

MALDIVES

Disaster Management Reference Handbook

May 2021

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Front Cover

A portion of the Haa Dhaalu Atoll in northern Maldives. Photo: NASA/METI/AIST/Japan Space Systems, and U.S./Japan ASTER Science Team

Disclaimer

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Letter from the Director

In the years since the 2004 Indian Ocean tsunami, Maldives has built up its disaster risk reduction and response capacity at home while also taking a key role in the global campaign to address climate change. In addition to engagement with UN agencies and Asian, Oceanian, and Pacific groupings of states, the country has expanded civilian and military partnerships with the U.S. This relationship not only promotes resilience but also offers opportunities to rehearse emergency responses.

This handbook sets out some of the social, economic, and geographic context for Maldives' policies and practices to address fast-developing disasters and the longer-term challenges of shifting rainfall patterns and of rising sea levels and warming seas. The country is remotely situated in the Indian Ocean, and the population is small and widely dispersed among 26 atolls. The economy rests on two key pillars: tourism and fisheries. Given wide geographic dispersal and dependence on ecology for livelihoods and revenue, when storms, floods, tsunamis, or drought occur, the delivery of assistance requires significant time and resources. Thus, the development of atoll- and island-based mechanisms to respond to emergencies is a critical component to national disaster readiness.

As Maldives works to recover from the COVID-19 pandemic, the U.S. will remain a partner. The resumption of regular exercises and exchanges will ensure that the country's first responders have the knowledge and resources necessary to provide immediate relief to their communities. Moreover, these engagements will help prepare U.S. government and military personnel for what to expect in the event international assistance is required.

U.S. and other global parties who may be called upon to assist Maldives in case of emergency will find foundational information in this handbook. Together we can build upon the past 15 years of work and better prepare for the changing environment that will challenge us in the future.



Sincerely,

Joseph D. Martin, SES
Director

About the Center for Excellence in Disaster Management & Humanitarian Assistance

Overview

The Center for Excellence in Disaster Management & Humanitarian Assistance (CFE-DM) is a United States (U.S.) Department of Defense (DoD) organization that was established by the U.S. Congress in 1994. The Center is a direct reporting unit to U.S. Indo-Pacific Command and is located on Ford Island, Joint Base Pearl Harbor-Hickam, Hawaii.

CFE-DM was founded as part of the late Senator Daniel K. Inouye's vision. The Senator had witnessed the effects of Hurricane Iniki, which struck the Hawaiian Islands in 1992, and he felt the civil-military coordination in the response could have been more effective. He set about establishing CFE-DM to help bridge understanding between civil and military responders, and to provide a DoD platform for building Disaster Management and Humanitarian Assistance (DMHA) awareness and expertise among U.S. armed forces, and with partner nations in the Asia-Pacific. While we maintain a global mandate, the Asia-Pacific region is our priority area of effort, and collaboration is the cornerstone of our operational practice.

Vision

The Joint Force, allies, and partners are fully prepared to conduct and facilitate foreign humanitarian assistance.

Mission

CFE-DM builds crisis response capacity in U.S. and partner militaries, enhances coordination and collaboration with civilian and foreign partners, and strengthens those relationships to save lives and alleviate human suffering before, during, and after humanitarian crises.

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EXECUTIVE SUMMARY

The Republic of the Maldives (hereafter referred to as Maldives) is a low-lying island nation comprised of close to 1,200 islands within 26 naturally formed atolls.¹ All islands are subject to physical hazards due to the country's low elevation and the flat topography. The country is regularly affected by high frequency low impact seasonal events such as monsoonal flooding, coastal erosion, saltwater intrusion, and intense sea surge-related flooding due to sea level rise. As 75% of the land area of Maldives is less than a meter above mean sea level, the slightest rise in sea level will prove extremely threatening. The capital city Malé is one of the most densely populated cities in the world, with one-third of the country's population residing there, and it is susceptible to many man-made incidents including residential fires.²

The frequency of disaster triggered by natural hazards of large scale is relatively low; however, the 2004 Indian Ocean Tsunami brought devastating impact to the country's people, economy, and development progress. Maldives was one of over a dozen countries in the region affected by the Tsunami, which in turn significantly impacted the nation and spurred the development of more robust disaster management and disaster risk reduction strategies in the country. The country established the National Disaster Management Center in December 2004 to coordinate national response efforts. Efforts have also been made to create laws stipulating disaster management in the last decade,³ including the National Disaster Management Act (2015).⁴

In Maldives, frameworks, policies, and coordination mechanisms continue to evolve as they mature and are tested. National-level emergency response is led and coordinated by the National Disaster Management Authority (NDMA, formerly the National Disaster Management Center (NDMC)). NDMA is supported by the Maldives National Defence Force (MNDF), Maldives Police Service (MPS),

and Maldivian Red Crescent (MRC). However, local administrations (island councils) are the first line of response at the atoll and island levels. During a crisis or disaster, coordination occurs between councils, teams, liaisons, and other stakeholders.⁵

One of the most important objectives of NDMA is to mainstream disaster risk reduction (DRR) at the national level. Under the 2015 Disaster Management Act (DMA), NDMA's overarching objective is to minimize the impact of disasters,⁶ and work is underway to establish a modern Emergency Operations Center (EOC).⁷ In addition, the country has a Community Based Disaster Risk Management (CBDRM) Program run by NDMA as part of efforts to reduce risk and increase preparedness and resilience.⁸

Enhancing cooperation between health authorities and other relevant stakeholders to strengthen country capacity for disaster risk management for health and health systems is most timely in responding to the Coronavirus 2019 (COVID-19) pandemic. In 2016, the International Conference on the Implementation of the Health Aspect of the Sendai Framework for Disaster Risk Reduction 2015-2030 recommended this measure as well as others that could assist countries in implementing the health aspects of the Sendai Framework for Disaster Risk Reduction.⁹ The Maldives Ministry of Health has established a website and is tracking the status of the COVID-19 disease while providing updates.¹⁰ Maldives was one of the first countries to receive COVID-19 vaccines from India in January 2021 through bilateral aid.¹¹ Later, Maldives received delivery of COVID-19 vaccines through the COVAX facility in March 2021 by way of an initiative led by the World Health Organization (WHO), GAVI (formerly known as the Global Alliance for Vaccines and Immunisation), the Coalition for Epidemic Preparedness Innovations (CEPI), and UNICEF, providing vaccines to all developing countries suffering the brunt of the pandemic.¹²

COUNTRY OVERVIEW

History

The Maldivian archipelago was inhabited as early as the 5th century BCE by Buddhist peoples who originated in Sri Lanka and southern India. Islam was adopted in 1153 CE. The Maldives is of strategic importance because of its location on the major maritime routes of the Indian Ocean. This importance became evident in the 16th century as colonial powers (Portuguese, Dutch, and French) gained control over much of the trade in the Indian Ocean. The Portuguese forcibly established themselves in Malé in 1558 and reigned until they were expelled in 1573. In the 17th century the islands were ruled by a sultan under the protection of the Dutch rulers of Ceylon (now Sri Lanka).

In 1796, the British took possession of Ceylon but only made the Maldivian Islands a British protectorate in 1887. In 1932, the first democratic constitution of the islands was proclaimed, followed in 1953 by the proclamation of a republic; however, the country reverted to a sultanate later that same year.

In 1965, the Maldivian Islands attained full political independence from the British, and in 1968 a new republic was formed, thereby ending the sultanate. The last British troops left in 1976. The Maldives became a member of the Commonwealth in 1982.

Maumoon Abdul Gayoom ruled the country as President from 1978 to 2008 as the third President since the Maldives became a Republic. In the first years of the 21st century, Gayoom's government began to modernize and democratize the economy and political system. Beginning in 2003, reforms were instituted to improve human rights and the system of governance, and a multiparty political system was created. In 2008, a new constitution was adopted. The country's first multicandidate presidential election was held that year, and a former political prisoner, Mohamed Nasheed, was elected president, ending Gayoom's 30 year

tenure.

Nasheed's administration was hampered by lingering loyalty to Gayoom among members of the legislature, judiciary, police, and the military. Controversy erupted in January 2012 over the Nasheed administration's arrest of a senior criminal court judge. Nasheed resigned in early February and was replaced by his vice president, Mohamed Waheed Hassan. There was continued political unrest over the circumstances of the resignation, and a general election was held in September 2013; Nasheed received a large number of votes but did not win an outright majority. A second round of voting, in November, was won by Abdulla Yameen Abdul Gayoom, Maumoon Abdul Gayoom's half-brother. Two years later Nasheed was sentenced to 13 years in prison. He was granted leave to complete his sentence in Britain after undergoing surgery there, and he only returned to Maldives in 2018 after the Supreme Court overturned his sentence.¹³

In 2018, Yameen lost his reelection bid to Ibrahim Mohamed Solih, of the Maldivian Democratic Party (MDP), who had the support of a coalition of four parties that came together to restore democratic norms. In April 2019, Solih's MDP won 65 of 87 seats in parliament.¹⁴

After a one-year delay due to COVID-19, local elections were finally held in April 2021, resulting in the ruling MDP losing its majority among local council seats. The MDP won 43% of seats in the local council elections while the largest opposition party, Progressive Party of Maldives (PPM), won 34.9% of seats. Out of MDP's 804 candidates, 400 secured seats, while 325 out of the PPM's 646 candidates won seats.¹⁵ The MDP particularly experienced a loss of its supermajority in city and local councils in Malé, Addu City, and Gaafu Dhaalu Atoll - Thinadhoo.¹⁶ The MDP lost the majority in Malé amid low voter turnout. Although the capital has been an MDP stronghold for more than a decade, the Malé City mayoral seat was won by

Dr. Mohamed Muizzu of the Progressive Party.¹⁷ The loss was partially attributed to discontent over COVID-19 restrictions. Despite the losses, President Solih affirmed that MDP remained committed decentralizing the Maldives and would continue to empower local councils to strengthen decentralized governance.

Culture and Demographics

The culture of the country is influenced by proximity to India and Sri Lanka. Islam, the religion of the country, dictates various cultural aspects. Elements of African culture can also be observed. For example, Maldivian society pays great respect to elders and promotes strong relationships with immediate and extended family members. Members of society are expected to adhere to Islamic codes of conduct, and homosexuality has been criminalized. Males are allowed to marry four wives; however, polygamy is rare. Pre-marital sex is not allowed and is punishable.¹⁸

Maldivian cuisine includes fish as the main source of protein, and most meals include rice and fish. Meat other than pork may be consumed on certain ceremonial occasions. Vegetables are almost absent in the cuisine as the country has little arable land to grow them. Rice, sugar, and flour are some of the basic commodities that are imported from other countries. Food for tourists is commonly imported.¹⁹

The traditional attire involves a sarong wrapped around the waist as a lower garment and a cotton shirt which is most often white in color for men. “*Libaas*” are traditional costumes worn by women; they are like a long dress adorned with gold-and silver-colored threads.²⁰ Photo 1 depicts one of the few people still making *Kasabu Boavalhu Libaas*, a Maldivian cultural dress traditionally worn by

women. The intricate weaving is the “*Kasabu*,” and “*boavalhu*” translates to neckline.²¹

Ethnic Makeup

The population is almost entirely composed of ethnic Maldivians, a group formed by successive waves of various peoples settling in the islands through the country’s history. The first settlers may have been the Tamil and Sinhalese peoples from southern India and Sri Lanka. Traders from Arab countries, Malaya, Madagascar, Indonesia, and China also visited the islands in more recent centuries.²² Thus, most people are a mixture of Sinhalese, Dravidian, Arab, Australasian, and African, and this can be traced in the Dhivehi language.²³ Foreign migrants make up a significant portion of the country’s working population; some estimates find that 100,000 foreign workers, a significant proportion undocumented, mostly from Bangladesh, account for one-quarter of the labor force.²⁴

Key Population Centers

The total population of the Maldives is 557,426, with 379,270 Maldivians and 178,156 foreigners.²⁵ Over 100,000 people²⁶ (roughly 38% of the total population²⁷) live in the capital, Malé, which is on an island that measures 1 kilometer (km) by 1.7km (roughly one-half of one mile by one mile),²⁸ as seen in Photo 2.²⁹ The remaining population (62%) live in the islands of the



Photo 1: Maldivian Cultural Dress



Photo 2: Aerial View of Malé, Maldives

Atolls.³⁰ Approximately 31.5% of the population is 15-29 years of age.³¹ The country has an urban population growth rate of approximately 5% per year. It is anticipated that the population will more than double by 2025. This growth is expected to vary amongst the atolls with urbanization concentrated on the reclaimed island of Hulhumalé.³²

Language

The official language is Dhivehi. Dhivehi is based on Sanskrit foundations and is closely related to the Sinhalese language spoken in Sri Lanka. It is written in a script called Thaana,³³ which is written from right to left similar to the Arabic script.³⁴ Arabic, Hindi, and English are also spoken.³⁵ English is considered the second language of the Maldives, and the majority of the population can speak and write in English, as it is the medium of instruction in schools.

Religion

Although ancient Hindu culture had an impact on Maldives' local culture, Islam is the state religion.³⁶ Freedom of religion is severely restricted as Islam is the only religion

allowed to be practiced by Maldivians as per the constitution. Non-Muslims are not allowed to vote, hold public office, or possess citizenship. Foreigners are not allowed to worship publicly in the country if they belong to any religion other than Islam.³⁷

Vulnerable Groups

The scale and magnitude of a crisis or disaster has a higher impact on vulnerable populations and on those marginally above the poverty line. The following groups are particularly at risk in Maldives: women, children and adolescents, migrants, the elderly, people with disabilities,³⁸ as well as persons with substance abuse problems.³⁹

Women

Gender inequality can manifest as economic disadvantage for women in the Maldives, much as it does in many other countries. For example, a 2017 UNFPA Maldives Policy Brief explains that women headed households are found to be poorer compared to male headed households.⁴⁰ This could be interpreted to mean that access to services is limited for women, notably for those living in the islands and who are often dependent

on men for travel as well as for financial support. Traditional cultural and societal norms assigned different roles to men and women and designated positions within society's hierarchy. One key impact of this is on women seeking health services. Conservative thinking by families has, in some cases, led to gender segregation whereby some families disallow female members seeking services from male doctors; moreover, the method of family planning may be chosen by a man. Although a variety of family planning methods are available with the Public Health Units of the Atoll Hospitals and island health centers, some women are hesitant to seek those services due to the small nature of the community and a lack of privacy. An estimated 28.1% of need for family planning in the Maldives is unmet. Also, pregnant teenagers and those that have become pregnant but are not married have resorted to illegal abortion methods putting themselves at greater risk. Geography plays a role in inequality as it is not economically feasible for the government to provide a comprehensive list of health services to small populations on remote islands.⁴¹ In addition, women are more vulnerable to economic fragility during confinement and movement restrictions, as has occurred during the COVID-19 pandemic.⁴²

Children and Adolescents

Even before the COVID-19 pandemic, Maldives had very limited child protection and domestic violence services. In March 2020, COVID-19-related restrictions saw nationwide school closures that covered all grade levels from pre-kindergarten to 12th grade. With limited access to recreational and social interactions, children's physical development and psychological health are being negatively affected. Children and adolescents at risk or already experiencing violence in their homes have been confined with their potential abusers indoors, without the possibility to remove themselves from the danger.⁴³ As a region, South Asia has the highest proportion of countries reporting a disruption in any services related to

violence against children.⁴⁴

Maldivian youth are also at risk of radicalization or turning to violent extremism. More than 40% of the Maldivian population is 18-34 years of age. A 2019 youth vulnerability assessment survey found that 10% believed that people on their islands supported extremism. Furthermore, 69% reported social isolation was a serious problem for young people, which is a notable risk factor for violent extremism. Gangs have a significant impact in the urban areas of Malé and Addu City, where almost all survey respondents believed gangs were a problem and reported encountering them on nearly a daily basis.⁴⁵

Migrants

While the estimates vary widely, there are between 35,000⁴⁶ and 250,000 migrants living in Maldives. The majority work in the fisheries, agriculture, hospitality, and construction sectors. Of these migrant workers, approximately 60,000 are thought to be in an irregular immigration situation, having been trafficked or lost their immigration status, and lacking formal employment. As migrants are employed in the hospitality and construction sectors, some of the hardest hit sectors due to the pandemic, approximately 50% have faced income reductions, terminations, and furloughs. In addition, informal migrants have largely been excluded from government social assistance relief measures, labor protection, social protection, and health services. Thus, these people are vulnerable to labor exploitation, including debt bondage, and document and wage confiscation. Many of these migrants are stranded in the Maldives, and many live in congested, unhygienic housing accommodations.⁴⁷

Elderly

Delivery of and access to health and social services, especially for the elderly, has been affected by the COVID-19 pandemic. There are currently 18,598 elderly people registered by the pension office; of these people 1,220 are bedridden. This population is among the most

vulnerable to health risks posed by the pandemic, especially because they are unable to travel to Malé for medical care due to the lockdown (April – June 2020), as well as the travel restrictions put in place to reduce the spread of COVID-19.⁴⁸

Disabled Persons

The United Nations Common Country Analysis (UN CCA) has highlighted key gaps in services to persons with disabilities to include: lack of employment services and challenges around employment discrimination in the labor market, low expectations, and assumptions about skills and competencies of persons with disabilities.⁴⁹

A recent disability survey with the National Social Protection Agency (NSPA) indicates that only 25% of persons with disabilities receive benefits. Increased access to basic social services is essential to ensure their basic needs. Due to unavailability of Braille materials, visually impaired persons have had significant challenges in accessing health risk information or educational materials that shifted to online spaces due to pandemic-related lockdowns.⁵⁰

Economics

The Maldives is a higher middle-income country. It is dependent on the tourism and fisheries sectors. Climate change will have an impact on these two sectors; warming sea temperatures, rising sea levels, and ocean acidification are threatening the coral reefs, which in turn jeopardizes incomes, health, and long-term economic growth.⁵¹ Separate from ecological risks, infrastructure projects, largely funded by China, could add to a growing fiscal deficit and add to debt levels.⁵²

Tourism is the main economic driver. It generates the highest share of Gross Domestic Product (GDP)

at 23%. While fisheries' contribution is lower, this sector remains a significant source of rural livelihoods and plays an important role in domestic food and nutrition security. Almost 99% of the Maldivian territory is comprised of ocean. Thus, fish (especially tuna) is a primary source of protein in local diets.⁵³ Fishing employs approximately 20% of the country's labor force. Common species of fish found in the Maldives are tuna, grouper, dolphin fish, barracuda, trevally, and others. Photo 3 depicts a fish market scene in the Maldives.⁵⁴

