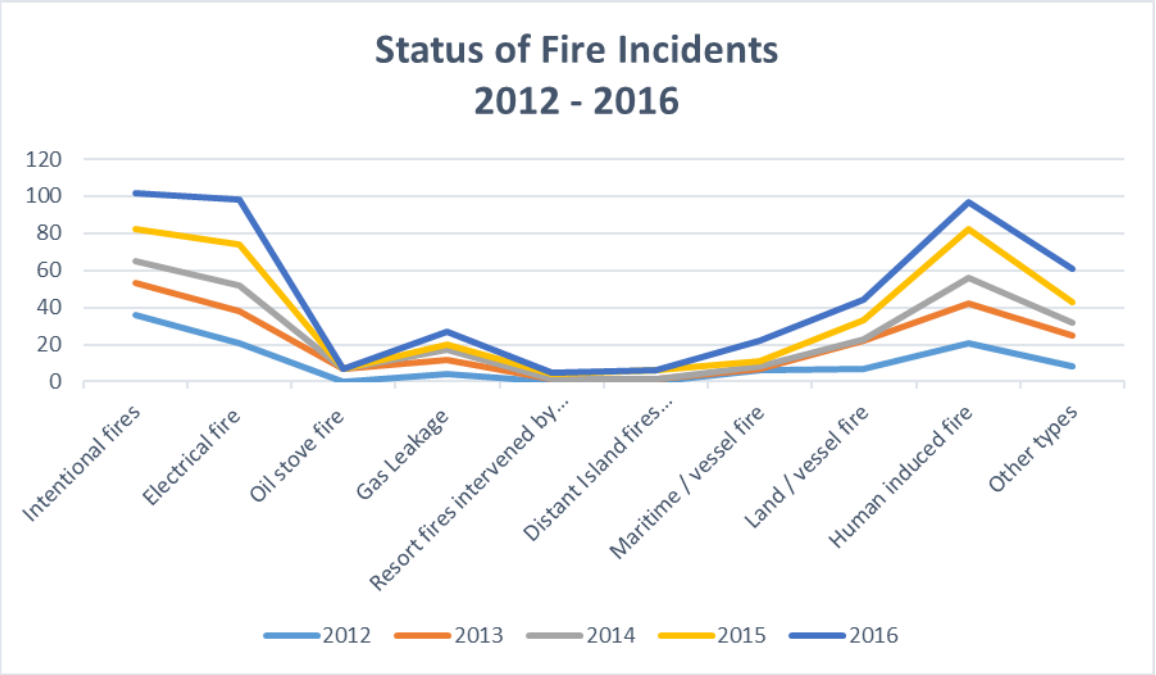


Figure 25: Graph shows the status of fire incidents from 2012-2016

Figure 26: Fire at coastline hardware showroom

Figure 27: Speedboat of Makunudhoo island resort, docked at the number 6 jetty in the northern harbor of Male''

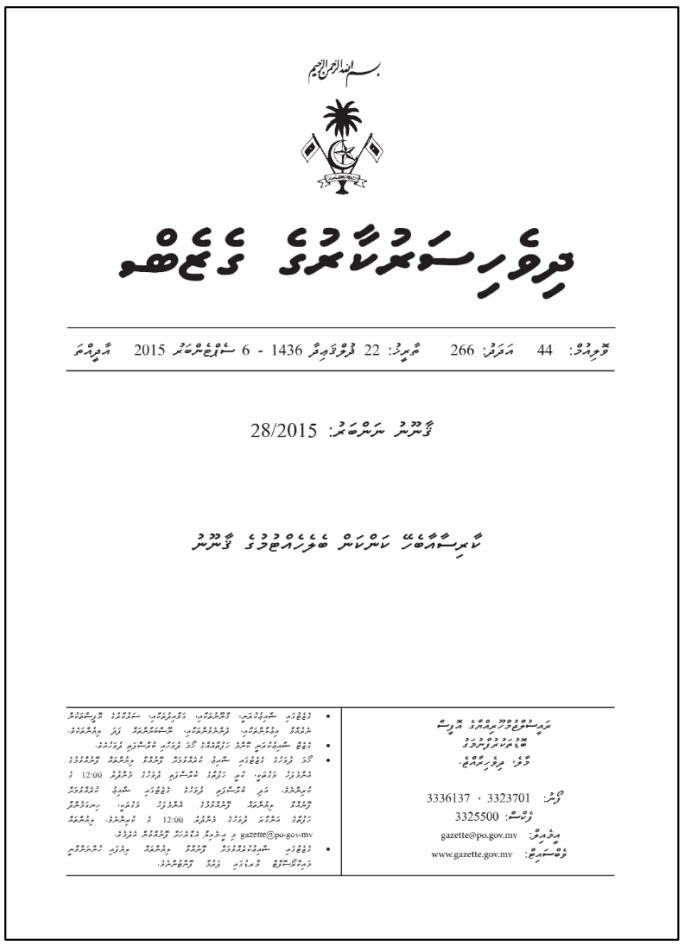
4. DISASTER MANAGEMENT SYSTEM

4.1 ADMINISTRATIVE SYSTEM IN MALDIVES

There are 20 administrative atolls and 5 city councils in the Maldives, with over 940 council members on 187 administrative islands.

In April 2010, the Decentralization Act was passed by the parliament. This act formalized the roles and responsibilities of atoll and island councils and required that they be democratically elected. The Local Government Authority was established in late 2010, and the first local council elections were held in February 2011.

4.1.1 MALDIVES DISASTER MANAGEMENT ACT (28/2015)



Disaster Management Act established on 6th September 2015. This Act refers to the responsibility of the State to protect its people, their health and well-being, their property, and the natural and built-up environment they live in from natural and man-made disasters, and hazards.

The Maldivian territory and its residents face the risks of disasters, hazards, and emergency situations, requiring proactive measures to minimize the vulnerability of the natural habitat. It is crucial to not only respond to disasters but also to mitigate their impact. The establishment of a national emergency response guideline is imperative to ensure preparedness, facilitate relief efforts, and safeguard the lives and property of disaster victims. Seeking assistance for providing basic necessities and coordinating all relevant matters on a national level is essential. Integrating disaster mitigation standards into sustainable development projects, communities, international institutions, and disaster management policies is crucial, aligning with the guidelines outlined in the Act.

4.1.2 INTRODUCTION TO NATIONAL DISASTER MANAGEMENT AUTHORITY

National Disaster Management Authority (NDMA) was established by former President Ibrahim Mohamed Solih as per the Disaster Management Act (28/2015). With this, all staff, assets, ongoing work of NDMC has been transferred to NDMA.

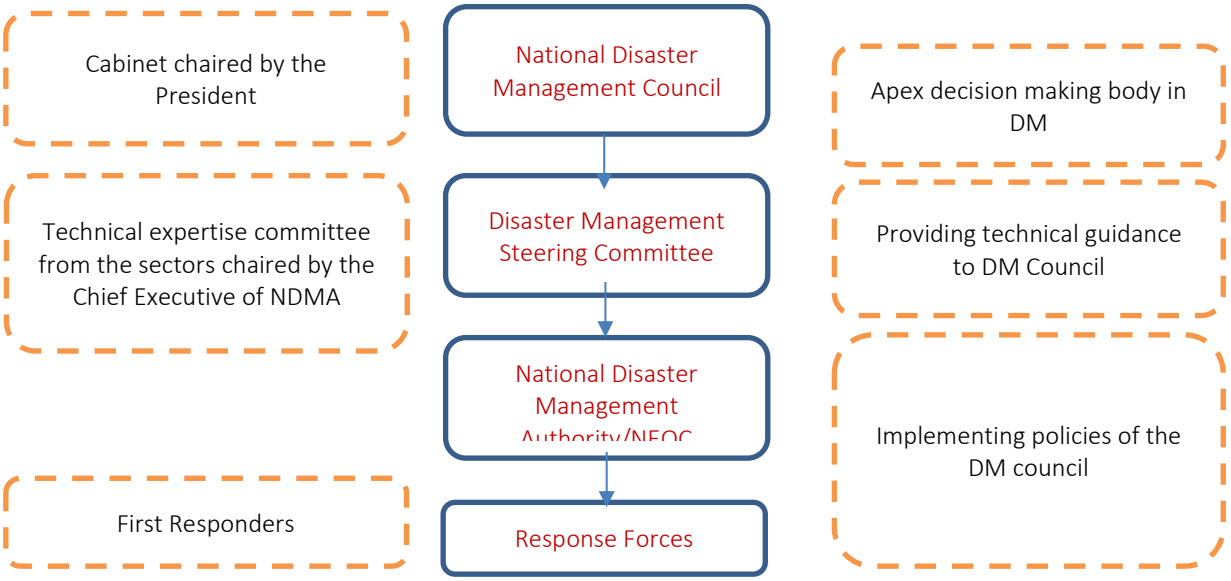
Currently, NDMA is carrying out a more holistic model, where in the processes of hazard identification and mitigation, community preparedness, integrated response efforts, and recovery are planned for and undertaken contiguously within a risk management context to address issues of vulnerability.