The economy of the Maldives has developed rapidly in the last fifty years. Annual GDP growth has been high, averaging about 6% a year. The Maldives entered the South Asian Free Trade Area (SAFTA) in 2006 and in 2017 signed a free trade agreement with China. Imports include rice, textiles, medicines, and petroleum products. Exports from the country include mostly dried, frozen, or canned fish. Maldives' main trading partners include China, India, the United Arab Emirates, Thailand, Sri Lanka, and Singapore.⁵⁵

Government

For the last 45 years, the country has been a presidential republic⁵⁶ whose official name is 'Republic of Maldives.' In July 1965, Maldives attained independence from Britain. The Government's structure includes the president's



Photo 3: Fish Market, Maldives

office, parliament, and the judiciary. The President is both chief of state and head of government; the office is filled by direct, popular vote. There is a Presidential term limit of two five-year terms. The cabinet is nominated by the President and approved by the Maldives Parliament (also known as the People’s Majlis). In 2008, a new constitution came into effect.⁵⁷ The current President, Ibrahim Mohamed Solih, was elected in September 2018.⁵⁸ The Vice President is Faisal Naseem. The next election is to be held in 2023.⁵⁹ The Maldives uses an Islamic (Sharia) legal system with English common law influences, primarily in commercial matters.⁶⁰

Environment

Geography

The Maldives is a group of small, scattered islands in the Indian Ocean; it is located approximately 675 kilometers (420 miles) southwest of Sri Lanka,⁶¹ as pictured in Figure 1.⁶²

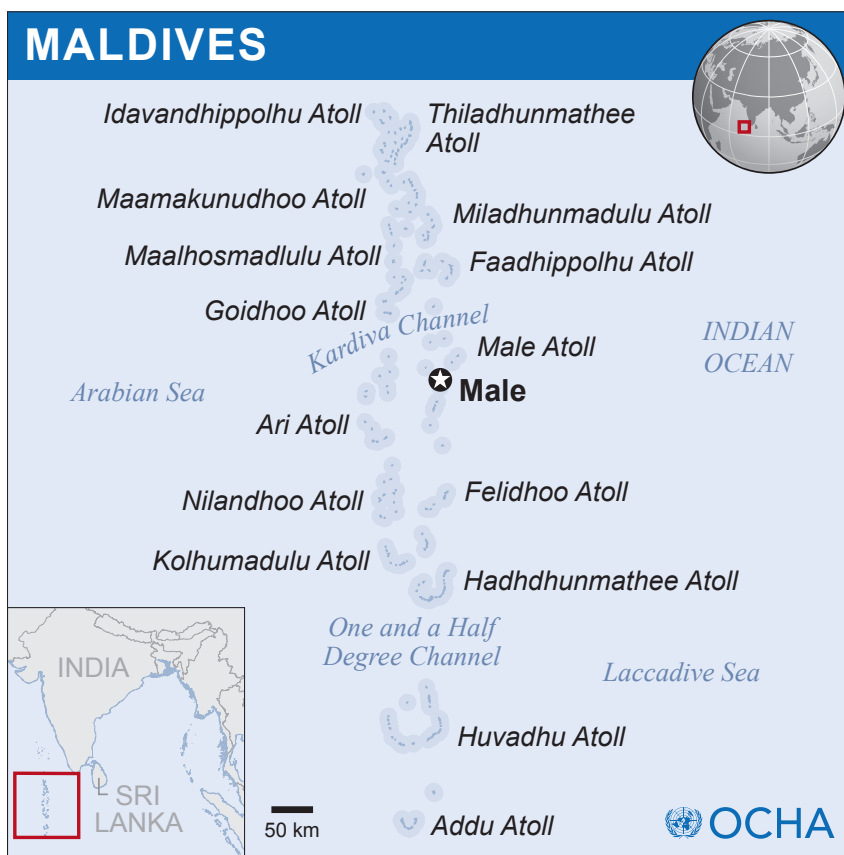
The Maldives is one of the most geographically dispersed countries in the world; it consists of close to 1,200 islands within 26 naturally formed Atoll-systems, which are grouped into 20 administrative atolls⁶³ and spread over roughly 90,000 square kilometers (35,000 square miles). Of these islands, only 187 are inhabited and another 105 are registered as resorts or marinas. Many islands can be walked across in just 10 minutes, and only a few are longer than 2km (1.24 mi). The islands are low-lying and rarely measure more than two meters or six feet above sea-level. The archipelago stretches 823 km north to south and 130 km east to west.⁶⁴

Borders

Maldives is an island country in the Indian Ocean and does not share borders with any country.

Climate

The country has a warm and humid tropical climate with an average daily high temperature of 33°C and an average daily low temperature of 26°C. There are minor variations in daily temperature throughout the year. Maldives has a southwest (rainy) monsoon season and a northeast (dry) monsoon season.⁶⁵ Rainfall averages about 2,130 millimeters (84 inches) per year. The atolls have sandy beaches and lagoons.⁶⁶



Map Sources: UNCS, ESRI.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Map created in Sep 2013.

Figure 1: Map of Maldives

DISASTER OVERVIEW

The Maldives experiences several climate hazards including tropical cyclones and storms, thunderstorms, cyclonic winds, drought, floods induced by heavy rainfall, and storm surges or “*udha*,” a Maldivian term for high waves. Weather events are exacerbated by a changing climate, as demonstrated by intensified storms, more frequent sea-surge events and longer dry periods which result in water shortages in some island communities. The country is vulnerable to coastal flooding and to tsunamis due to the islands’ low elevation; this vulnerability is worsened by climate change.⁶⁷

The most common hazard is flooding, often caused by wave run-ups at the coast and prolonged swell conditions. Other causes include sizeable tides, high winds, and rising sea levels. Saltwater intrusion also salinizes the freshwater lens. Human-induced hazards include oil-spills, residential fires, and aviation accidents.⁶⁸ There are also health emergencies including seasonal dengue and flu epidemics, with the COVID-19 being the latest epidemic.⁶⁹

Climate Change

Together with geological processes, climate change will threaten Maldives. Projections suggest a sea level rise of 0.09-0.88m over 1990 levels by the year 2100. Approximately 75% of the country’s land area is less than one meter (3.2 feet) above mean sea level; therefore, any rise in sea level is extremely threatening. It is estimated that by 2025, 15% of Malé’s land area will be inundated, and 50% by 2100. A 50cm rise in sea level could result in significant portions of the islands being inundated or washed away by erosion. Projected negative impacts include loss of land, flooding of low-lying coastal areas, displacement of population, loss of crops, impacts on coastal aquaculture, and erosion of sandy beaches. Climate change therefore affects the country in a very significant way, as most economic activities are heavily dependent on the coastal ecosystem.⁷⁰

The 2020 Asian Development Bank (ADB) Multi-hazard Risk Atlas of Maldives projects a warmer and wetter Maldives in the future. The current average temperature ranges from 27.95°C to 28.50°C, with higher temperatures in the northeastern region. Projected average annual temperature, based on a moderate greenhouse gas emissions scenario, suggests Maldives will have warmer days (average of 29.05°C–30.15°C) in the 2030s and 2040s, particularly in northern Maldives where the average annual temperature will range from 29.60°C to 30.15°C. Future rainfall projections show an increase over northern and central regions, but a decrease in precipitation in the southern regions for the years 2021-2050. For the years 2082-2100 an overall increase in precipitation is projected.⁷¹ Current rising temperatures are already affecting populations. Heat can cause declining water supplies, reduced agricultural yields, and health impacts.⁷²

Hazards

Maldives is also vulnerable to manmade risks and exposures including waste, pollution, and environmental degradation. Land reclamation, coastal modification, sand mining, and beach erosion can exacerbate coastal risks from storm surges and tsunamis.⁷³ While Maldives has been affected by major disasters such as the 2004 Indian Ocean tsunami, these large events are rare, and the frequency of large-scale natural hazards is relatively low. The Maldives does experience high frequency but low impact seasonal events including monsoonal flooding, coastal erosion, saltwater intrusion, and sea surge-related flooding due to sea level rise. Small-scale and recurrent hazards have caused the most damage and loss in recent years⁷⁴ including halting island-level economic activities, schooling, and medical services.

The Maldives experiences the following hazards:

Heavy Rainfall and Flooding

Floods due to rainfall are the most frequent natural events. Climate projections indicate that extreme flooding events are likely to become more frequent in the future.⁷⁵ Flooding in the country occurs often with a sudden downpour associated with low pressure systems and thunderstorms. The southern atolls receive ample rainfall and are exposed to heavy rainfall, which can lead to flooding, whereas the central and northern atolls are at lower risk. Though the central and northern atolls are less affected by heavy rains, the northern atolls can be exposed to heavy rains during cyclonic events occurring around the vicinity of the Maldives.⁷⁶

As previously mentioned, the Maldives experiences coastal flooding through swells, known locally as “*Udha*.” A rise in the water level on coasts during the southwest monsoon season causes flooding up to 0.6m, particularly along the western ridge of the atolls. The islands’ low-lying nature also makes them vulnerable to sea erosion.⁷⁷

Tropical Cyclones

The Maldives is exposed to cyclonic winds and associated storm surge. Northern islands can be affected by cyclones occurring in the Bay of Bengal and Arabian Sea. The risk of tropical cyclones is not particularly high; however, when they do occur, they are very damaging.⁷⁸

Tsunami

There is a risk from tsunamis generated in the active seismic zones around Sumatra and Western India, and in the waters west and southwest of the Maldives. The waters lying south of the Maldives and the Carlsberg oceanic ridge zone have a high level of seismic activity. Islands along the eastern edge of eastern atolls are more exposed to tsunami risk. While the risk of tsunami is quite high, the probability is low. Indeed, the probability of the Maldives experiencing another tsunami the size of that in 2004 is found to be one in 219 years.⁷⁹

Earthquakes

The country is at relatively low risk of

an earthquake as it is situated on the Indo-Australian plate, which is considered tectonically very stable and aseismic. While it is located away from high-seismic activity, Maldives is still at high risk from tsunamis generated by powerful earthquakes in the larger region. The waters south of Maldives and the Carlsberg oceanic ridge zone have a high level of seismic activity.⁸⁰

Drought

Although not as large of a concern as other natural hazards, drought does affect areas of the country. Northern and central atolls experience more frequent drought conditions due to uneven rainfall distribution or suppressed seasonal rains compared to the southern atolls, which generally receive more rain.⁸¹ A lack of capacity to effectively harvest rainwater and lack of other sources of water also contributes to water insecurity.

History of Disasters

The following is a list of disasters in the Maldives in the last ten years.

December 2019-Flooding

In December 2019, a few hours of torrential rain flooded the streets of Malé, and soldiers from the Maldives National Defence Force (MNDF) Fire and Rescue Service were deployed to pump out floodwaters in the worst affected areas. The heaviest rainfall was recorded on the central island of Muli in Meemu atoll (84.8 millimeters), followed by Alif Dhaal Maamigili (64.6 millimeters) and Gaaf Alif Gemanafushi (58.8 millimeters). Flooding was also reported on Rasdhoo Island in Alif Alif atoll where police helped residents protect households with sandbags.⁸²

September 2019-Fires

On 20 September 2019, a fire broke out at a three-story chemical storage facility at ‘Thilafushi’ house in Henvairu ward of Malé. Seven residential buildings caught fire on the Abadhah Fehi Magu road, and five other buildings were damaged. Several buildings

were destroyed or had to be torn down while an additional 24 buildings were damaged. One person was reported killed, and approximately 50 people were hospitalized. Over 700 people were affected, including over 100 migrant workers. More than 400 people were displaced.

The Maldivian Red Crescent (MRC) worked with other first responders on the scene including MNDF, MNDF Fire and Rescue Services, and the Maldives Police Service (MPS). MRC assisted with guiding people to safety, providing first aid, transporting the injured to hospitals, supporting safe transport to temporary shelters, and providing psychosocial support and shelter management. MRC also distributed relief items to over 500 affected people in NDMA's relief collection center.⁸³

Approximately 50 people affected by smoke inhalation were treated at the ADK Hospital, and Indira Gandhi Memorial Hospital (IGMH) treated 25 people. IGMH set up a medical post at Kalaafaanu school and treated 25 people where a relief center was set up to facilitate registration of displaced people, provide psychosocial support, and aid distribution.⁸⁴

Residential fire incidents have been increasing, attributed largely to urbanization with poor building code regulations. The most common types have been human induced and electrical fire incidents. 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 in 2016.⁸⁵

May-June 2019-Flooding

Monsoon rains triggered flooding in late May 2019 and continued through June, damaging approximately 600 homes.⁸⁶ The worst affected islands were in the northernmost atolls. Homes on Kulhudhuffushi and Nolvivaram in Haa Dhaal atoll, Maamendhoo Island in the southern Gaafu Alifu atoll, and islands in the south-central Thaa atoll were affected by flooding and storm winds.⁸⁷ Additionally, homes on three islands in Thaa atoll, homes on Villigili in Gaafu Alifu atoll, and hundreds of homes on six islands in Laamu atoll were affected. The police, military,

island councils, and the Maldivian Red Crescent responded to the situation, clearing roads, pumping out floodwaters, and assisting displaced families.⁸⁸

May 2018-Flooding

In May 2018, monsoon rains led to flooding in the southern atolls. Heavy rainfall caused flooding in southern Thinadhoo Island and Addu City, the southernmost area of the Maldives. Flooding was reported in the Hithadhoo, Feydhoo, and Hulhudhoo wards of Addu City. Maldives police assisted with pumping out the water. Water seeped into two households each in the Hithadhoo, Feydhoo, and Hulhudhoo wards of Addu City.⁸⁹

December 2017-Cyclone Ockhi

In early December 2017, heavy rains attributed to Cyclone Ockhi caused flooding on 36 islands; winds tore off roofs and felled trees on 22 islands, and swells were reported from four islands. The effects of the cyclone caused damage to households and property in 62 islands in the Maldives. Maldives police and military assisted with draining and pumping out floodwater on several islands.⁹⁰

May-June 2017-Monsoon Flooding

Heavy rains, strong winds, and a tornado caused damage on 14 islands in May and June 2017. In addition, a supply boat capsized near Malé atoll. Flooding damaged fields on the northern islands of Uligamu in Haa Alif atoll and Vaikaradhoo in Haa Dhaal atoll. Wind speeds in Malé hit 55 miles per hour, and some roads were flooded. Some 80 homes were also affected by flooding in the southern island of Nadella in Gaaf Alif atoll. Other affected islands included Nilandhoo in the south-central Faafu atoll and Thinadhoo in the southern Gaafu Dhaal atoll. Approximately 25 homes were damaged when a tornado struck the Hithadhoo ward of Addu City in the southernmost atoll.⁹¹ The houses were repaired by the National Disaster Management Authority (NDMA) with help from the military and state-owned companies.⁹²

January 2016-Fires

On 26 January 2016, a fire broke out in Thinadhoo Island on Gaafu Dhaal atoll affecting 12,000 residents. The fire destroyed all three of the island's generators, resulting in an island-wide electricity outage. This also affected the water supply as residents use electric water pumps to collect water from wells.⁹³

November 2015-Flooding

On 24-25 November 2015, southern Addu Atoll was affected by severe flooding after several hours of torrential rains. The storm damage was described as the worst in 40 years. Economic losses were estimated at US\$300,000. Homes and businesses in Addu City were inundated by floodwaters. The City experienced 228.4 mm rainfall in a day, the highest in a 24-hour period recorded in the country's history. The islands of Feydhoo, Maradhoo feydhoo, and Maradhoo were the worst affected.⁹⁴

December 2014-Fire

A fire at a water treatment plant broke out in December 2014; it cut off drinking water to approximately 100,000 residents in Malé.⁹⁵ This led to a 10-day suspension of all water supply, a Maldives government appeal to Sri Lanka, China, and the U.S. for assistance, and a declaration of a state of disaster. The U.S. provided approximately \$20 million in relief.⁹⁶

October-November 2012-Cyclone Nilam

Cyclone Nilam originated in the Bay of Bengal and first affected Maldives in late October 2012. It continued to affect the country into early November, flooding 51 islands. Of these, 28 islands were severely flooded, and four islands were reportedly left in a critical state. The cyclone affected 33,826 people and caused an estimated US\$133,090 in economic damages.⁹⁷

Country Risks

Country Risk Profile

Risk calculation takes into account exposure to hazards, vulnerability, and institutional

coping capacity, all of which are important factors in Disaster Risk Management. The Index for Risk Management (INFORM) Global Risk Index (GRI) measures the risk of humanitarian crisis and disasters in 191 countries. The INFORM GRI supports a proactive crisis management framework. INFORM GRI is helpful for establishing an objective allocation of resources for disaster management as well as for coordinating actions focused on anticipating, mitigating, and preparing for humanitarian emergencies. The INFORM GRI model is based on risk concepts published in scientific literature with three dimensions of risk: Hazards & Exposure, Vulnerability, and Lack of Coping Capacity. The first dimension measures the natural and human hazards that pose the risk. The second and third dimensions cover population factors that can mitigate against or exacerbate the risk. The vulnerability dimension considers the strength of individuals and households relative to a crisis while the lack of coping capacity dimension considers factors of institutional strength.⁹⁸

The INFORM GRI model is split into different levels to provide a quick overview of the underlying factors leading to humanitarian risk. INFORM gives each country a risk score of 1-10 (1 being the lowest and 10 the highest) for each of the dimensions, categories, and components of risk, as well as an overall risk score.⁹⁹ The higher the score the more at risk a country is to disasters. In the 2020 INFORM Global Risk Index, the Maldives had an overall risk of 3.2/10, which INFORM categorizes as the "medium" risk class. The Hazards and Exposure dimension score takes into account a combination of both natural and human hazards, and the Maldives rated 3.2/10. The Vulnerability dimension score was 3.7/10, and Governance in the Lack of Coping Capacity dimension score was 5.8/10. Physical exposure to tsunami, at 9/10, was the highest risk in the Hazards & Exposure dimension, with the Gender Inequality Index measuring at a 4.6/10 risk for the vulnerability dimension.¹⁰⁰

ORGANIZATIONAL STRUCTURE FOR DISASTER MANAGEMENT

Disaster Management in the Maldives became a national concern after the 2004 Indian Ocean tsunami. Consequently, many of the laws and arrangements regarding disaster risk and emergency response have been developed in the last 15 years. Frameworks, policies, and coordination mechanisms continue to evolve as they mature, are tested, and even run into political or economic realities.