One of the most important objectives of NDMA is to mainstream disaster risk reduction at the national level. This includes planning processes, establishing agreed standards, developing procedures and policies. This work is guided by the National Community-based Disaster Risk Reduction Framework. Several other documents and processes are in development or have already been institutionalized, including the Relief Guideline, Framework for managing internally displaced persons (IDPs) and the National Emergency Operations Plan (NEOP). Significant internal re-structuring has taken place to meet the demands of a changing social climate and environment.

NDMA Strategic Framework

Our Role	Our Purpose	Our Mission	Our Vision
We are the lead for Disaster Risk Management and Emergency Response	Working towards a resilient Maldives that ready and prepare for emergencies and disasters	Save Lives and Protect Livelihood	A resilient Maldives

Detailed below are the institutional arrangements, roles and responsibilities to ensure effective and efficient emergency response, established at different levels through the Disaster Management Act.



Figur28: Institutional Arrangements for Emergency Response

If a disaster occurs at City, Atoll and Island level, City Mayor, or Council president or the person in charge of the island will play a lead role with local level stakeholders. The City/Atoll/Island Council/DMC also interacts with both national and local volunteer groups for timely dissemination of information to vulnerable communities and to responding and coordinating agencies.

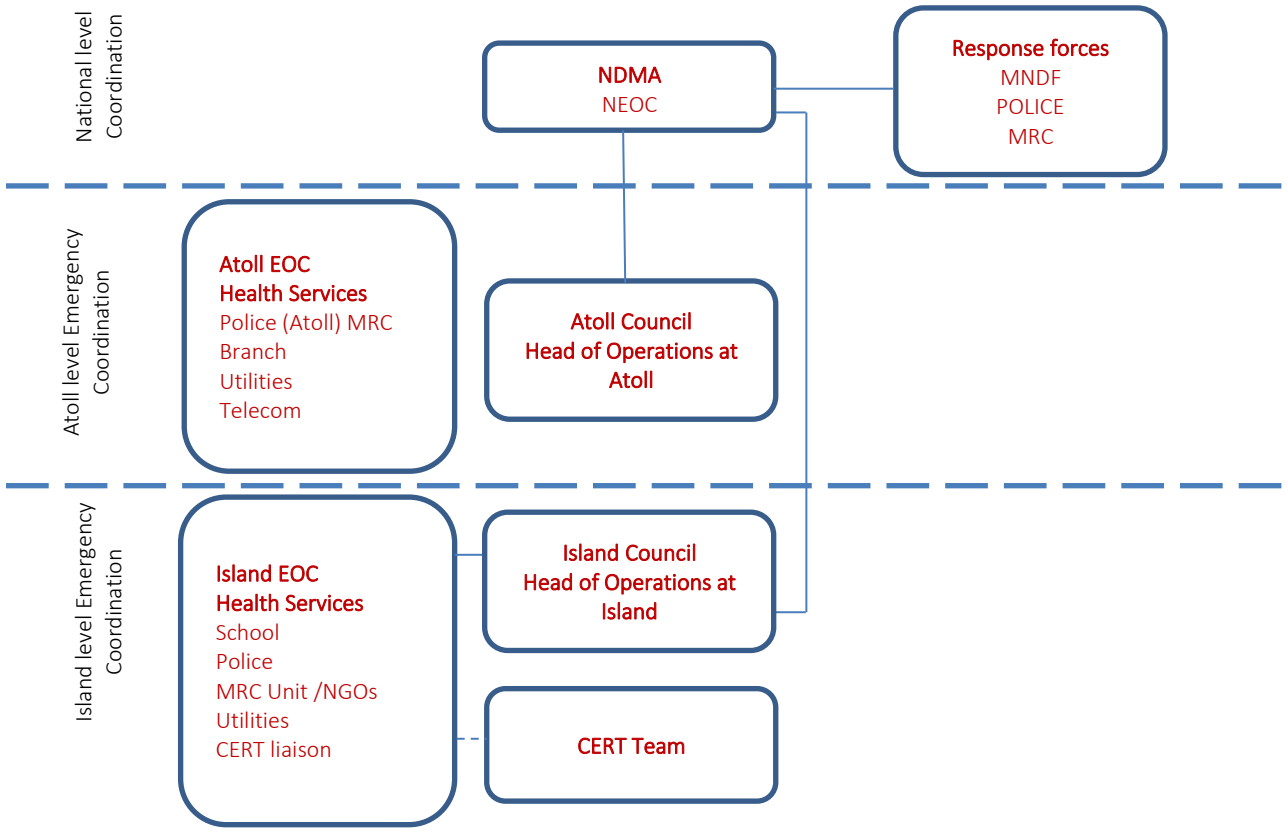


Figure 29: Emergency Response Coordination

Local Councils (Atolls, Island, and cities) are responsible for first response to incidents/emergencies impacting their jurisdictions including the application of fiscal procedures and remedies designed and available to be used for various applications during local emergencies. NDMC may receive emergency funding from it tier partner organizations or from state funding sources and shall provide reports of their ongoing costs and emergency finance activities. The assumption of the situation will be as follow:

- The Local councils will seek emergency supplemental response and recovery funding when funding resources within their jurisdiction have been exhausted.
- The Local councils will seek supplemental response and recovery funding from the government through the NEOC when incident-related costs meet or exceed their thresholds and declaration factors.
- Islands, atolls, and cities will follow laws, regulations, applicable policies, and grant guidance when grants are made available.

- During and after a local response, accurate accounting of and for income and expenses related to the incident need to be documented and recorded.

4.2 LEGAL SYSTEM AND FARMEWORK