National-level emergency response is led and coordinated by the National Disaster Management Authority (NDMA, formerly the National Disaster Management Center (NDMC)). NDMA is supported by the Maldives National Defence Force (MNDF), Maldives Police Service (MPS), and Maldivian Red Crescent (MRC). However, local administrations are the first line of response at the atoll and island levels.¹⁰¹

Maldivian political actors theoretically committed to decentralization, which could possibly affect disaster management, but implementation has been slow. The objectives of the 2010 Decentralisation Act included allowing island communities to make their own decisions in a democratic and accountable manner. However, successive administrations did not decentralize, with a 2019 review citing lack of political will for fiscal decentralization among the reasons. Should decentralization gain momentum in the future, disaster management has the potential to become more localized.¹⁰²

Lead Government Agencies in Disaster Response

National Disaster Management Authority (NDMA)

Maldives' National Disaster Management Authority (NDMA) replaced the National Disaster Management Center (NDMC) on 30

December 2018. NDMA is the lead coordinating authority for disasters and emergencies. It carries out comprehensive disaster risk management (DRM) interventions and addresses vulnerability issues in the Maldives. NDMC had been created by presidential directive after the 2004 Indian Ocean tsunami; all staff, equipment, and work were transferred to NDMA.¹⁰³

Under the 2015 Disaster Management Act (DMA), NDMA's overarching objective is to minimize the impact of disasters, "by establishing a proper mechanism to organize and coordinate disaster management activities at national, atoll, and island levels that are conducted by State institutions, NGOs, and the private sector."¹⁰⁴ One of the most important objectives of NDMA is to mainstream disaster risk reduction (DRR) at the national level. According to NDMA, work is underway to establish a modern Emergency Operations Center (EOC).¹⁰⁵

NDMA receives technical and financial support through partnerships with international technical bodies and donor agencies. Of note are projects funded by the UN Development Programme (UNDP), United Nations' Children's Fund (UNICEF), UN Office of Disaster Risk Reduction (UNDRR, formerly UNISDR), and the Asian Disaster Preparedness Center (ADPC). NDMA has received training from the South Asian Association for Regional Cooperation (SAARC), UN Economic and Social Commission for Asia and the Pacific (UNESCAP), Asian Disaster Reduction Center (ADRC), MERCY Malaysia, and other organizations.¹⁰⁶

There are three organizational units within NDMA:

Early Warning and Emergency Operations:

The national EOC serves as a central coordination and control facility responsible for emergency management functions at a strategic level and for ensuring the continuity of relief and recovery operations during emergencies.

Disaster Preparedness and Risk Reduction:

The DRR unit conducts local and national level programs to prepare for hazards and mitigate risk, including handling all matters related to Disaster Risk Reduction Policies, Flood and Fire, Disaster Awareness Programs such as Community-Based Disaster Risk Management (CBDRM), awareness program implementation, and project execution.

Corporate Affairs: Administration and Human Resources, Procurement and Logistics, and Budget and Finance sections provide administrative support to the EOC and DRR units in implementing programs and strategies.¹⁰⁷

Maldives Meteorological Service (MMS)

The Maldives Meteorological Service (MMS), based in Malé, operates 24/7 and is responsible for the country's seismological and meteorological services. MMS uses traditional news media, social media, and the web to post weather alerts. Information on the weather and weather forecasts is on the MMS home page (<https://www.meteorology.gov.mv/>).

There are five MMS offices that serve various sections of the country; the Hulhulé station is the main office. The other stations are in Haa Dhaal Hanimaadhoo, Laamu Kadhdhoo, Gaaf Dhaal Kaadedhdhoo, and Seenu Gan. Aviation and periodic surface weather (synoptic) observations done in the outer stations are sent to Hulhulé via email or fax. There are also 20 automated weather stations and three tide gauges installed across the country and that provide real time data to MMS.¹⁰⁸

Beyond its own forecasting, MMS contributes to and has access to the shared seasonal forecasts produced by the South Asian Climate Outlook Forum (SASCOF) of which Maldives is a member. This shared forecast focuses on tropical and mid-latitude rainfall patterns to inform users of probable precipitation or lack thereof on a short-term basis.¹⁰⁹

MMS' Meteorological Warnings run on a scale of "minor" (white), "moderate" (yellow), "severe" (orange), and "extreme" (red), illustrated in Table 1.¹¹⁰

Ministry of Health

The Ministry of Health (MoH) may be the lead government agency in some cases such as epidemics or pandemic events. As lead agency for such emergencies at the national level, MoH's role is to coordinate the management of the emergency in accordance with its own emergency plans and to use the provisions of the National Emergency Operations Plan (NEOP) in support of its management when the health sector is overwhelmed and requires a coordinated, multi-agency response. The SARS-CoV-2 pandemic is the first health emergency that has required full MoH mobilization with the support of key stakeholders including NDMA, MNDF, MPS, other government ministries, UN agencies, and civil society organizations (CSO).

Per NDMA's NEOP, MoH is the primary coordinating agency for emergency support during disasters and incidents with public health impacts such as floods or water crises.

As a supporting agency during broader national emergencies, MoH provides a qualified representative at the EOC. It coordinates directly with NDMA to advise on public health issues and the availability/capacity of the health system to respond. Moreover, MoH is responsible for the protection and operation of health infrastructure during an emergency.¹¹¹

Disaster Relief and Emergency Response

There are 20 administrative atolls and three city councils across 186 administrative islands. The 2010 Decentralization Act formalized the roles and responsibilities of atoll and island councils. At the local level, there are Atoll and Island Chiefs who head their respective administrations. Local Councils (Atolls, Island, and cities) are responsible for immediate response in cases of emergencies in their jurisdictions. According to the Disaster Management Act (DMA), if a disaster occurs in a City, Atoll, or Island, the City Mayor, Council president, or leader in charge of the island will play the lead role with local stakeholders. The

Hazard	CAP Categories of Severity			
	Minor (Alert level 1, WHITE)	Moderate (Alert level 2, YELLOW)	Severe (Alert level 3, ORANGE)	Extreme (Alert level 3, RED)
Heavy Rain and Flood	50 mm in 1hrs or 80 mm in 6 hours	70 mm in 1hrs or 100 mm in 6 hours	90 mm in 1hrs or 120 mm in 6 hours	180 mm in 6 hours
Thunderstorms (TS)	Significant TS reported and evident from satellite/Radar/LDN	Moderate TS observed or evident from satellite/Radar/LDN.	Severe TS observed or evident from satellite/ Radar/ LDN.	---
Wind and Seas	19-24 mph (past 3 hrs) or 22 – 27 mph (past 1hr), or forecast to meet this condition	25-30 mph (past 3 hrs) or 28 – 35 mph (past 1hr), or forecast to meet this condition	34-40 mph(past 3 hrs) or 36 – 42 mph (past 1hr), or forecast to meet this condition	>40 mph (past 3 hrs) or >42 mph (past 1hr), or forecast to meet this condition
Squalls (Frequent Gust)	50 - 54 mph	55 - 62 mph	63 - 69 mph	above 70 mph
Swell & Tidal Waves (observed or forecast)	Observed or forecast (minor impact)	Observed or forecast (affect at least 5 islands)	Observed or forecast (affect at least 10 islands)	Observed or forecast (extreme impact based)
Tropical Cyclone (TC)	RSMC declare TC center in the box within lat’ S5-N12, lon’ E66-E81	TC track towards Maldives and expect to cross Maldives atolls in next 24hr	TC track towards Maldives and expect to cross Maldives atolls in next 12hr	TC track towards Maldives and expect to cross Maldives atolls in next 6hr
Earthquake occurred	Magnitude >6 within 400km of Maldives EEZ. Or mag>7 in Indian Ocean within 4000km of Maldives EEZ	Magnitude >7 within 400km of Maldives EEZ. Or mag>8 in Indian Ocean within 4000km of Maldives EEZ	Magnitude > 8 within 400km of Maldives EEZ. Or mag>9 in Indian Ocean within 4000km of Maldives EEZ	Magnitude >9 within 400km of Maldives EEZ
Tsunami	Magnitude >8 in Indian Ocean within 4000km of Maldives EEZ. Or confirmation of Indian ocean wide Tsunami of low impact to Maldives	Magnitude>9 in Indian Ocean within 4000km of Maldives EEZ. Or confirmation of Indian ocean wide Tsunami of moderate impact to Maldives	Confirmation of Indian ocean wide Tsunami of high impact to Maldives	Confirmation of Indian ocean wide Tsunami of extreme impact to Maldives

Table 1: Criteria for Meteorological Alerts and Warnings

City/Atoll/Island Council also interacts with national groups for dissemination of information to vulnerable communities and to responding and coordinating national and international entities.¹¹²

Figure 2 shows the lines of coordination among stakeholders (Note: The NDMC is now the NDMA).¹¹³

Community Emergency Response Teams (CERT) are comprised of local volunteers trained to respond to island level emergencies. Team training aims to handle emergency situations during the initial stages of disaster response. Members are trained on how to attend to those affected, mitigate further loss or damage, carry out initial field assessments, and coordinate additional aid. The CERT for each island community is expected to comprise 15-20 members based within the community. Members undergo various trainings from CERT training partners including the Maldivian Red Crescent (MRC), Maldives National Defence Force (MNDF), MNDF's Fire Service and Coast Guard, and the Police. The teams are managed at the island level by the Local Island Councils or Community Disaster Management Committee (DMC).¹¹⁴

In case of emergency, a list of Emergency

Support Functions (ESF) helps organize government ministries, departments, agencies, the private sector, and voluntary organizations within the Multi-Agency Coordination System (MACS) to facilitate planning, preparedness, coordination, and resource mobilization. These include but are not limited to:

- Emergency Management – National Disaster Management Authority
- Health Care and Medical Services – Ministry of Health
- Transportation – Maldives National Defence Force
- Firefighting/Urban Search and Rescue – Maldives National Defence Force
- Law Enforcement and Public Protection – Maldives Police Service
- Energy, Water, and Sanitation – Ministry of Environment and Energy
- Mass Care and Shelter – National Disaster Management Authority and Maldivian Red Crescent
- Deceased and Dead Body Management – Ministry of Islamic Affairs¹¹⁵

In addition to the above functions, the Ministry of Environment supervises the Environment Protection Agency (EPA),

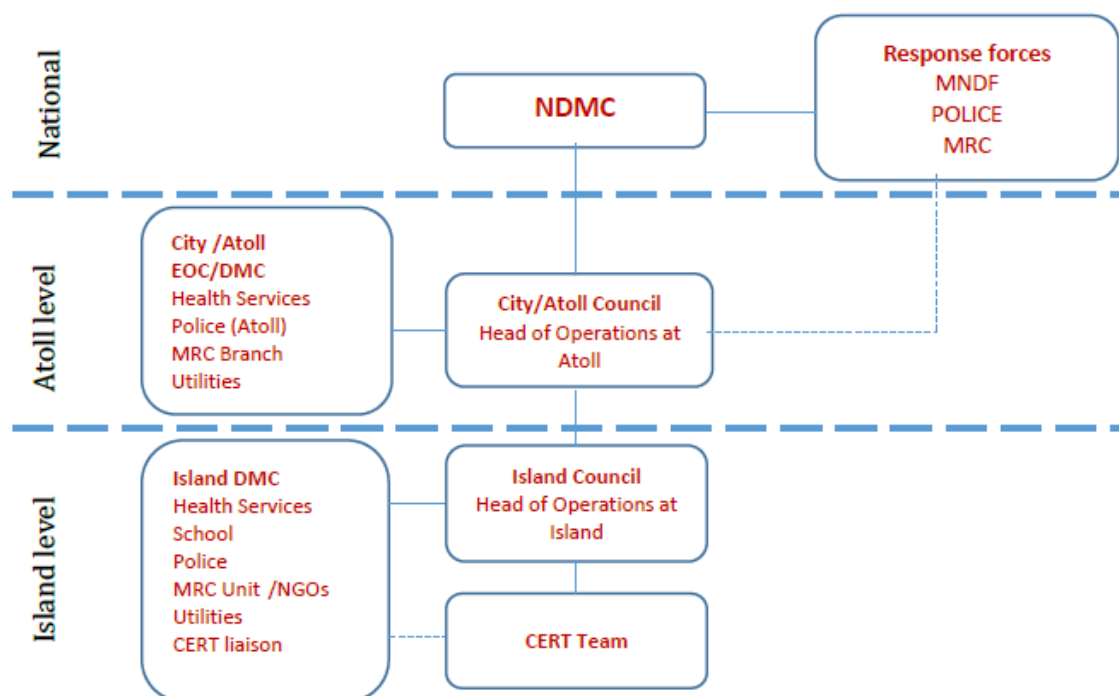


Figure 2: Emergency Response Coordination

Maldives Meteorological Service (MMS), Utility Regulatory Authority, UNESCO Baa Atoll Biosphere Reserve Office, and the Baa Atoll Conservation Fund, all of which have roles in emergency response as well as in disaster risk reduction and climate change action.¹¹⁶ The Ministry of Home Affairs (MoHA) oversees the Maldives Police Service (MPS) which is responsible for internal security and is an emergency first responder due to its presence across the atolls and its direct contact with the community.¹¹⁷ The Ministry of Health (MoH) works in close cooperation with the World Health Organization (WHO), and if WHO signals that under the international health regulations there is an emergency, the Director General of Public Health (DGPH) will advise the Minister of Health of a need to declare a state of public health emergency, a declaration that invests DGPH with significant powers regarding public health matters. MoH and WHO have an established Health Emergency Operations Center (HEOC) within MoH for the coordination and management of public health emergency response and recovery operations.¹¹⁸

Armed Forces Role in Disaster Relief

The Maldives National Defence Force (MNDF) and Maldives Police Service (MPS) are integral to disaster management. MNDF is responsible for external security and disaster relief; it reports to the Ministry of Defence (MoD). MPS is responsible for internal security; it reports to the Ministry of Home Affairs (MoHA).¹¹⁹

The Armed Forces Act (1/2008) assigns disaster relief operations to the Armed Forces. Thus, MNDF operates as a first responder during disasters, and it actively participates in other phases of disaster management, including disaster preparedness training and disaster risk reduction (DRR) projects with NDMA and the Maldivian Red Crescent (MRC). In collaboration with NDMA and MRC, MNDF has conducted workshops and awareness programs to increase DRR capabilities at the island and atoll level.

MNDF conducts annual emergency management workshops for schools, the health sector, MPS, and other government agencies. These workshops deal with preparedness, evacuations, and managing a crisis before help arrives.¹²⁰

Within MNDF, the Fire and Rescue Service (FRS) plays a key role in fighting fires and assisting with rescues. FRS will sometimes work with the Maldives Airport Rescue and Firefighting Services, based at the country's main airport, Velana International Airport near Malé, to combat fire emergencies.¹²¹

Although it is primarily focused on maritime law enforcement, MNDF's Coast Guard is responsible for coordinating Search and Rescue operations within the Maldives Search and Rescue Region.¹²² In recent years, the Coast Guard has built partnerships with the U.S., India, Australia, and Japan to include expanding bases, building coordination capacity, and adding to the Coast Guard's ship inventory. The Maritime Rescue and Coordination Center (MRCC) is one target of these partnerships and investment.¹²³ MRCC oversees all Coast Guard search and rescue operations. In February 2021, the governments of Maldives and Japan along with the UN Office on Drugs and Crime (UNODC) signed an agreement to establish a Maritime Rescue Coordination Training Facility at MRCC in Villimalé, 2km west of Malé.¹²⁴ The project comprises two phases, the first of which involves construction of a building, which will host the new MRCC offices, training spaces, accommodation, and a library. In the second phase, UNODC will design and deliver tailored training programs on search and rescue and maritime law enforcement.¹²⁵

Disaster Management Partners

The government's National Disaster Management Authority (NDMA) has primary responsibility to coordinate emergency response and disaster risk reduction (DRR). It works with other government and non-government agencies as well as Island/Atoll Councils. United Nations (UN) agencies are major partners acting in support of the government in terms

of both building institutional capacity and providing longer-term financial resources. In many communities, the Maldivian Red Crescent (MRC) is an implementing partner on building human capacities for Community Based Disaster Risk Reduction (CBDRR), strengthening partnerships, and supporting institutional arrangements at all levels (community/island, Island/Atoll Councils, and national level). At the national level, MRC also provides monitoring reports and advice to NDMA. Local and international non-government organizations (NGO) are key supports for institutional arrangements at all levels; they identify potential innovations and provide financial resources. Donor agencies and lending agencies, as appropriate, engage in national-level partnerships to contribute financial resources. The private sector is expected to engage in DRR implementation per existing institutional arrangements; entities may engage in partnerships and provide financial or in-kind resources at national, Island/Atoll Council, and community levels.¹²⁶

The UN Country Team (UNCT) Maldives consists of offices based within and outside the country. It comprises the Food and Agriculture Organization (FAO), International Fund for Agricultural Development (IFAD), International Labour Organization (ILO), International Organization on Migration (IOM), UN Development Programme (UNDP), UN Environment Programme (UNEP), UN Educational, Scientific, and Cultural Organization (UNESCO), UN Population Fund (UNFPA), UN High Commissioner on Refugees (UNHCR), UN Children's Fund (UNICEF), UN Office on Drugs and Crime (UNODC), UN Office for Project Services (UNOPS), the World Health Organization (WHO), and the World Bank.¹²⁷

UNICEF is one of the major organizations that supported the establishment of the Community Emergency Response Teams (CERT) who are the first responders on each island/atoll in case of emergency. UNICEF supported the government to develop the guiding framework for CERTs and

to provide each CERT the essential equipment to mitigate a crisis, such as dewatering pumps and accessories. In addition, UNICEF works with NDMA and island councils to embed DRR planning and response into local island development strategies via participatory island disaster management planning workshops. A special focus of this planning is the risk faced by women and children in a changing environment.¹²⁸

In terms of specific work, IOM supports local authorities to identify country priorities to enhance emergency preparedness and mainstream DRR. As the lead agency of the UN cluster for Camp Management in Disasters, IOM also contributes to national planning efforts to address emerging migration trends due to disasters, climate change, and environmental degradation.¹²⁹

Among its programs in Maldives, UNDP has a specific focus on climate change adaptation. Via its Green Climate Fund, UNDP supported the Ministry of Environment in a 5-year project to provide safe and uninterrupted drinking water to around 105,000 people on 29 project islands and 7 atolls through a decentralized dry season water supply mechanism. With climate induced fluctuations in rainfall expected, these water supply mechanisms can be expected to become more common.¹³⁰ Moreover, UNDP assists Maldives in Community-Based DRR (CBDRR) and local disaster and climate risk management planning, particularly in Addu where it works in collaboration with MRC and Dhiraagu via un-manned aerial vehicle surveillance.¹³¹ Finally, UNDP is involved in chemical and hazardous waste management and assists the Maldives' government in complying with the Stockholm Convention on Persistent Organic Pollutants.¹³²

The World Health Organization (WHO) is the main international coordination body working with Maldives' Ministry of Health (MoH) and is a partner in operating the Health Emergency Operations Center (HEOC) in case of public health emergency or disaster with health implications.¹³³ WHO has long been working in the country, helping it move toward certified

elimination of malaria, lymphatic filariasis, and measles. In times of emergency, WHO helps Maldives mobilize technical resources and boost national capacity for integrated diseases surveillance with enhanced laboratory systems.¹³⁴