Disaster Management in the Maldives has become a national concern since the Indian ocean Tsunami of 2004. Within the last decade, tremendous efforts have been undertaken to create laws stipulating disaster management

Below are the applicable laws and ordinances that provide legal basis to the practice of disaster management in the Maldives:

- Under the Armed Forces Act of 1/2008, article 7 (d), (e), and (f) assign disaster relief operations to the Armed Forces - (Chapter 1, Article 7 d), (e), and (f) – Armed Forces Act (1/2008)
- Under the Police Act of August (5/2008), article 6 (II) mandate the Police Services to protect live and Properties - (Chapter 1, Article 6 (11) Police Act of August (5/2008)
- Under the Maldivian Red Crescent Act 7/2009, - Chapter 1, Article 2 (d) and 3 (a) Maldives Red Crescent Act (7/2009)

★ Article 2(d) establishes as an independent voluntary aid organization that's auxiliary to the public authorities in the humanitarian field.

★ Article 3 (a) assigned the Maldivian Red Crescent the primary task to provide humanitarian aid, prevent and alleviate human suffering in disaster.

- Presidential Decree of December 2004 established the National Disaster Management Center.
- Under the Constitution of 2008, the following elements provide legal support to disaster management: Article 253 of Chapter II, Article 22 of Chapter II, and Article 23.
- Under the Decentralization Act of 7/2010, the Article 24 of Chapter 4 assigned Island Council to establish a mechanism that provides assistance in times of an emergency - Chapter 4, Article 24, Decentralization Act (7/2010)
- Disaster Management Act of 2015, provides full legal basis to the disaster management practice in the Maldives - (Disaster Management Act (Government of Maldives 2015)

As per the Disaster Management Act (Chapter 4, Article 28 (a) (7) of Disaster Management Act (Government of Maldives 2015)), the National Disaster Management Authority (NDMA) is vested with the responsibility to draft the NEOP, and set instructions for all sectors of the government for the purpose of integrating disaster prevention and mitigation measures in their sectoral disaster management plans and provide assistance.

4.3 ORGANIZATIONAL AND INSTTUTIONAL MECHANISMS

Ensuring effective disaster response and understanding and strengthening societal capacity for resilience have been two of the key priority areas in which NDMA has been working along with other stakeholders. In this regard, several policies, plans, and SOP's have been developed and programs have been implemented in the Maldives.

4.3.1 NATIONAL ORGANIZATIONS FOR DISASTER RISK REDUCTION

Apart from the NDMA, the Maldives has very few national organizations that undertake the DRR process. The Maldivian Red Crescent conducts programs and workshops mainly focusing on disaster management as a core strategic area. And the United Nations office in the Maldives provides funding and conducts various programs in coordination with the Maldivian government.