In recent years, WHO has supported Rapid Response Training (RRT) and Hospital Emergency Readiness Training (HERT) in over 17 atolls. These training sessions strengthen the preparedness and response capacities of peripheral health institutions.¹³⁵

Of special importance are the GeneXpert diagnostics that WHO helped establish in more than 10 atolls and at the central level at Indira Gandhi Memorial Hospital (IGMH). Intra-agency Emergency Health Kits (IEHK) have been distributed and placed in 3 regions (north, south, and central) since 2016. A single IEHK is designed to meet the initial primary healthcare needs of a displaced population without medical facilities or a population with disrupted medical facilities in the immediate aftermath of a natural disaster. It contains medicines and medical supplies sufficient to assist a population of 10,000 people for approximately 3 days during an emergency.¹³⁶

The South Asian Association for Regional Cooperation (SAARC) Disaster Management Centre (DMC) was established in November 2016 by merging four SAARC Centers: SAARC Disaster Management Centre (SDMC – New Delhi, India); SAARC Meteorological Research Centre (SMRC – Dhaka, Bangladesh); SAARC Forestry Centre (SFC – Thimphu, Bhutan); and SAARC Coastal Zone Management Centre (SCZMC – Malé, Maldives). The new DMC, based in Gujarat, India, has the mandate to support member-states' Disaster Risk Reduction (DRR) initiatives through scientific and technical knowledge, exchanges of best practices, capacity development, collaborative research, and networking.¹³⁷

Maldives is a member-owner of the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES). Representation within the institution is via the Maldives

Meteorological Service (MMS). While the Program Secretariat rotates among members, the Government of Maldives serves as the RIMES Administrative Secretariat, representing RIMES in the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (IOTWS). RIMES evolved from early efforts in the aftermath of the 2004 Indian Ocean tsunami, and it is active in establishing a regional early warning system within a multi-hazard framework for the generation and communication of early warning information. Moreover, it is a partner in capacity building for preparedness and response to trans-boundary hazards.¹³⁸

The International Red Cross and Red Crescent Movement

International Committee of the Red Cross

The International Committee of the Red Cross (ICRC) is a private, independent humanitarian organization, headquartered in Geneva, Switzerland. The ICRC bases its activities on the provisions of International Humanitarian Law, and it is neutral in politics, religion, and ideology. The ICRC assists with the protection of civilian victims of armed conflict and internal strife and their direct results. Within these roles, it may take any humanitarian initiative as a neutral and independent intermediary.¹³⁹

International Federation of Red Cross and Red Crescent Societies

The International Federation of Red Cross and Red Crescent Societies (IFRC) is a humanitarian organization that provides assistance and promotes humanitarian activities carried out by the National Societies, with a view to preventing and alleviating human suffering. IFRC was founded in 1919 and includes 192 National Societies. The IFRC carries out relief operations to assist victims of disasters and combines this with development work to strengthen the capacities of its member National Societies.¹⁴⁰

Maldivian Red Crescent

The Maldivian Red Crescent (MRC) is an independent, voluntary, humanitarian organization. It was established by the Maldivian Red Crescent Law of 2009 as the country's National Society. This law mandates MRC to respond to emergencies and disasters as an auxiliary of government agencies.¹⁴¹ MRC's primary objective is to provide humanitarian aid, and to prevent and alleviate human suffering. MRC counts more than 4,440 volunteers who work across 10 branches and 20 units spanning the country's atolls.¹⁴² MRC has programs to train individuals in Community-Based Disaster Risk Reduction (CBDRR) and for emergency response. The most common issue confronted by Maldivian society is flooding, and MRC partners globally and nationally to address sea level rise.¹⁴³ During 2019, the most recent year with available data, MRC responded to 21 emergencies, 12 of which were flooding events driven by heavy rains on Haa Dhaalu, Malé, Gaafu Alifu, and Addu.¹⁴⁴

MRC is an embedded partner within the Maldivian National Emergency Operations Coordination Framework and works closely with the relevant authorities during crises. MRC Emergency Response Team (ERT) members participate in drills with the Ministry of Education, the Maldives National Defence Force (MNDF), and the United Nations Development Programme (UNDP). Photo 4 shows MRC ERT members participating in a flood response during 2019.¹⁴⁵

U.S. Government Agencies in Maldives

The United States has been providing assistance to Maldives since 2001 so that the country can meet its energy needs, provide clean drinking water to residents, protect marine life and ecosystems, and strengthen institutional capacities of government bodies. More than \$30 million in U.S. investments to Maldives have supported relief and reconstruction assistance following humanitarian crises since 2004. The U.S. Agency for International Development (USAID) is a key agency in

U.S.-Maldives engagement.¹⁴⁶ USAID signed a landmark agreement with the Government of the Maldives in March 2019 to improve the resilience of Maldives' economic and democratic governance and to support inclusive and sustainable development. A \$20 million bilateral development agreement was signed in March 2019 by the USAID Mission Director for Sri Lanka and Maldives and the Maldivian Minister of State for Foreign Affairs,¹⁴⁷ and has since been amended to increase bilateral assistance to \$35 million for the Maldives.¹⁴⁸

During the Severe Acute Respiratory Syndrome - Coronavirus - 2 (SARS-CoV-2) pandemic, the U.S. donated 60 new, state-of-the-art ventilators to Maldives; this equipment provided a vital life-saving resource to patients affected by the virus. In addition to the ventilator donation, the U.S. funded an almost \$3 million tailored package of support that included helping local civil society organizations to expand COVID-19-related social protection services, advocate effectively for recovery policies, and provide technical assistance to the government to develop effective economic, fiscal, and monetary measures in response to the pandemic. The ventilators and other support were funded through USAID.¹⁴⁹ The technical assistance addressed critical care, emergency care, and transport of critical patients with and without ventilators. Through the Meeting Targets and Maintaining Epidemic Control (EpiC) program, USAID helped build a network of trainers on



Photo 4: Red Crescent Team Members Respond to Flooding

these subjects to improve overall patient care through the islands and atolls.¹⁵⁰ Although designed as an HIV project, EpiC has been modified to strengthen health systems to address COVID-19.¹⁵¹

The United States partners with the Maldives to strengthen environmental resilience. USAID helps protect Maldives' delicate marine ecosystem, and it builds partnerships to strengthen the island nation's capacity to become self-reliant. To mitigate the negative impacts of warming sea temperatures, rising sea levels, and ocean acidification that threaten fragile coral reefs and jeopardize incomes, health, and long-term economic growth, USAID helps to increase policymakers' access to technologies that help sustainably manage oceans. USAID also builds local capacity to measure, monitor, and adapt to the impact of natural hazards, helping Maldives progress toward its goal of achieving recognition as a UNESCO Biosphere Reserve.¹⁵²

On issues of ecosystems, the environment, and mitigating the impacts of climate change, USAID is helping Maldives to strengthen the management of coral reef ecosystems. The Reefs Generate Environmental and Economic Resiliency for Atoll Ecosystems (REGENERATE) project strengthens the management of coral reef ecosystems to mitigate the adverse effects of climate change in Maldives. The four objectives are: 1) improve access to science and technology for decision making and establish policy frameworks for increasing coastal resilience; 2) increase stakeholder capacity to measure, monitor, and adapt to climate stresses through education, training, and outreach; 3) strengthen governance in support of decentralized management for more resilient reef ecosystems; and 4) establish sustainable financing mechanisms to support climate-resilient marine management. USAID has trained volunteer marine biologists on best practices to monitor marine biodiversity. These "citizen-scientists" help raise awareness and implement climate impact mitigation and management measures. USAID has also sponsored a series of public seminars on environment at the Maldives

National University. More than 6,000 people attended these seminars.

As part of a new activity, Climate Change Adaptation Maldives, USAID will strengthen the capacity of the Maldivian government, private sector, and local environmental and community groups to adapt to the vulnerabilities of climate change by improving natural resource management – particularly marine resources. Approximately \$11 million in assistance will help government institutions, the private sector, and non-governmental environmental groups to manage the impact of climate change on selected sectors. USAID activities will: reduce risk and support adaptation planning in the tourism and fisheries sectors by improving access to information about weather, climate hazards, and environmental impacts; support central and local governments in addressing climate-related risks; support innovative approaches to climate risk resilience; and mobilize private sector funding or financing for actions that reduce risks associated with extreme weather, climate variability, and climate change.¹⁵³

Meanwhile, to address the issue of decreasing potable water on Hinnavaru Island, the Maldives Global Climate Change project constructed an integrated water supply and distribution system to provide reliable access to safe drinking water for the island's 4,500 residents. Completed in 2017, the integrated water supply and distribution system is part of USAID's strategy to enhance water security and build the national and local capacity of government utilities. USAID provided technical assistance and capacity building to help regulators make informed decisions around water resource management, and to develop the knowledge, skills, and attitudes that island residents need to become good stewards of their island environment.¹⁵⁴

In response to a Maldivian government request, USAID provides technical assistance to government ministries and helps advance sound economic and democratic policies. USAID also supports civic engagement in reform processes and assists with voter education

ahead of elections. Three specific projects are the Strong and Inclusive Maldivian Democracy (SIMD) activity, the Promoting Resilience in Maldives (PRIME) project, and Public Financial Management (PFM) in Maldives.¹⁵⁵ SIMD aims to strengthen the capacity and resilience of democratic institutions in Maldives by increasing the efficiency and effectiveness of local government and the justice sector, and by increasing citizen engagement with government on policy reform. PRIME aims to increase the resilience of vulnerable populations and at-risk groups, including youths, against violent extremism by strengthening the education system and improving employment prospects.¹⁵⁶ PFM Maldives helps the government establish a transparent and accountable budgetary system to improve national budget allocations and management. The activity will also help the national government to identify efficient public investments, including management and oversight, and to mobilize public revenue, commensurate with the determined level of public investments and services. In supporting PFM, USAID strengthens government capacity and systems to implement transparent budget management, efficient public investment, and mobilize public revenue for better public expenditure management.

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Laws, Policies, and Plans on Disaster Management

The Government of the Maldives has developed various legal and institutional arrangements to plan and manage disaster risk reduction (DRR) and disaster response management activities. In addition to the general principle of protection of the citizenry from hazards, the 2008 constitution lays out other duties fundamental to emergency response. Chapter II, Article 22 asserts the fundamental duty of the State to protect and preserve the natural environment and upholds the people's rights and freedoms to such protection. Chapter XI places natural disasters on par with epidemic diseases, wars, threats to national security, or threatened foreign aggression as subjects appropriate for declaration of a state of emergency by the President in all or part(s) of the country.¹⁵⁷ The work to formulate the national disaster management plan (NDMP) is underway and the national emergency operational plan (NEOP) has been sent to the president, but neither has been published.¹⁵⁸

Disaster Management Act (2015)

The Disaster Management Act (DMA) confers upon the State the responsibility to protect its people, their health and well-being, their property, and the natural and built-up environment from natural and man-made disasters and hazards. It requires the State not only to respond to disasters but also to mitigate risk, establish emergency response guidelines, ensure disaster preparedness, assist in disaster relief, seek assistance in providing basic necessities, and coordinate all related matters. The purpose of the Act is:

- To protect the people from natural hazards and man-made disasters
- To incorporate guidelines on disaster risk mitigation and preparedness
- To reduce disaster risk and to adapt a preparatory national strategy, to identify responsible parties to manage disaster risk, and to identify their responsibilities
- To provide assistance in emergency situations, provide assistance in relief efforts, and incorporate guidelines to coordinate such assistance
- To state the roles and responsibilities of the City Councils, Atoll Councils, and Island Councils in reducing disaster risk in emergency situations
- To create awareness among the people on reducing disaster risk and on mitigation in emergency situations, and to incorporate guidelines to protect the people from such dangers and enhance coping capacity
- To incorporate disaster risk reduction guidelines and policies within sustainable national development projects
- To make the people responsible and accountable on disaster risk reduction and disaster mitigation.¹⁵⁹

National Emergency Operations Plan

Formulating and maintaining a National Emergency Operations Plan (NEOP) is one of the NDMA's key tasks. The agency continues to use and up-date the NEOP although it has not been officially endorsed.¹⁶⁰

Education Sector Emergency Preparedness and Response Plan (EPRP) and School Emergency Operations Plan (SEOP)

An Education Sector Emergency Preparedness and Response Plan exists and is being revised in 2021. An example of an Educational Response Plan was published in May 2020 to guide the sector's response to the SARS-CoV-2 pandemic. It reflects a countrywide effort to lessen the impact of school closures and to set the stage for re-opening.¹⁶¹ Meanwhile, all public schools in the country are expected to have a School

Emergency Operations Plan (SEOP) that reflects the specific context of each community.

Health Master Plan (2016-2025) and Health Emergency Operations Plan (2018)

The Health Master Plan (2016-2025) identifies three strategic focus areas: governance, public health protection, and health care delivery. Each area includes strategic direction to build public trust in the health system, to reduce the disease and disability burden among the population, and to reduce inequalities in access to health care. The health system's approach to emergency risk management for health will build upon the same strategic areas and directions.

The national Health Emergency Operations Plan (HEOP) of 2018 lays out the response mechanisms and responsibilities in case of public health emergencies. It incorporates actions, policies, and regulations on how to elaborate, implement, and execute a response operation for public health emergencies and disasters with public health impacts. The Health Protection Agency (HPA) under the Ministry of Health (MoH) is the lead administrative and planning agency for public health initiatives and activities including public health emergency management. HEOP identifies MoH and HPA's response activities during a public health emergency and supports public health and medical care components in NDMA's national emergency operations plan.¹⁶²

National Community-Based Disaster Risk Reduction (CBDRR) Framework (2014)

Since the concept and practice of community-based disaster risk reduction (CBDRR) was introduced to the Maldives in 2005, a framework has been developed with the lead of the National Disaster Management Authority (NDMA) and technical support from the Asian Disaster Preparedness Center (ADPC). Members of NDMA, ministries involved in CBDRR, and development partners who support the government of Maldives are the primary implementing partners for CBDRR. The framework incorporates plans for institutional

arrangements, human capacity, technical capacity, partnerships, and financial resources.

To strengthen institutional arrangements, the national level is the focal point for preparing practical guidelines for implementation of the Disaster Management Act (DMA), formulating a system to rank the most disaster resilient or active councils/islands, promoting and advocating CBDRR among government departments, identifying a systematic mechanism for Government Ministries and Departments to contribute to the implementation of the DMA, and supporting vertical integration of islands, atolls/cities, and Malé. In order to strengthen human capacity, national, island, and community entities all have a role in identifying, recognizing, and promoting schemes for CBDRR, and they will need to cooperate with the National University, through local council trainings, and with local schools to integrate DRR into formal education. To strengthen technical capacity, national authorities can consider a Training Division within NDMA, integrate a risk index into the assessment formula for Island Development Plans, develop a Disaster Information System and add a basic mobile version for easy access in communities, include DRR modules into teacher training, review community/island risk assessments from a scientific and broader economic perspective, and conduct a campaign of traditional and local coping mechanisms for DRR. In order to strengthen partnerships, multi-stakeholder partnerships need to be formalized including involvement of civil society organizations. To strengthen financial resources, national authorities need to seek to influence future large development projects during the design/appraisal stage and to establish a mechanism for pooling stakeholder/partner budgets. At the Island/Atoll level, private resorts need to be brought in as partners to support CBDRR implementation and finance of community projects. In addition, advocacy information needs to reach local businesses to identify clear mutual benefits between the businesses and communities if businesses provide small funds or in-kind

contributions for risk reduction activities.¹⁶³

Public Health Protection Act (2012)

The Public Health Protection Act (7/2012) establishes policies for the protection of public health and is the legal instrument that established the Health Protection Agency (HPA) within the Ministry of Health (MoH). Its objectives are:

- Establishing the main policies to protect public health in Maldives
- Identifying the persons responsible for protection of public health, determining the structure they would be placed in and their main responsibilities
- Identifying communicable, dangerous, and notifiable diseases, and policies on how such diseases can be classified
- Identifying lifestyle-related diseases and non-communicable diseases, increasing public awareness on such diseases, and establishing policies to protect public from them
- Establishing policies to respond to public health emergencies
- Classifying situations which may be harmful to health and establish measures to take in such a situation
- Establishing roles and responsibilities of island, atoll, and city councils for the protection of public health
- Making each Maldivian citizen a responsible and accountable person with regard to public health protection
- Identifying offenses which endanger public health protection and determining punishments for such offences¹⁶⁴

Strategic National Action Plan (SNAP) for Disaster Risk Reduction and Climate Change Adaptation (2010-2020)

Building on its economy-wide carbon neutral plan for 2009-2019, the Maldives began work on a Strategic National Action Plan (SNAP) for Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA). The process was initiated with assistance from United Nations International Strategy for Disaster Risk Reduction (UNISDR - now the United Nations

Office for Disaster Risk Reduction (UNDRR)) per agreement in July 2009. Designed to promote collaboration among policy makers, experts, and practitioners of DRR and CCA for the development of a comprehensive risk management approach, SNAP supports the government's efforts to achieve its vision of good governance and prosperity. SNAP aimed to build resilience to disasters by sustaining progress made, consolidating learned best practices, and incorporating risk reduction into the strategy for decentralization.

The SNAP development process was informed by the post-2004 Indian Ocean Tsunami recovery process in the following ways:

- Incorporating multi-hazard analyses into development and information policies
- Continuing training and field experiences
- Building and sustaining significant engagement and partnerships with international non-governmental organizations (INGO) and the private sector
- Developing policies to support application of international standards in reconstruction and rehabilitation processes.¹⁶⁵

National Adaptation Programme of Action (NAPA)

The first National Adaptation Programme of Action (NAPA) was developed to communicate the most urgent and immediate adaptation needs of the Maldives to the United Nations Framework Convention on Climate Change (UNFCCC). NAPA preparation began in 2004 but halted because of that year's Indian Ocean tsunami. It relaunched in February 2006. NAPA describes the National Adaptation Policy Framework including interactions among climate hazards and risks, exposure and vulnerability of systems, desired sustainable development outcomes, and adaptation strategies, country characteristics, national development goals, and climate hazards and risks peculiar to the Maldives. The focus of the adaptation framework is on climate change related hazards, risks, and shocks, and what the Maldives will do to cope with them. The framework does consider barriers to

implementation. There are several socio-political shocks and stresses such as political instability, social upheaval, and terrorism that could affect speedy implementation of national adaptation activities. Barriers identified in NAPA include weak institutions without strategic direction or human, financial, and technical resources to implement plans, and a lack of knowledge, education, and awareness among the public on the science and impacts of climate change.¹⁶⁶

Local Management Plans

The Community Based Disaster Risk Management (CBDRM) Programme is run by NDMA as part of efforts to reduce risk and increase preparedness and resilience. Formulating disaster management plans for each island is a component of the Programme that at least 56 islands have undergone with support from UNDP and UNICEF. Through the CBDRM 2.0 Programme, communities are encouraged to integrate DRR strategies and measures in all island level sectors. These include ensuring schools have necessary School Emergency Operations Plans (SEOP) in place, that hospitals and/or health posts have Health Emergency Response Plans (HERP), and that other public offices, and community institutions have the necessary Standard Operating Procedures (SOP) in place.¹⁶⁷

Table 2 lists additional laws and frameworks applicable to the country's humanitarian assistance and disaster relief preparedness and response activities.¹⁶⁸

Disaster Management Communications

The two main agencies responsible for information, warnings, and alerts are the Maldives Meteorology Service (MMS) and the National Disaster Management Authority (NDMA). MMS is the technical agency responsible for issuing early warnings related to most natural disasters. The agency may receive alerts from its own facilities, or from regional and international agencies. MMS

ORGANIZATIONAL STRUCTURE FOR DISASTER MANAGEMENT

IMPLEMENTATION	LEGISLATION/POLICY	SCOPE	PURPOSE
GOVERNMENT OF MALDIVES	Disaster Management Act (2015)	National, Atolls, Islands,	To protect people from natural and man-made hazards, to incorporate DRR into all levels of planning, to create awareness about disaster and climate risk, and to state the roles of operators at all levels.
NDMC, ISLAND & ATOLL COUNCILS	Community Based Disaster Risk Management Framework (2014)	Atolls, Islands, Communities	To guarantee the institutionalization of community-based DRR approaches, and to enhance local capacities at the islands through participation.
NATIONAL DISASTER MANAGEMENT CENTER	National Framework for Managing Internally Displaced Persons in the Maldives (2013)	National, Atolls	The framework for managing IDPs is to ensure that individuals receive support which is on par with the international principles and SPHERE standards on displacement nationwide
NATIONAL DISASTER MANAGEMENT CENTER	Health Emergency Operations Plan (2018)	National, Atolls, Islands	An action plan to provide a multi-hazard strategic plan for health emergencies, assigning roles and responsibilities to relevant agencies and operators for a better response.
THE GOVERNMENT OF MALDIVES	Strategic National Action Plan for Disaster Risk Reduction and Climate Change Adaptation SNAP (2010-2020)	National, Atolls, Islands	To guarantee an integrated approach to DRR and CR where systematic efforts to manage disasters and climate risk have been synergized through streamlining DRR and CR into all development.
THE GOVERNMENT OF MALDIVES	Maldives Decentralization Act (2010)	Atolls, Islands	Granted more powers and responsibilities to local governments to better carry out their local plans and take after their constituencies.
GOVERNMENT OF MALDIVES	Maldives Climate Change Policy Framework (MCCPF) (2014-2024)	National, Atolls, Islands	Guided by a set of principles, the MCCPF aims to guide activities by taking into account existing laws, development plans, strategies, policies and relevant documents in efforts to incorporate climate planning at all levels.

Table 2: National Disaster and Climate Risk Reduction Policies, Plans, and Legislation in the Maldives

then notifies NDMA, which is responsible for coordinating early warning and ensuring public dissemination.¹⁶⁹ The Ministry of Health (MoH) plays a subsidiary role in communication in case of public health emergencies.

Early Warning Systems

National Tsunami Warning Center (NTWC)

After the 2004 Indian Ocean tsunami, the Maldives started to develop its early warning system, and the National Tsunami Warning Center (NTWC) was established within MMS. Earthquake data and the California Integrated Seismic Network (CISN), a real-time earthquake monitoring system, are drawn from the U.S. Geological Survey (USGS).¹⁷⁰ Additional equipment and technology come from the German Indonesian Tsunami Early Warning System (GITEWS) project; this includes broadband seismometers installed in Haa Dhaalu Hanimaadhoo and Gaafu Dhaalu Kaadeddhoo. Seismic data collected from these stations are transferred to the GITEWS main hub in Jakarta, Indonesia, via satellite antenna. The stations are solar powered, and the very-small-aperture terminal (VSAT) modem has a backup battery installed in case of power loss. For backup communication, a Broadband Global Area Network (BGAN) is installed in each station. The SeiscomP3 System was also installed at MMS in early 2008 for real time earthquake monitoring. The system displays real time seismic waves and is capable of automatically calculating earthquakes within a few minutes.¹⁷¹

Beyond national assets, Maldives is a member of the Indian Ocean Tsunami Warning and Mitigation System (IOTWS). Under IOTWS, Regional Tsunami Service Providers (RTSP) are the primary source of tsunami advisories for the Indian Ocean; at present, RTSPs are Australia, India, and Indonesia. The activities of the Intergovernmental Coordination Group (ICG) for IOTWS are led by the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO), and its subsidiary Working Groups focus on Tsunami Risk Assessment and

Reduction, Tsunami Detection, Warning and Dissemination, and Tsunami Awareness and Response. ICG helps organize full-scale tsunami exercises every 2 years.¹⁷²

Dhandhaana

The Los Angeles-based Sahana Software Foundation offered Maldives use of the Sahana Alerting and Messaging Broker (SAMBRO) system. SAMBRO consolidates all available resources through a shared platform for exchanging timely disaster alerts and warnings. The aim is to narrow emergency response times through the software.¹⁷³ In October 2016, the SAMBRO implementation within Maldives NDMA was given the name “Dhandhaana” which means “Reach” in Dhivehi. NDMA’s use of SAMBRO allows it to warn more than 500 government and non-government individuals, and MMS is set to join with NDMA for two-way communications alerts. Moreover, Health and Red Crescent authorities are considering implementing and using the alerts and apps.¹⁷⁴

Ministry of Health

In public health and environmental health emergencies where MoH is the lead agency, MoH, NDMA, and other related agencies may coordinate public health information to ensure timely, accurate, accessible, and consistent messaging. During a public health event or emergency, MoH’s public information office provides information and situation updates through partners to external entities, including the general public, news media, and other agencies.¹⁷⁵

In case of global or multi-national health emergencies such as pandemics, WHO may develop and share messages with MoH for dissemination in order to keep the messages consistent and accurate. A risk communication plan for emergencies is planned with clear roles and responsibilities defined, which will be annexed to the Health Emergency Operations Plan (HEOP) and will refine communications during health emergencies.¹⁷⁶

The Health Emergency Operations Center

(HEOC) maintains situation updates, keeps external organizations informed, and responds to inquiries from the media and local and national agencies related to the emergency. The Health Protection Agency (HPA) coordinates and releases public health related alerts, warnings, advisories, and media circulars to keep the public informed about health risks and disease preventive measures.¹⁷⁷ Any preventative messaging will be based on a risk communication and community engagement plan.¹⁷⁸ These alert codes – outlined in Table 3 – correspond with MMS weather alerts and earthquake and tsunami warnings.¹⁷⁹

The Public Health Protection Act of 2012 tasks the Director-General of Public Health (DGPH) with reporting responsibilities, particularly in terms of reporting to WHO (under the International Health Regulations (IHR) of 2005) if any health hazard created or introduced in Maldives may be of international concern, or if any health hazard created or introduced in Maldives falls under international agreements.¹⁸⁰

Information Sharing

Understanding how to overcome the information challenges that civilian and military

agencies experience during a typical disaster response mission is important. Knowing what the available HADR resources are will assist Joint Task Force leaders and staff during mission planning.¹⁸¹ Sharing information is critical since no single responding entity, non-government organization (NGO), International Governmental Organization (IGO), assisting country government, or the host government can be the source of all the required information.¹⁸²

Collaboration, information sharing (IS), and networking have been the backbone of successful disaster response and preparation. Disseminating information not only to those in-country and threatened by disaster, but also to those responding to assist in the emergency has been crucial to timely, efficient, and effective disaster response. Recent technology has advanced to aid predicting and alerting of disasters around the world, which has resulted in early warning and evacuation measures as well as opportunities to react and prepare for incoming threats to countries. The following are some of the ways in which information regarding disaster risk management and response are shared. Managing information is central to the overall mechanisms within disaster preparedness and response. There are many resources, stakeholders, and

Phase	Measures	Code
Information	Notification of a potential emergency that may impact Maldives or specific information important to the health sector. Example: emergence of a new infectious disease with pandemic potential, or early warning of extreme weather conditions. Corresponds with NDMC and MMS White Alerts.	White
Standby	Warning of imminent code red alert that will require immediate activation of health emergency plans. Example: Imported case of a new and highly infectious disease in Maldives without local transmission, or initial reports of a major mass casualty incident in a highly urbanized island which may require assistance from atoll/city or national level. Corresponds with NDMC and MMS Yellow Alerts.	Yellow
Activation	Major emergency in Maldives exists that requires immediate activation of health emergency plans. Example: large-scale epidemic or pandemic or major mass casualty incident in any parts of the country requiring immediate response, assistance and coordination from all the national level agencies and partners. Corresponds with NDMC and MMS Red Alerts.	Red
Stand-down	Deactivation of emergency response. Example: end of outbreak or epidemic. Recovery activities will continue.	Green

Table 3: Health Emergency Alert Codes

components to consider with IS before, during, and after a natural disaster. This section will discuss country-specific, humanitarian, regional, government, and DoD information sources.

Maldives Information Sources

National Disaster Management Authority (NDMA)

The NDMA is the lead coordination authority for disasters and emergencies, carries out comprehensive disaster risk management interventions, and addresses vulnerability issues in the Maldives. The website includes information on on-going projects as well as historic disaster/emergency response activities. Web: <http://www.ndmc.gov.mv/>

Maldives Meteorology Service (MMS)

The MMS home page includes current weather, forecasts, and emergency information. The Service's remit includes monitoring climatic and hydrological threats as well as earthquakes and tsunamis.

Web: <https://www.meteorology.gov.mv/>

Maldivian Red Crescent (MRC)

MRC is the country's Red Cross/Crescent National Society; it responds to emergencies and disasters as an auxiliary of government agencies. MRC is an embedded partner within the national emergency operations coordination framework and works closely with the relevant authorities during crises.

Web: <https://redcrescent.org.mv/>

Humanitarian Information Sources

United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Regional Office for Asia and the Pacific (ROAP)

UN OCHA's ROAP seeks to optimize the speed, volume, and quality of humanitarian assistance and coordinates emergency preparedness and response in the world's most disaster-prone region in support of national governments. ROAP covers 41 countries,

partnering with them for coordinated and effective international responses to emergency situations.

Website: <https://www.unocha.org/roap>

For OCHA situation reports, click on "Subscribe" button on bottom of page.

ReliefWeb

ReliefWeb is a service of UN Office for the Coordination of Humanitarian Affairs (OCHA) that consolidates information and analysis from organizations, countries, and disasters for the humanitarian community.

Website: <https://reliefweb.int/>

PreventionWeb

PreventionWeb is provided by the UN Office for Disaster Risk Reduction (UNDRR, formerly UNISDR) to consolidate disaster risk reduction information into an online, easy to understand platform.

Website: <https://www.preventionweb.net/english/>

International Federation of Red Cross and Red Crescent Societies (IFRC)

IFRC is the world's largest humanitarian organization, comprised of its 192-member National Societies including the Maldivian Red Crescent, a secretariat in Geneva, Switzerland, and over 60 delegations around the world. The IFRC carries out relief operations to assist victims of disasters and combines this with development work to strengthen the capacities of its member National Societies. IFRC's work focuses on four core areas: promoting humanitarian values, disaster response, disaster preparedness, and health and community care.¹⁸³

Website: <https://media.ifrc.org/ifrc>

International Committee of the Red Cross (ICRC)

ICRC is an impartial, neutral, and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of armed conflict and other situations of violence and to provide them with assistance. It also works to prevent suffering by

promoting and strengthening humanitarian law and universal humanitarian principles. ICRC, together with IFRC and the 192 Red Cross Red Crescent Societies, make up the Red Cross Red Crescent Movement.¹⁸⁴

Website: <https://www.icrc.org/en>

Humanitarian Response

Humanitarian Response is a platform providing the humanitarian community a means to aid in coordination of operational information and related activities.

Website: <https://www.humanitarianresponse.info>

Global Disaster Alert and Coordination System (GDACS)

GDACS is a cooperation framework between the United Nations, the European Commission, and disaster managers worldwide to improve alerts, information exchange, and coordination in the first phase after major sudden-onset disasters.

Website: <https://www.gdacs.org/alerts/>

Virtual OSOCC

The Virtual OSOCC is a real-time online coordination tool for disaster response professionals from urban search and rescue (USAR) teams, national authorities, as well as regional and international organizations at a global level.

Website: <https://vosocc.unocha.org/>

The latest alerts can be found here: <http://www.gdacs.org/Alerts/default.aspx>

To subscribe: <http://www.gdacs.org/About/contactus.aspx>

Consider other information resources, such as:

Think Hazard

Think Hazard is a website that provides detailed information on a country. Information is provided on the Maldives regarding hazards, country assessments, projects, early warning systems, and other resources.

Website: <http://thinkhazard.org>

Humanitarian Country Teams (HCT)

HCT is a strategic and operational decision-making and oversight forum established and led by the Humanitarian Coordinator in each country. It is generally comprised of representatives from UN agencies including the IOM, international NGOs, and the IFRC as well as the respective National Society in the country. During a disaster response, HCTs often produce a Situation Report (SitRep), usually in conjunction with OCHA.

Most HCT SitReps can be found through ReliefWeb: <https://reliefweb.int/>

Humanitarian Data Exchange (HDX)

HDX is an open platform for sharing data across crises and organizations launched in 2014 with the goal of centralizing humanitarian data for easy access and analysis. HDX is managed by OCHA's Center for Humanitarian Data in The Hague.

Website: <https://data.humdata.org/>

Regional Information Sources

Asian Disaster Reduction Center (ADRC)

ADRC has the mission of enhancing the disaster resilience of member countries, building safe communities, and creating a society where sustainable development is attainable. Maldives is a member, and information on both preparedness and emergency response can be found on its website. ADRC is a partner of Maldives' National Disaster Management Authority (NDMA).

Web: <https://www.adrc.asia/disaster/>

Changi Regional HADR Coordination Centre (RHCC)

Changi RHCC was launched in September 2014 to support the military of a disaster affected state in coordinating assistance with assisting foreign militaries. It aims to provide open, inclusive, and flexible platforms that allow both regional and extra-regional militaries to work together effectively in a multinational disaster

response. Changi RHCC manages the OPERA CIS web portal to broadcast the updated situation status of multinational military responses to disasters to minimize duplication and gaps in the provision of foreign military assistance.

Website: <https://www.changirhcc.org/>

To subscribe to RHCC Weekly and Spot Reports, email: Changi_RHCC@defence.gov.sg

U.S. Government (USG) Sources

U.S. Agency for International Development (USAID)

USAID is committed to responding to crises around the world to help people and places most in need. They aim to:

- Promote Global Health
- Support Global Stability
- Provide Humanitarian Assistance
- Catalyze Innovation and Partnership
- Empower Women and Girls

USAID produces a monthly newsletter called USAID Newsletter which is available digitally at <https://www.usaid.gov/news-information/newsletter>.

More information and updates from USAID are available via their blog, IMPACT, at <https://blog.usaid.gov/> and on Facebook, Instagram, Twitter, and YouTube.

Website: <https://www.usaid.gov/>

Bureau for Humanitarian Assistance (BHA)

The Bureau for Humanitarian Assistance (BHA) is responsible for leading and coordinating the U.S. Government response to disasters overseas. BHA responds to an average of 75 disasters in 70 countries every year. BHA fulfils its mandate of saving lives, alleviating human suffering, and the reduction of the social and economic impact of disasters worldwide in partnership with USAID functional and regional bureaus and other U.S. government agencies. BHA works with the international population to help countries prepare for, respond to, and recover from humanitarian crises.¹⁸⁵

USAID/BHA products include situation reports and maps, which are available via

email mailing lists as well as Reliefweb.int. Info products (HA Updates/Fact Sheets, etc.) are also available on USAID.gov (<https://www.usaid.gov/humanitarian-assistance>)

For BHA updates on a disaster response, ask the BHA representative for the respective DoD Geographic Combatant Command to add you to the email list if you have a U.S. government email address:

- BHA.INDOPACOM@usaid.gov
- BHA.SOUTHCOM@usaid.gov
- BHA.NORTHCOM@usaid.gov
- BHA.AFRICOM@usaid.gov
- BHA.SOCOM@usaid.gov
- BHA.CENTCOM@usaid.gov
- BHA.EUCOM@usaid.gov

Pacific Disaster Center Global

Pacific Disaster Center (PDC) Global has trademarked an early warning and decision support system called DisasterAWARE®. DisasterAWARE® is primarily for disaster management practitioners and senior decision makers. It supports disaster risk reduction and best practices throughout all phases of disaster management from early warning to multi-hazard monitoring. It has a collection of scientifically verified, geospatial, data and modeling tools to assess hazard risks and impacts. A restricted version of DisasterAWARE is the EMOPS (Emergency Operations) system, which is specifically for the disaster management community, including government agencies and humanitarian assistance organizations serving at local, state, federal, and regional levels.¹⁸⁶

PDC also provides a public version, Disaster Alert, which offers open access to a world map documenting 18 hazard types.¹⁸⁷ Disaster Alert also has a free, early-warning app to receive customizable maps based visual alerts of active hazards. The app offers a global notification system covering natural and man-made hazards. It is available on both iPhone and Android.¹⁸⁸

Website: <https://www.pdc.org/> and <https://www.pdc.org/apps/disasteraware/>

Emergency Operations (EMOPS) system (request account): <https://emops.pdc.org/emops/>

All Partners Access Network (APAN)

APAN is the Unclassified Information Sharing Service (UISS) for the U.S. Department of Defense (DoD). APAN provides the DoD and mission partners community space and collaboration tools to leverage information to effectively plan, train, and respond to meet their business requirements and mission objectives. Importantly, APAN's technology team has been supporting humanitarian assistance and disaster response (HADR) operations for over 15 years.¹⁸⁹ APAN has played an integral role in the success of disaster responses, such as the 2015 California Wildfire Response and the 2013 Typhoon Haiyan Response in which they provided organizations and militaries a centralized location to share information, increase situational awareness, and decrease response time and duplicated efforts for best practices in HADR services.¹⁹⁰

Website: <https://www.apan.org/>

Note: The Multinational Communications Interoperability Program (MCIP) has an APAN site used in planning exercises and real world HADR information sharing.

Joint Typhoon Warning Center

JTWC provides advanced warning for U.S. Government agencies and organizations in relevant areas.