The National Disaster Management Centre conducts workshops and awareness programs in atolls and islands in collaboration with the Maldives National Defense Force to increase disaster risk reduction capabilities at the island and atoll levels.

Figure 30 and 31: National Disaster Management Authority conducting IDMP in one of the islands

The Maldives National Defense Force also conducts annual emergency management workshops in different areas of the country aimed at local counselors and staff who work in schools, the health sector, the Maldives Police Service, and other government agencies.

These workshops introduce them to the concept of managing a crisis before help arrives, how to deal with evacuations, and how to raise awareness about the importance of being prepared.

4.3.2 ISLAND DISASTER MANAGEMENT PLANNING (IDMP)

The Community-Based Disaster Risk Management (CBDRM) Program is currently one of the most successful programs run by NDMA as part of its efforts to reduce risk and increase preparedness and resilience. Formulating island disaster management plans is a component of the program that over 72 islands have now undergone since the end of 2023, with the support of USAID, UNICEF, and UNDP.

Figure 32: CBDRM 2.0 program

Through the CBDRM 2.0 Program, communities are encouraged to integrate DRR strategies and measures in all island-level sectors. These include ensuring schools have the necessary school emergency operations plans in place, hospitals and/or health posts, other public offices, and community institutions have the necessary standard operating procedures in place.

Disaster management plans have been completed on 72 islands by the end of 2023.

4.3.3 COMMUNITY EMERGENCY REPONSE TEAMS (CERT)

The aim of Community Emergency Response Teams (CERT) is to mitigate and control emergency situations during their initial stages. The primary objective of CERT is to respond to all island-level emergencies. CERT consists of volunteers trained to prevent any emergency from escalating into a major disaster. Island-level emergencies are best responded to by locals; therefore, it is essential that all CERT members belong to the respective island community

(preferably those who live and work on the same island).

An induction program will be conducted to enhance their DRR knowledge to guide them on how to react and respond efficiently and effectively to local emergencies, attend to those affected and most vulnerable, take action to mitigate any further loss or damage, and carry out initial field assessments to assess the situation and coordinate further relief efforts.

Figure 33: CERT Workshop

Any member of the island community who is over the age of 18 can become a CERT member with the ability to communicate clearly (both in spoken and written language). Each island community with a CERT team will have at least 15-20 members based in the community after completion of a CERT induction training who have to adhere to the humanitarian principles and affirm the CERT Code of Conduct in order to carry out the primary objectives and act as emergency responders.

CERT consists of volunteers trained to prevent any emergency from escalating into a major disaster. CERT members will undergo various response-related trainings from CERT training partners: MRC, MNDF (FRS and Coast Guard), and police. These teams will be managed at the island level by the Local Island Councils and Community Disaster Management Committee. By the end of 2023, there will be nine islands with established CERTs, and in two islands, CERTs will have specialized trainings such as firefighting, standard first aid, psychosocial support, search and rescue, and maritime safety, with the help of UNICEF.

4.3.4 LOCAL ORGANIZATIONS FOR DISASTER RISK REDUCTION

Non-governmental organizations, such as the CARE Society, have a focus on DRR and climate change. Other thematic NGOs working in areas such as women, children, people with disabilities, autism, heart disease, etc. advocate for mainstreaming DRR into development and the planning processes that cater to the needs of the most vulnerable people.

Figure 34: Care Society Students

5. DISASTER MANAGEMENT STRATEGY, POLICY, AND PLAN

The Third Constitution of the Maldives and the Disaster Management Act provide statements of the highest national policies and priorities of the nation. In addition, the Strategic National Action Plan (SNAP) for Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) aims to promote collaboration among policymakers, experts, and practitioners of disaster risk reduction and climate change adaptation throughout the country in order to develop a comprehensive risk management approach. The work to formulate the national disaster management plan (NDMP) is underway, and the national emergency operational plan (NEOP) has now been approved by the president. The DM Act compels us to produce and maintain these two plans. Other plans include the establishment of a national early warning system, the commissioning of a disaster management plan for the tourism sector, the development of a Safe Island Strategy, and the integration and mainstreaming of climate change adaptation and disaster risk reduction into the resilient island development planning of the Maldives.