Website: <https://www.metoc.navy.mil/jtwc/jtwc.html>

Daniel K. Inouye Asia-Pacific Center for Security Studies (DKI-APCSS)

DKI-APCSS is a U.S. Department of Defense institute that addresses regional and global security issues, inviting military and civilian representatives of the U.S. and Asia-Pacific nations to its program of executive education and workshops.

Website: <https://apcss.org/>

The Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM)

The Center for Excellence in Disaster

Management and Humanitarian Assistance (CFE-DM) is a U.S. Department of Defense organization that was established by U.S. Congress in 1994 and is a direct reporting unit to U.S. Indo-Pacific Command. CFE-DM provides training and education to help U.S. and foreign military personnel navigate complex issues in disaster management and humanitarian assistance. They produce country focused disaster management reference handbooks, after action reports, best practices, and lessons learned for advancement in response coordination. CFE-DM also works to improve cross-coordination and reduce duplication of efforts and promote U.S. involvement in civ-mil consultations and dialogues with relevant HADR parties such as the AHA Center, OCHA, and the Changi RHCC. CFE provides resources and updates at its website, as well as via Facebook and Twitter. Website: <https://www.cfe-dmha.org/>

Disaster Management Reference Handbooks are available for download at: <https://www.cfe-dmha.org/DMHA-Resources/Disaster-Management-Reference-Handbooks>

CFE-DM Disaster Information Reports are available for download at: <https://www.cfe-dmha.org/Publications/Reports>

Civil-Military Coordination in Foreign Disaster Relief Missions: Best Practices for Information Sharing is available here: <https://www.cfe-dmha.org/Publications>

COVID-19 Information Sharing Sources

Johns Hopkins Coronavirus Resource Center
<https://coronavirus.jhu.edu/>

Cases Database
<https://github.com/CSSEGISandData/COVID-19>

INFORM's COVID-19 Risk Index
<https://data.humdata.org/dataset/inform-covid-19-risk-index-version-0-1-4>

INFRASTRUCTURE

The dispersed nature of the country’s geography and population have traditionally been obstacles to large-scale infrastructure projects. Island/Atoll-level development has been the norm, particularly in transport and public utilities. The exception has become investment in communications technology to the point that all inhabited areas of the country are served by modern, wireless telecommunications.

Despite on-going investment and development, the effects of climate change pose a long-term challenge to the country’s critical infrastructure – transport, communications, health, and energy. According to the National Adaptation Plan of Action (NAPA), the location of key infrastructure at or near the coastline makes it highly vulnerable to sea level rise and storm damage. For example, the infrastructure of the two international airports is within 50m of the coastline; about 30% of Malé International Airport’s infrastructure lies within this range. Among infrastructure that is within 100m of the coastline, 80% of powerhouses, 90% of waste disposal sites, and 75% of communications assets are in this vulnerable zone. Of particular interest, among the key economic sectors of the country, an estimated 70% of all fisheries infrastructure and 99% of all tourist accommodation are within 100m of coastline.¹⁹¹

Transport

The Maldives’ people are scattered across hundreds of small islands. The transportation sector is essential for ensuring access to basic items such as food, fuel, and medicine as well as delivery of and access to social services such as health care, higher education, and employment. Even during non-emergency times, the wide dispersion of people and high cost of fuel discourage investments by the private sector. The lack of investment in sea and air transportation takes a toll on social and economic growth, and when disaster strikes, food and fuel security suffer.¹⁹²

Under the Government’s Strategic Action Plan (SAP) for 2019-2023, the “island life” program, *Jazeera Dhiriulhun*, is intended to promote living in harmony with the island environment, sustainably, through connectivity and management of natural resources. The Jazeera Dhiriulhun goals for transportation are detailed in Figure 3.¹⁹³

Public transportation systems are weak due to high operational costs and incongruent infrastructure. The Maldives Transport and Contracting Company (MTCC) offers inter-island ferry services but bears significant financial losses. The lack of a reliable, safe,

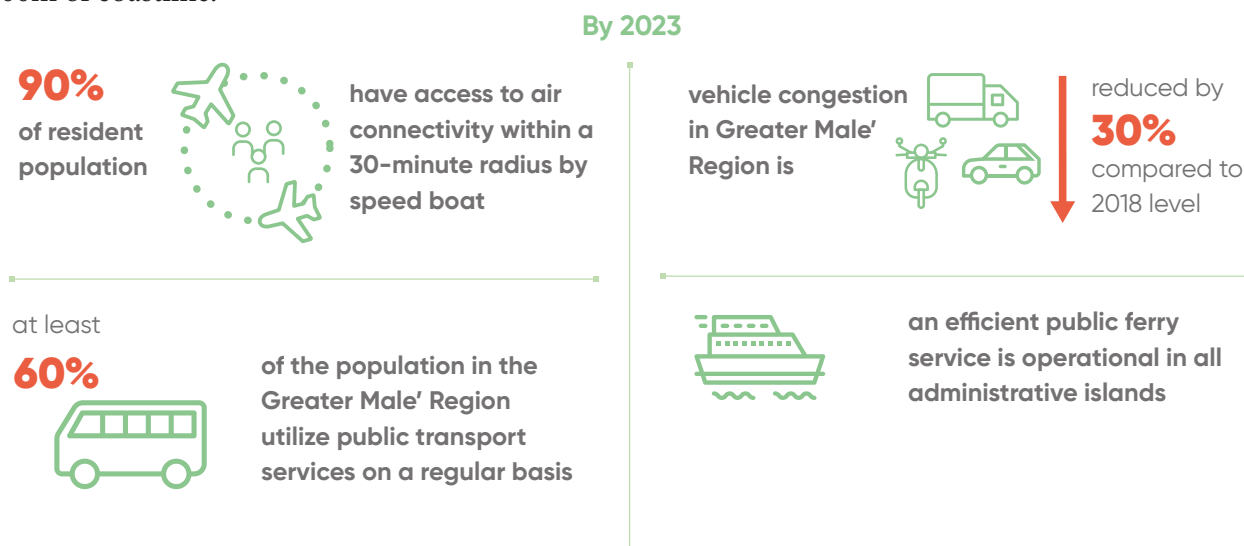


Figure 3: Strategic Transport Goals under the Jazeera Dhiriulhun Concept

affordable, and efficient public transportation system restricts mobility of individuals, goods, and services, slowing social and economic growth and hindering sustainable development.¹⁹⁴

Airports

Maldives has a total of nine airports, seven with paved runways, only one of which is more than 3,047m (10,000ft) in length.¹⁹⁵ The Velana International Airport (MLE/VRMM; also known as Ibrahim Nasir International) serves Malé; it averages 12 aircraft movements per hour and can manage up to 7,000 passengers each day. The maximum number of aircraft that can be handled simultaneously is six wide-bodied aircraft, four loose-bodied aircraft, six narrow-bodied aircraft, or two wide-bodied freighter aircraft. The turnaround time for a wide-body aircraft is 80-90 minutes. The turnaround time for narrow-body aircraft is 60 minutes. There is a parking area for up to eight planes.¹⁹⁶ Table 4 displays the names, codes, and runway lengths for Maldives’ main airports.¹⁹⁷

Thirty-four airlines serve Maldives.¹⁹⁸ Trans Maldivian and Maldivian Air Taxi provide charter seaplane service to outlying islands during daylight hours. Maldivian and Fly Me run fixed-wing domestic service to some of the atolls with land runways during night hours as well.¹⁹⁹

The air industry is a crucial support for the Maldivian economy, contributing an estimated US\$3.1 billion (gross value added) and supporting 73,000 jobs when the wider tourism industry is accounted for. Moreover,

the industry is expected to grow by 154% from 2018 numbers over the coming two decades. By 2038, the country could be expected to welcome nearly 8 million visitors annually based on current trends. The busiest direct air transport routes connecting the Maldives are Sri Lanka, the United Arab Emirates (UAE), India, Singapore, and Thailand while the busiest air cargo routes serving the country are Qatar, UAE, Sri Lanka, Singapore, and Hong Kong. This concentration reflects the dominance of the Asia-Pacific region for tourist arrivals in Maldives. In 2019, some 2.2 million tourists arrived in Maldives from the Asia-Pacific, accounting for 74% of arrivals. Meanwhile, all of Europe accounted for 588,000 arrivals in the country over the same period; most of these arrivals would have transited the UAE en route.²⁰⁰

Given the vulnerabilities of the country’s air transport infrastructure, Maldives has partnered with the UN and the private sector to address risk. In 2017, the Deutsche Post DHL Group and UNDP joined Maldives Airports Company Ltd and NDMC (now-NDMA) along with other officials, MNDF, and other humanitarian actors in the Get Airports Ready for Disaster (GARD) Program at MLE (Velana Airport). The four-day GARD workshop saw participants and trainers assess and evaluate the current level of preparedness, conduct training exercises, and develop specific recommendations and an action plan to ensure that the country’s airports are prepared for disasters. Airports are critical to Maldives for two related reasons: 1) they play a critical role in channeling humanitarian teams

National Airports/Airfields		
Airport	IATA/ICAO Code	Runway Length
Malé International Airport	MLE/VRMM	10,499 ft (3,200m) 2 nd runway under construction
Gan International Airport	GAN/VRMG	12,000 ft (3,657 m)
Hanimaadhoo Airport	HAQ/VRMH	4,003 ft (1,220 m)
Kadhhdoo Airport	KDO/VRMK	4,003 ft (1,220 m)
Kooddoo Airport	GKK/VRMO	5,905 ft (1,799 m)
Kaadedhdhoo Airport	KDM/VRMT	4,003 ft (1,220 m)
Dharavandhoo Airport	DRV/VRMD	3,901 ft (1,189 m)

Table 4: Codes and Runway Lengths for Maldives Main Airports

and relief goods in the immediate aftermath of a disaster; and 2) Maldives relies heavily on air routes to transport aid and supplies during normal times and during emergencies. GARD workshops allowed Maldivian participants to access best-practice logistics management practices and to devise customized disaster-response plans for their airports.²⁰¹

Seaports

The country's isolation and scattered population makes transport of people, goods, and services fuel-intensive and expensive. While all inhabited islands are served by a basic nationwide transportation network of ferries and jetties, connectivity across low-lying islands needs to be improved to sustain the development efforts of Maldives.²⁰²

Transportation between the international airport and Malé proper and between the airport and nearby resort islands is via motorized water taxis and speedboats. Many resorts stop boat transfers between the airport and resort islands after sunset.²⁰³ Private operators dominate the service between Malé and the outer atolls. Public ferry service within the atolls is provided primarily through the Maldives Transport and Contracting Company (MTCC), which operates ferry service in five of the seven regions. However, a lack of reliability and poor service provision are the subjects of loud public complaint.²⁰⁴

The most common boats for interisland transport are the wooden mechanized boats that dominate the fishing industry; these are locally called '*dhoanis*.' The speed of these boats varies depending on the size and capacity of the engine. Second in line are the fast speed launches of varying sizes used to carry people from place to place. While *dhoanis* are used for travel inter-island for lower prices, the launches are mainly attached to tourist resorts for the transfer of tourists between airport and resorts. The third and fourth types of vessels for passenger travel are the 'boats' and '*baththeli*,' which are much larger in size and are the cargo-cum-passenger transport vessels built for long distance travel.

These are the main means of commuting between atolls that are far from the capital city, for trading goods, and for other transport needs. The '*bokkura*' is a small dingy type *dhoani* used for loading and unloading goods and, in some situations, people from vessels to shore or jetty. Since most of the harbor areas in the islands are shallow waters, the vessels must anchor further away from the jetty, and *bokkura* are then used. These are also used for inter-island travel between nearby islands and for reef fishing.²⁰⁵ The number of registered vessels increased during the period 2010–2018 from 9,687 to 14,003. In particular, the number of *dhoanis* for passenger's transportation increased from 5,840 to 7,246 over this period.²⁰⁶

International sea cargo passes through Malé Commercial Harbor (MCH). The other two regional seaports – one in Kulhudhuffushi in the north (Haa-Dhaal Atoll) and the other in Hithadhoo (Seenu Atoll) in the south – were commissioned for international service in 2005. The capacity of MCH was expanded after the change of Maldives Port Authority (MPA) into Maldives Ports Limited (MPL) in 2008. However, cargo demand has continued to grow, and MCH consistently operates above capacity. To meet the additional demand, the development of a new international port with container terminal on Thilafushi Island is planned.

Malé Commercial Harbor

Latitude: 4° 10' 25" N

Longitude: 73° 30' 23" E

The Malé Commercial Harbor (MCH) has six berths, one alongside (Magathu Faalan), two on the eastern quay, and 3 on the western quay. In total, there are approximately 525m of berthing. Only the 101m Magathu Faalan berth can accommodate larger vessels (up to 9m draft and 150m length). The remaining berths are limited to vessels 3.5m in draft and 60m in length. MCH has open storage of 21,700 square meters (m²) and covered warehouse space of 2,900m². It offers 80 plug points for reefer containers. There are a dozen mobile cranes (25–160-ton capacity) and

20 forklifts (3-13-ton capacity). In addition, the port has reach stackers and various trailers and tractors for handling.

MCH has limited specialized facilities.

There are no Ro-Ro berths. A tanker terminal is available at Funadhoo and Thilafushi Island. Vessels below 15,000 tons displacement and draft of 8.0m can be handled at these berths. Tankers are also handled at anchorage, and ship-to-ship transfer is possible for large vessels. A gas tanker terminal is available at Thilafushi Island; it includes two terminals: State Trading Organization Terminal and Vila Gas. Vessels of up to 130m in length and 8m in draft can be berthed in these two terminals. All types of cargo are handled at berth except dry bulk cargo, liquefied petroleum, and gases.²⁰⁷

From MCH, about 40% of total imports are reshipped to outer atolls, and 90% of this reshipment occurs via the adjacent Malé North Harbor (MNH). However, congestion at MNH is a serious problem. One of the causes is the long turnaround time of each vessel per call. Under the Asian Development Bank-funded Domestic Maritime Transport Project, the available berth length doubled, which directly increased the cargo handling capacity. MPL operates the new facility.²⁰⁸

Hulhumalé International Terminal

Latitude: 4° 13' N

Longitude: 73° 32' E

Hulhumalé International Terminal (HMT) has been operational since 2013; it has an international terminal and a local terminal owned and operated by MPL. Hulhumalé International Terminal has an open storage volume of 500 twenty-foot equivalent units (TEU) along with two warehouses of 3,000 square feet and five plug points for reefer containers. The port is considered the main hub for handling and storing perishable cargo. There is a total berth length of 180m. HMT provides customers with vehicles from the port for rent along with express and re-shifting services.²⁰⁹

Kulhudhuffushi Regional Port

Latitude: 6° 36' N

Longitude: 73° 03' E

Kulhudhuffushi Ports Limited (KPL) manages the Kulhudhuffushi Regional Port (KRP), located on Kulhudhuffushi Island, the economic capital of the North. The port serves as a hub for inter-island trade and distribution activities within the northern region. There are plans to develop the port to receive cargo directly from India, via the Cochin Ferry Link. The port offers equipment rental, warehousing, and maintenance services for locally operated speed-boats.²¹⁰

Hithadhoo Ports Limited

Latitude: 0° 37' S

Longitude: 73° 06' E

Hithadhoo Ports Limited (HPL) manages the Hithadhoo Regional Port (HRP) in the Addu Atoll, the southernmost atoll in the Maldives. HRP came into operation in 2009 and is the main distribution hub for containerized, general cargo for the region. One of HPL's primary objectives is to ease logistics and transportation. HRP offers 5,400m² of stacking area and 1,725m² of warehouse area.²¹¹

Maamigili International Port

Latitude: 3° 28' N

Longitude: 72° 50' E

Maamigili International Port (MIP) began operating in 2018. It is located in the hospitality center of Ari Atoll, the most densely populated tourist atoll with a local population topping 15,000. MIP can accommodate vessels of 7,000 deadweight tonnage (DWT) and below; it has land for storage and handling of dry break-bulk and general cargo. The quay wall length is 450m; the port hosts a bonded warehouse, cold storage, and cargo from the many resorts situated in Ari Atoll region.²¹²

Roads

The country has only about 93km of paved roads; these are on Malé, Addu, and Laamu. The remainder of the country's roads are compacted coral.²¹³

Only a few islands are large enough to support automobiles. Roads in Malé and on the airport island are paved with cement bricks and generally well-maintained. Dirt roads on resort islands are well-kept by the resorts. Transportation in Malé is either by foot, bus, or taxis that charge a fixed fee for any single journey.²¹⁴

A large part of the fuel used in land transportation is consumed in the Greater Malé Region and in Addu City. Other inhabited islands and resorts, industrial, and agricultural islands also have vehicles, though they are fewer in number. The number of registered vehicles more than doubled over the period 2010–2018 from 46,028 to 108,532. Motorcycles accounted for 83% of all vehicles with an active registration in 2018.²¹⁵ The rapid increase in vehicles in Malé and Hulhumalé has contributed to heavy traffic congestion within the cities, and it poses a growing threat to passenger safety and the environment. A lack of an effective public transport system contributes to the problem.²¹⁶

Railways

There is no rail network anywhere in the archipelago.

Waterways

There are no inland waterways or rivers in the Maldives.

Schools

The Government of the Maldives provides free schooling for every child through 12 years of education. The Maldives allocates about 11% of the national budget to education – 3.6% of gross domestic product (GDP) – while households contribute an additional 0.5% of GDP spending on education. In 2018, the net enrolment for children at pre-primary level topped 92%; at the primary level, that number was above 95%. The

rate of enrolment starts to fall at lower secondary level to 90.5% and steeply drops at the higher secondary to 44.5% (50.4% of girls and 38.9% of boys).²¹⁷ This fall off reflects the fact that higher secondary courses only exist in 59 of 212 schools, making it impossible for some adolescents to continue their education unless they migrate to another island.²¹⁸

Despite high enrolment, the quality of primary and lower secondary education is variable. The proportion of fourth and seventh grade students who have attained mastery level competence in Language (Dhivehi and English) and Mathematics is low compared to many other countries. The National Assessment of Learning Outcomes (NALO) for 2015 and 2016 found that some 38% of Grade 4 students and 43% of Grade 7 students failed to achieve the minimum pass percentage of 40%. Girls have shown higher performance than boys in Mathematics, English, and Dhivehi. Moreover, there is a clear geographical difference in the results.²¹⁹ Studies have shown that students in certain atolls, such as Laamu in the south, perform worse than others. Many subjects are not taught in schools on outer islands where a large portion of schools only allow students to study arts. Schools in Malé offer more high-level courses, along with classes on business, commerce, and other subjects.²²⁰

Since 2013, developing an Inclusive Education Policy and addressing children with Special Educational Needs (SEN) have received greater attention with a specialized department and a professional team at the National Institute of Education. The inclusive education program is focused on 16 types of students from 3 categories, collectively defined as 'children requiring an Individual Education Plan (IEP):²²¹ As of 2018, 178 of 212 government schools had instituted education programs for children with disabilities,²²² and there were 3,215 students requiring an IEP based on diagnosis or on suspicion of needing support through an IEP. Implementation of the SEN Policy however needs to be strengthened through increased awareness of what special needs involves and through clear leadership on the issue amongst principals and

the Ministry of Education.²²³

As part of an effort to improve the quality of education and ensure students in outer islands do not fall through the cracks, the UN Children's Fund (UNICEF) worked with the Ministry of Education to launch the Maldives Education Management Information System (MEMIS), a real-time, student-based information system for tracking educational achievement; it launched in 2017. With MEMIS, teachers can manage students' performance and classroom activities, communicate students' progress to students and their families, and provide real-time updates on a child's educational status. The system stores school records, issues report cards, and tracks attendance of both teachers and school staff.²²⁴

The Snapshot of the Maldivian School System in 2016-2017 assessed schools and found that many schools across the country needed additional buildings/classrooms and that 55 schools (20%) do not meet national minimum standards for educational facilities, including water and sanitation requirements. It found that 11 of those 55 schools did not have toilets for students, that 10% were without access to hand washing facilities, and that 12.3% were without access to drinking water.

The student-teacher ratio in Malé is 12:1 while in the outer islands it is 8:1. Proportionally, the numbers of expatriate teachers and untrained teachers are higher in the outer islands. The percentage of untrained teachers working in primary schools dropped to approximately 6% in 2018 from 23% in 2010. However, with over 500 untrained teachers still working in the system, serious learning gaps are likely, particularly for children in the more isolated islands. One of the most significant efforts made to upgrade local teacher skills is a new requirement of a minimum of a diploma. There is an ongoing partnership between the Maldives National University (MNU) and the Ministry of Education to train 3,000 in-service teachers to bachelor's degree level. By the completion of this 5-year project, more than 80% of teachers should have a minimum qualification of a bachelor's degree.

However, since teacher training and preparation has not been aligned with the new curriculum implementation, there are several gaps in teacher allocations for teaching different subject areas.

Technical and Vocational Education and Training (TVET) programs for at risk secondary school students have been initiated. While options have grown, the school-to-work transition is still challenging due to (a) a lack of soft skills and training in both technical and academic programs ranked high for getting jobs; (b) weak quality and relevance of TVET, which also reduces students' interest; (c) inadequate linkages between tertiary education institutions and private firms; (d) low quality of teaching in TVET; (e) a lack of competency and outcome based curriculum and assessment; and (f) limited career guidance and counselling to students.

The higher education sector is growing with two public universities, nine private colleges, and two polytechnics, but there is no mechanism or regulation to assist in their governance. There are more than 200 higher education institutions (HEIs) registered, and 35 of these institutions offer programs at diploma and higher qualifications. The Ministry of Higher Education and the Maldives Qualification Authority, though mandated for regulation and quality assurance of higher education, do not have qualified staff to properly regulate the sector. In 2019, government announced a policy of free education up through an undergraduate degree in-country as well as student loans for study abroad. This highly ambitious policy lacks cost controls and workforce planning systems, and its cost effectiveness and sustainability are open to question. Educational policy has, so far, not been linked to the skills needed within the workforce for the implementation of government priorities. While a number of government institutions suffer from a high turnover of staff and lack of human and technical capacity, there is no clear policy or process to ensure recruitment and retention of trained and skilled staff in the civil service, nor is there a strategy to limit brain drain from the Maldives.²²⁵

Disaster Risk Reduction in the Education Sector

The National Disaster Management Authority (NDMA) recognizes the importance of education in promoting and enabling disaster risk reduction (DRR) and has tried to integrate disaster risk education in primary and secondary school curricula alongside the Ministry of Education. School programs include disaster awareness sessions and drills aimed at helping school administrators, staff, teachers, and students prepare for emergencies and protect themselves and school property. The theory is that teaching children how to respond early in an emergency will help convince hesitant parents and adults to respond swiftly and appropriately. There is increasing evidence that students of all ages can actively study and participate in school safety measures, and they can work with teachers and other adults in the community towards minimizing risk before, during, and after disaster events. Each year, NDMA and its local and global partners conduct School Awareness Programs and Mock Drills that reach hundreds of students.²²⁶

The 2004 Indian Ocean tsunami damaged or destroyed 44 schools in Maldives. It took one month to re-open schools, some with assistance from UNICEF, which supported construction of 73 temporary classrooms, helped clean school premises, and moved to ensure adequate sanitation facilities.²²⁷ However, no similar disaster has struck the country since 2004, and most of today's students do not have memories of that emergency.²²⁸

The Ministry of Education launched a process in 2009 to:

- Place school safety on the education agenda
- Make Disaster Reduction a priority in every school
- Create a School Safety Advisory Committee
- Sensitize school communities on risk management and the importance of action plans
- Develop a tailored School Safety Plan for each individual school
- Establish a Reporting Network between all

schools and offices that represent the School Safety Advisory Committee

- Provide support for the preparedness and mitigation activities conducted in schools
- Advocate with parents and the public on school safety
- Prepare School Safety Information or materials

The Ministry of Education, as of April 2021, is in the process of updating the Maldives Education Sector Emergency Preparedness and Response Plan (EPRP) and School Emergency Operations Plan, in coordination with UNICEF.²²⁹

The School Safety Advisory Committee (SSAC) is the national policy making body responsible for broad policies; it is chaired by the Ministry of Education with representatives from the Ministries of Health, Finance, Housing, and Home Affairs as well as the Maldives National Defence Force, Maldives Meteorological Service, National Disaster Management Authority, and Maldives Police. SSAC provides guidance and direction to schools on how to develop preparedness and response capabilities. The responsibility of implementing school preparedness lies with the Ministry of Education's School Health and Safety Section. Figure 4 shows the Ministry of Education's national and school level planning, preparedness, and response structure.²³⁰

At the school level, the Head of School is the focal point for the School Emergency Operations Plan (SEOP) for all tasks including planning, logistics, and finance. Under the Head of School, the Emergency Planning Committee (EPC) is responsible for preparing the school for emergencies by formulating the SEOP as well as implementing the plan by conducting regular drills and training for teams. An EPC may include members of parent-teacher associations, head teachers, senior administrators, parents, and student leaders.

The Ministry of Education with support from the United Nations Development Programme

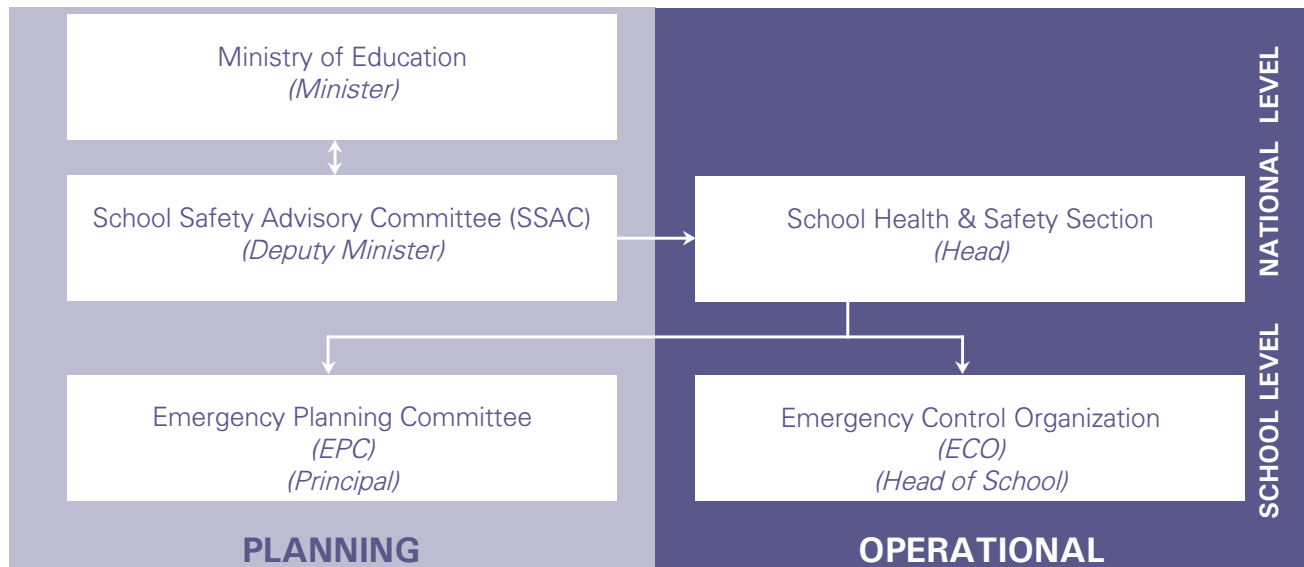


Figure 4: National Level School Planning Preparedness and Emergency Response

(UNDP) Maldives developed the “School Emergency Preparedness & Response Guide” for use as a template for each school in the country. All SEOPs were expected to include an Emergency Control Organization (ECO) within the school and to plan for trainings for all staff members and students to prepare for efficient communication, prompt response, and maximum safety in the event of an emergency. The potential situations required to be addressed in the SEOP are:

- Fire on school grounds
- Fire in surrounding vicinity
- Explosion / Risk of Explosion / Chemical Explosion
- Flooding
- Sea swell
- Loss or failure of utilities
- Ferry disaster
- Bus disaster
- Earthquake
- Tsunami²³¹

By 2017, schools across the country had elaborated SEOPs, and many had begun to hold drills, overseen by the National Disaster Management Authority (NDMA), the Maldivian Red Crescent (MRC), the Maldives National Defence Force (MNDF), and island councils and backed by UNDP and the Government of Japan. With generally one school per island,

UNDP’s Asia-Pacific region-wide “Reducing the Loss of Lives of School Children from Tsunamis in Asia-Pacific Region” program was able to reach much of an island community via a single school program.²³² Photo 5 shows students and teachers from the Dhuvaaafaru School, Raa Atoll, participating in a UNDP-backed 2018 evacuation drill.²³³



Photo 5: A Teacher Leads Students in Dhuvaaafaru School Evacuation Drill

Communications

The Maldives has experienced rapid growth in the telecommunications and information and communication technology (ICT) sector over two decades due to high public acceptance and adaptability to improvements in technology and to investment in the sector. While the most notable transformation has occurred in

mobile phone services, connectivity in general is bridging the geographic disparities inherent in the country. Increased acceptance and usage of ICT infrastructure and services have re-defined the social and economic landscape of the country and presents an avenue to address the development challenges. There is also a drive for digitization of governance systems to improve public services delivery.²³⁴

There is a well-developed national communications network, and in recent years investment has allowed it to extend to outer islands, following a period when commercial considerations had focused investment in Malé and at tourist resorts. Home-grown and partly government-owned, Dhiraagu is the country's dominant multi-media, telecoms, and communications company with mobile, internet, data, fixed-line, financial, logistics, and television services throughout the Maldives.²³⁵ The country's second-largest communications company is Ooredoo, which provides voice, data, broadband, content, and enterprise services; it accounts for about half of the country's mobile subscribers.²³⁶

While the mass media is somewhat lively and debates some political and economic policies quite freely, there are strictures on criticism of Islam and government policies on religion that lead to self-censorship and legal troubles for some media outlets. The Communications Authority of Maldives (CAM) is the government agency responsible for both corporate oversight and regulatory action for licensing, standards, and international coordination.

Telephones

As of 2020, Maldives counted as many as 16,000 fixed-line telephone subscriptions and more than 829,000 mobile phone subscriptions at the peak before pandemic-related economic damage hit consumer spending.²³⁷ While this means there are only about 3 fixed-lines per 100 Maldivians, there are upwards of 155 mobile phones per 100 residents. In recent years, the country has seen modern, digital communications infrastructure extend to the

outer islands, and at least two mobile providers have extended Long-Term Evolution (LTE) service to major parts of the country. With the tourism industry partnering in telecoms investment, 5G trials have begun in some areas.

For international connectivity, Maldives is a landing point for the Dhiraagu Cable Network, NaSCOM, Dhiraagu-SLT Submarine Cable Networks, and WARF submarine cables. There are three satellite earth stations, all Intelsat (Indian Ocean).²³⁸

There are two licensed operators, Dhivehi Raajjeyge Gulhun (Dhiraagu) and Ooredoo Maldives, both of which provide fixed and mobile services, and they each claim about half of the mobile subscriber base. They have both invested in their fiber networks and in High Speed Packet Access (HSPA) and LTE infrastructure, providing national coverage with both technologies. Both companies have trialed 5G technology.

Revenue from the telecom sector is limited by the country's relatively small local market. A combination of the vibrant tourist sector and multiple subscriber identification module (SIM) card use account for the high mobile penetration rate. The large number of expatriate workers in the country also require SIM cards on a semi-temporary basis. Despite its strong position, the telecoms sector has suffered consequences from the COVID-19 pandemic. Losses during 2020 are expected to continue through 2021 due to a downturn in consumer spending on telecoms services and devices. This comes under pressure from the financial effect of large-scale job losses and the consequent restriction on disposable incomes. However, the crucial nature of telecom services, both for general communication as well as a tool for homeworking, will offset some pressures.²³⁹

Internet Access

As of December 2020, there were 375,000 internet users in the country; this accounts for about 69% of the population.²⁴⁰ There are only about 53,000 broadband subscriptions or 14 per 100 inhabitants.²⁴¹ Upload and download

speeds continue to rise across the country with the roll-out of more modern technologies. LTE is reportedly available in 99% of the country via mobile if using a Dhiraagu or Ooredoo SIM card purchased within the country. Pre-paid service is the norm, and rates range from US\$6.41 (Rf99) for 500 megabytes to US\$58.32 (Rf899) for 12 gigabytes, and “top-up” cards are available at various stores and tourist service centers in the country.²⁴²

Surveys of Maldivian internet users find that about 100% are social media users, and that nearly 100% use a mobile phone connection to access social media accounts. Many may use fixed broadband in addition to mobile to access general web content. Facebook is the largest social media outlet for the country; it reports about 330,000 Maldivian users with males outnumbering females 2:1. Instagram reports 180,000 Maldivian users, roughly evenly split between males and females. Meanwhile, Twitter reports only about 76,000 Maldives accounts, a community that is 87.5% male.²⁴³

A 2018 U.S. State Department report noted that the government generally does not restrict or disrupt access to the internet or censor online content; nonetheless, there have been reports of government or police monitoring private online communications without appropriate legal authority. The Communications Authority of Maldives (CAM) is the regulatory body mandated to enforce internet content restrictions on sites hosted within the country and to block domestic access. CAM reportedly maintains an unpublished blacklist of offending websites and is said to have accepted requests from ministries and other government agencies to block websites that allegedly violated domestic laws on anti-Islamism, pornography, child abuse, sexual and domestic violence, and other prohibitions.²⁴⁴

Mass Media

There are government and private media outlets; government media is overseen by the state body, Public Service Media. Non-state media do report political pressure, and there are some indications that journalists operate in a climate of violence, particularly threatened by

political parties.²⁴⁵

Print

- *Mihaaru* - Dhivehi-language newspaper; website in English and Dhivehi (<https://mihaaru.com/>)

On-line

- *Maldives Independent* – English-language news website (<https://maldivesindependent.com/>)
- *Sun Online* – English- and Dhivehi-language news website (<https://en.sun.mv/>)
- *Miadhhu* – Dhivehi- and English-language news website (<https://www.miadhhu.mv/home>)

Broadcast

- Public Service Media - state-run, multi-media agency (<http://www.psm.mv/>)
 - Television Maldives (TVM), Dhivehiraajjeyge Adu (Radio), Dhivehi FM, YES TV, maldeeb (print), Dheenuge Adu (radio), Majlis TV, Munnaaru (TV), and Maldives TV
- Raajje TV - private, general entertainment, sports, and news station (<https://raajje.mv/en>)
- Sangu TV – private, news-focused, digital TV (satellite/cable)
- VTV – private, general entertainment TV (satellite/cable)

The constitution guarantees freedom of expression so long as it is exercised in a manner “not contrary to any tenet of Islam,” a vague condition that encourages self-censorship. State-run media and regulatory bodies, especially the Maldives Broadcasting Commission (MBC), have typically displayed bias in favor of the government and restricted coverage of the opposition. Journalists report facing the threat of violence in reprisal for their work; these threats come particularly from Islamist militants. The Presidential Commission on Investigation of Murders and Enforced Disappearances, established in November 2018 by President Solih, confirmed in September 2019 that journalist Ahmed Rilwan, who disappeared in 2014, had

been abducted and murdered by a local affiliate of Al-Qaeda. The presidential commission reportedly found evidence that officials under the previous administration had interfered with the police investigation.²⁴⁶

Post

Maldives Post is a government-owned organization with the mandate of providing postal service across the country and abroad under Universal Postal Service Obligation. It is the national postal operator with a network of 14 Atoll Post Offices and 172 agency offices that provide access to postal service on all inhabited islands. In addition to letter and parcel services, Maldives Post provides financial and agency services, the latter include utility payments, passport applications, insurance, and stock exchange services.²⁴⁷

Alongside Maldives Post, other parcel delivery services and couriers operate. The best known are FedEx and DHL.

Utilities

The dispersed nature of the country's geography and population have traditionally been obstacles to large-scale utilities infrastructure projects. The country has instead depended on resorts and industries to build facilities on islands beyond Malé and Addu City. The Ministry of Environment oversees both national energy policy and water-sanitation policy, planning, and implementation.

Over the past 40 years, energy demand has grown exponentially due to the extraordinary economic growth in tourism, the fishery industry, sea transport, and construction. However, Maldives does not possess any domestic fossil fuel reserves. It depends almost entirely on imported liquid fossil fuels for electricity production, industrial uses, transport, and cooking. The extension of solar, wind, and ocean energy are gaining steam as part of the country's commitments to reduce greenhouse gas emissions and confront climate change.

Three decades of development in the water

and sewerage services have shifted the country from relying entirely on rainfall catchment to a combination of rainfall catchment and desalination for water supply. An estimated 30% of the population still does not have access to piped water while 13% does not have access to safe wastewater disposal. A steady erosion in the quality of groundwater means increasing reliance on expensive desalination even as coastal waters suffer pollution from unsafe wastewater disposal.