6.
PROSESS OF THE IMPLEMENTATION HYOGO FRAMEWORK FOR ACTION (HFA) IN THE MALDIVES

The progress of implementation of the Hyogo Framework for Action (HFA) 2005–2015: Building the resilience of nations and communities to disasters has been going on in the Maldives since the time of its inception. In order to achieve the goals outlined by the HFA, the Government of the Maldives committed to the HFA's five priorities for action. Following is a summary of the National Progress Report on the implementation of HFA in the Maldives from 2011–2013, reported by the National Disaster Management Centre.

AREA 1: The more effective integration of disaster risk considerations into sustainable development policies, planning, and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness, and vulnerability reduction.

Outcome: Disaster risk consideration has been integrated into the government's National Development Plan. Specifically, the 2011 Strategic National Action Plan on Climate Change Adaptation and Disaster Risk Reduction for 2010–2020 was designed to promote collaboration among policymakers, experts, and practitioners of DRR and climate change adaptation in the country for the development of a comprehensive risk management approach. It aims to build the resilience of the nation and the island communities to disasters by sustaining the progress made by consolidating learned best practices and incorporating risk reduction into the strategy for decentralization. Once harmonized with the policies, plans, and sustainable development strategy, it will identify a consolidated set of programs and projects that can be undertaken with Government budget and considered for donor assistance. Few government agencies' programs have already integrated disaster considerations, such as the Safe Island program; a new proposal for mosques as safe shelters has been developed. These mosques will act as a base for food and water storage and communication equipment, acting as a stronghold on each island in case of disaster.

AREA 2: The development and strengthening of institutions, mechanisms, and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards

Outcome: Established government institutions lack adequate capacity and resources and thus have limitations in implementing DRR initiatives at all levels, including interventions for communities. The Disaster Management Act 28/2015, which was published in the government gazette on September 6, 2015, stipulates the basic tenets and principles that govern disaster management in the Maldives. The Act states the policies, rules, and guidelines that need to be formulated in order to reduce disaster risk and manage disasters. The implementation of the Decentralization Act was also hindered by the lack of sufficient capacity and resources at all national, atoll, and island levels, including communities. In the absence of a legal DRR framework and insufficient funding, government agencies have collaborated on an ad hoc basis to implement programs. The approach has mobilized trained staff

from different ministries and institutions at the national and international level in disaster management, risk reduction, and other related fields, with many yet to be fully utilized. The civil society organizations have made good progress in conducting trainings to strengthen the capacities of government agencies, private sectors, and communities.

AREA 3: The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response, and recovery programs in the reconstruction of affected communities.

Outcome: The government agencies, private sector, and civil society organizations have supported key sectors and several communities in emergency preparedness, response, and recovery. This includes the development of community-based disaster preparedness plans for affected communities with guidance on preparedness, response, and recovery based on vulnerability and capacity assessments (VCA). During the process, trainings for response, including 1st Aid, search and rescue, psychosocial support, and early warning, were provided, as well as simulation exercises conducted for some islands. School-level Standard Operating Procedures (SOPs) were completed for most schools in the country, with staff being trained on emergency preparedness and decentralized management, including regular mock drills being conducted within the school as well as activities carried out for community awareness with the involvement of parents in DRR. The Ministry of Health and Family has specific SOPs for the health sector, while the Ministry of National Defense Force and the Ministry of Tourism, Arts, and Culture have SOPs in place for their respective sectors.

6.1 IMPLEMENTATION OF SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION (SFDRR)

To strengthen understanding of the Sendai Framework for Disaster Risk Reduction in coherence with the 2030 Agenda for Sustainable Development and the Paris Agreement on Climate Change and the particular role of states together with other relevant stakeholders in developing national and local disaster risk reduction strategies by 2020, a 3-day workshop on the national implementation of the Sendai Framework: Development of Risk Reduction Strategies and Plans in the Maldives was carried out in Male' from March 7–9. This was the initial step in the implementation of the Sendai Framework, where the targets and indicators were discussed.

Among other countries, the Maldives also reported 2017 data on targets A, B, C, D, and E related to the SDGs before March 31, 2018. Work is ongoing for the reporting of 2015–2017 data for all global targets before October 1, 2018.

7. ADRC COUNTERPART IN THE MALDIVES

Name of Focal Point: National Disaster Management Authority

Website: www.ndma.gov.mv

Email: info@ndma.gov.mv