Power

Maldivians have enjoyed universal access to electricity since 2008, but the cost of electric power has remained high due to structural challenges, particularly reliance on imported diesel and isolated island-based grids. Maldives' vision for the energy sector is the "provision of sufficient, reliable, sustainable, secure, and affordable energy for a prosperous Maldives." This vision rests on three pillars: energy efficiency, renewable energy, and technology innovation. There are no proven reserves of fossil fuels in Maldives. However, it has abundant renewable energy resources, including solar, wind, and ocean or tidal, as well as the potential to produce green hydrogen fuel with the surplus of renewable energy produced in the islands. Maldives also has the possibility to substitute part of its diesel consumption with less expensive and more efficient liquefied natural gas (LNG).²⁴⁸

The policy instruments supporting Maldives' vision for its energy sector are the Energy Policy and Strategy 2016 and the Strategic Action Plan (SAP) 2019–2023. In its 2020 Update of Nationally Determined Contribution (NDC) under the Paris Climate Agreement, Maldives also set forth the goal of reducing emissions by 26% by 2030, and the country promised to strive to achieve net zero by 2030.²⁴⁹ The Ministry of Environment and Energy is responsible for policy, planning, and development of the energy sector.²⁵⁰ The Utility Regulatory Authority was established by law in 2020 to replace the Maldives Energy Authority. It is a semi-autonomous board under the Ministry of Environment²⁵¹ and operates under guidance of a Governing Board

appointed by the Civil Service Commission. The regulator is mandated with establishing tariffs and issuing guidelines and regulations to ensure the reliability and security of the grids and that the rights and obligations of consumers and service providers are safeguarded.²⁵²

Imported fossil fuels are by far the most important source of energy for the entire country. Fuel imports account for about 10% of Maldives’ GDP; approximately half of fuel imports go to electricity generation. It is estimated that, in 2019, Maldives imported 723,000 tons of refined petroleum products that went to such diverse purposes as electricity generation, fisheries and water desalination, sea and road transport, cooking and water heating, and aviation. Diesel, LPG, and aviation fuel are shipped to all inhabited islands and resorts islands. Figure 5 shows the rise in fuel imports from 2006-2017 as well as the proportion of fuels in the import mix.²⁵³

Electricity generation for the Greater Malé Region accounts for approximately 63% of the total electricity consumed in all inhabited islands. However, all inhabited, commercial and tourist resort islands have a 24-hour electricity service. Annual electricity demand is projected to grow at

a rate higher than 8.5% per year, with this growth rate being influenced most significantly by the increase in electricity demand for the greater Malé region.²⁵⁴

A total of about 290 megawatt-size diesel generators are installed in 186 inhabited islands. Resort islands have an additional 144 megawatts (MW) in diesel generators, and industrial islands have about 20 MW. Power systems in small- and medium-sized islands typically comprise a few diesel generators, often installed with substantial reserve capacity and that run at very low loads during off-peak hours to cover for forced outages. A total of 21.5 MW of renewable energy systems are installed across the country. The installation of rooftop solar photovoltaic (PV) panels in the Greater Malé Region has increased in the past 5 years, reaching more than 3,000 kilowatts peak (kWp) at the beginning of 2020. Hulhumalé has had 1.5 MW of rooftop solar PV operating since March 2018 under a power purchase agreement (PPA) contract at a fixed price of \$0.21 per kilowatt-hour (kWh) for 20 years. Imported diesel, shipped in small quantities by boat to islands, results in one of the highest costs for power generation in South Asia. The most efficient power plants in the country

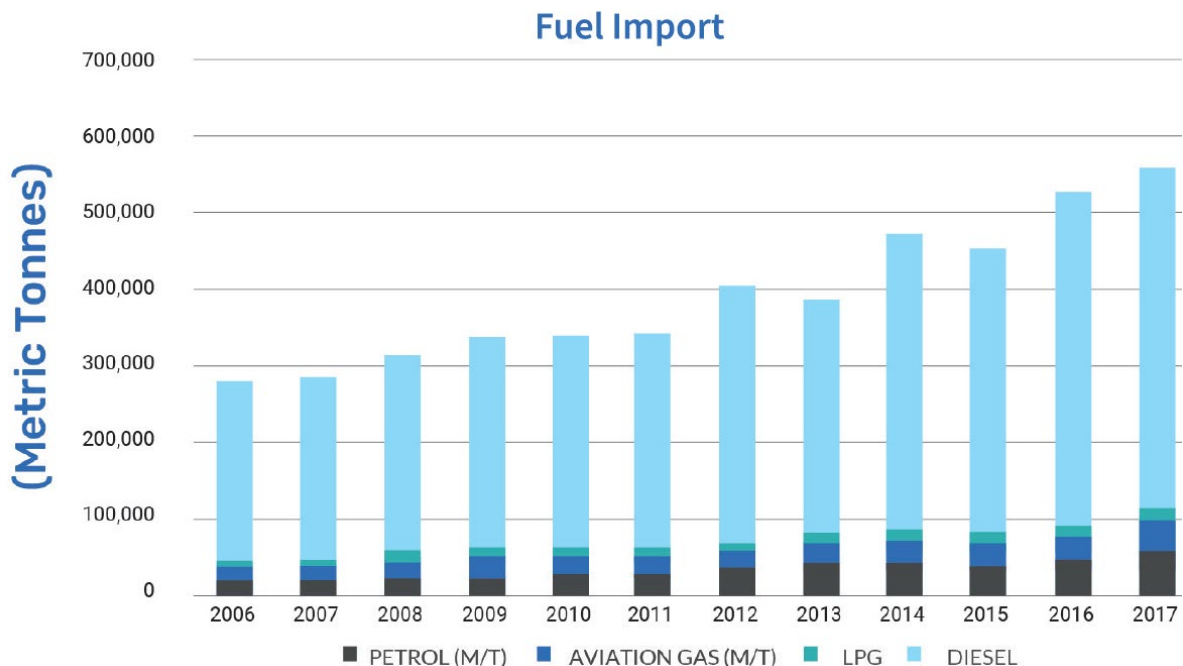


Figure 5: Maldives Fuel Imports (2006-2017)

produced electricity from \$0.23 to \$0.33/kWh; many of the smaller inhabited islands see costs as high as \$0.70/kWh. Annual subsidies to the electricity sector amount to Rf1 billion (US\$65 million at the end of 2019).

The FENAKA Corporation Ltd. operates 148 powerhouses; the State Electric Company Ltd. (STELCO) operates 35 powerhouses, including all those located in the Greater Malé Region; the Malé Water and Sewerage Company Pvt. Ltd. (MWSC) operates one powerhouse at Dhuvaafaru (Raa); and the remaining powerhouses are operated by island councils. As for the resort islands, the typical diesel power generation installed capacity is 900 kilowatts. These powerhouses operate intermittently when the islands are operating for their guests.²⁵⁵

In 2019, the power generation installed capacity in the Greater Malé Region was 149.6 MW of diesel generators operated by STELCO. These power plants produced 488 gigawatt hours (gWh). Meanwhile, the installation of rooftop solar PV panels in the Greater Malé Region has increased to reach more than 3,000 kWp at the beginning of 2020. Rooftop solar PV panels are installed by private citizens benefitting from a net-metering tariff scheme, or by the private

sector after signing power purchase agreements (PPA) with STELCO. Similar expansions have occurred in PV across the islands; Figure 6 shows the expansion of renewable energy in Maldives since 2008.²⁵⁶

Solar infrastructure developments are supported by the Accelerating Sustainable Private Investments in Renewable Energy (ASPIRE) project, funded by the World Bank. A second project was tendered in 2019. In this second project, a fixed price of \$0.109/kWh for 15 years, with a capital cost buy down component, was offered by the project winner. In addition, 21,000 kWp are currently under pre-qualification, out of which 10,000 kWp are floating PV.²⁵⁷ The Accelerating Renewable Energy Integration and Sustainable Energy (ARISE) project brings together the Ministry of Environment, STELCO, and FENAKA, the country's main utility companies. It aims to expand solar power generation and to strengthen the capacity of the power system for integration of electricity generated from solar power. The solar installations under ASPIRE and ARISE generate 42.5 MW, a significant portion of the country's 2020 target of 51 MW.²⁵⁸

Maldives established the Preparing Outer

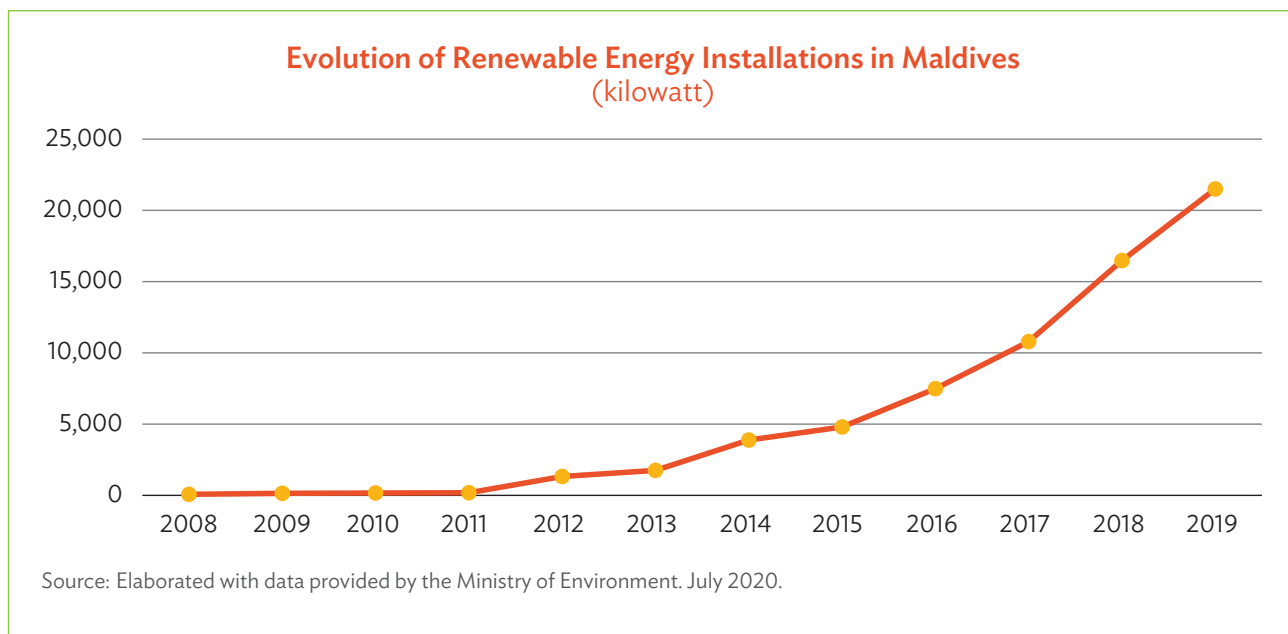


Figure 6: Evolution of Renewable Energy Installations in Maldives (by kilowatt)

Islands for Sustainable Energy Development (POISED) project in 2014 with an aim to transform the existing diesel-based energy systems of at least 160 islands into hybrid solar PV-diesel systems. POISED aims to install a minimum of 21 megawatts-peak (MWp) in PV installations.²⁵⁹

Due to the country's geography, there is little ability to take advantage of scale in installing any renewable technology. Instead, the Environment Ministry, STELCO, and FENAKA have focused on renewable energy mini grids that allow them to gain expertise and capabilities.²⁶⁰ Meanwhile, there has been a move to facilitate more private sector investments in renewable energy, especially in solar photovoltaic technology, in hopes of alleviating some of the high cost of electric power. The government has set an ambitious goal of raising the share of renewable energy in the national energy mix by 20% by 2023 and ramp it up to 70% by 2030. The country is already on track and is gaining the attention of investors. More than 60 international bidders expressed interest after the government invitation in January 2020 for prequalification for solar PV systems in select islands.²⁶¹

In the non-electricity subsector, diesel and liquefied petroleum gas (LPG) account for most inputs. All inhabited islands are connected by a basic nationwide transportation network of ferries and jetties. However, the price of diesel makes sea transport very expensive. The number of registered vessels increased to 50% between 2010 and 2018, and there is every reason to believe the ferry transport sector's diesel consumption also increased. Fuel consumption for land transport happens mostly in the Greater Malé Region. The number of registered vehicles more than doubled in the period 2010–2018, with motorcycles accounting for 83% of all vehicles with an active registration as of 2018. Most of the LPG imported by the country is used in cooking.²⁶²

Water and Sanitation

The Water and Sewerage Act (8/2020) came into force in 2020 and is intended to ensure

delivery of safe and clean water to all residents. The Act lays out guidelines and procedures for protection of water resources and for building a water-sewerage network for all inhabited islands; the shape and costs of these services are the purview of each island council. The Act does mandate use of modern technology to seek the most environment friendly means of providing services and stipulates that renewable energy must be utilized in production of water.²⁶³ The Water and Sanitation Department along with the Waste Management and Pollution Control Department are the Ministry of Environment's bodies involved in policy, planning, and implementation of water and sanitation projects.²⁶⁴

Freshwater in the Maldives is limited; it includes rain-fed aquifers formed naturally at an average depth of 1-1.5 meters below the surface, rainwater, and brackish water found in some larger islands. Climate change induced sea level rise and saltwater intrusion are expected to decrease the yield of safe groundwater by at least 3% by 2030. Already, approximately 76% of households in Malé use bottled water as their drinking water source while 10% of households in the outer atolls do so; the secondary impact of this reliance is increasing plastic bottle waste that is not safely discarded or recycled.²⁶⁵ While Maldives receives rainfall ranging 1,700-2,300 millimeters annually, the country experiences a dry period from December to April. Shallow groundwater aquifers are formed in thin lenses over the salt water. The islands' porous sandy soil makes the thin freshwater lens highly vulnerable to elevated salinity due to saltwater intrusion and to seepage of pesticides used in agriculture. Moreover, contamination from inappropriate waste disposal and sub-standard sanitation practices also makes groundwater unsuitable for human consumption in many islands.²⁶⁶

Maldives depends heavily on desalinated water, via reverse osmosis from seawater or bore well water. Among the 187 inhabited islands, only 34 islands have full water supply networks while in 17 islands, projects are currently ongoing. The remaining islands covering 27.9%

of the population do not have access to piped water network facilities.²⁶⁷ Water desalination was brought to Malé in the 1980s. It was later introduced in other densely populated islands because of the huge damage caused by the 2004 Indian Ocean tsunami to groundwater aquifers and storage facilities. According to the 2014 Maldives census, 30% of drinking water in Malé and 7% in smaller inhabited islands come from desalination plants. Desalination plants use diesel generators for their operation. The government constructs desalination plants and transfers them to FENAKA to operate them and provide water services. Regulated water tariffs are not sufficient to cover diesel costs, leading to huge losses.²⁶⁸ Growing water supply demand is largely met through desalinated seawater, directly supplied to households and communal tap-bays, or bottled and distributed.²⁶⁹

Many communities in the outer islands heavily rely on rooftop harvested rainwater to fill their potable water needs, and after the 2004 Indian Ocean tsunami, the government provided each household with a 2,500-liter rainwater storage tank. Community rainwater collection and storage systems also exist for use as back-up during the dry season (December-April).

Malé Water and Sewerage Company was established in 1995 with a mandate of providing water and sewerage services. Subsequently, the first municipal water supply project in the country began in Malé in 1996. However, in the outer islands, people continued relying on harvested rainwater and groundwater for domestic use. Since 2015, government launched projects to deliver piped water via metered house connections beyond the capital since rainwater storage tanks have been running dry more frequently due to increasing climate variability and limited storage capacity. When tanks run dry, consumers shift to expensive, emergency water supply from desalination facilities. Each year between 2017 and 2020, an average of 59 islands were supplied drinking water by sea transport during the dry season with an average annual volume of 2,518 cubic meters at an annual

average cost of Rf6.9 million (US\$500,000).²⁷⁰

Modern sewerage technologies were first introduced to the Maldives in the 1970s and 1980s, following outbreaks of cholera and diarrhea associated with consumption of contaminated groundwater containing human waste.²⁷¹ Traditional practices of defecation in the Maldives consisted of using bush/beach (*Athirimathi*) or shallow burial of feces in a designated area in the backyards of houses. Human excreta disposal systems including waterless ash latrines, sealed pit toilets, and public toilet blocks were attempted after the 1980s, but these were unsuccessful as they did not resolve the issue of contaminated groundwater and soil. Among the inhabited islands, Malé has had a piped sewerage system since 1988. Construction of sewerage schemes in the outer islands began in 1992 with comparatively inefficient, small-bore (simplified) sewerage systems with individual septic tanks. The sector has undergone significant changes since then as new and improved sewerage systems such as conventional gravity sewer system and vacuum sewer systems are being established in the islands, funded increasingly with external assistance.²⁷²

An estimated 66 islands have complete, proper effluent collection from onsite household sewage collection tanks and piping. There are 35 projects planned and on-going, but more than 13% of the population still does not have access to safe sewage disposal facilities. Of the established 66 sewer systems, 23 include sewage treatment plants (STP) with secondary treatment before release to the deep sea. However, due to operational constraints related to technical expertise and expensive operational costs, most STPs remain unused. The resulting wastewater is passed untreated directly to the sea through marine outfall after being cleared through Environmental Impact Assessment studies; this outfall affects marine ecosystems. There have been reports of negative environmental impacts on the coral reef ecosystems due to such raw sewage discharge.²⁷³

HEALTH

Health care and health outcomes in the Maldives has been improving over the last several decades. Basic health services are available on all inhabited islands. The Maldives has universal health insurance called “Husnuvaa Aasandha” run by the state-owned Aasandha. The country has an above-average life expectancy of 78.6 years as of 2019, compared to the world average of 72.6 years. Spectacular success has been seen in the decline of maternal mortality rates — from 677 maternal deaths per 100,000 live births in 1990 to 41 deaths per 100,000 live births in 2014. There has also been a significant and rapid decrease in infant mortality rates — from 34 infant deaths per 1,000 live births in 1990 down to 8 deaths per 1,000 live births in 2014. There is a corresponding reduction in the mortality rate for children under 5 years of age for the same period — from 48 deaths per 1,000 live births in 1990 to 10 deaths per 1,000 in 2014. The great success of the Maldives in achieving these improved health outcomes is attributed to nutritional educational programs conducted at the community level and to intensive campaigns against polio, measles, and neonatal tetanus with high vaccine coverage and quality surveillance. The national immunization program²⁷⁴ offers vaccines against 12 diseases, with additional special group vaccinations for Hajj-related travel.²⁷⁵ Furthermore, the government announced in April that the COVID-19 vaccine would be made available to tourists upon arrival, after the resident population has received the vaccine.²⁷⁶

However, the Maldives is also addressing a number of health challenges. Non-communicable diseases are the leading cause of death. Non-communicable diseases include respiratory diseases, cancer, diabetes, and cardiovascular diseases, and account for approximately 81% of total deaths in the country.²⁷⁷ The Maldives experiences high turnover rates with doctors and nurses, with a majority of them being foreigners, though the recent establishment of

the first in-country medical college should help to eventually increase the numbers of Maldivian doctors. Some areas of the nation have logistical challenges in receiving essential medical supplies and services, and medicine can be expensive, due to the country’s relative isolation and its small population scattered across hundreds of islands spanning several hundred square kilometers of ocean area.²⁷⁸

The Maldives is highly vulnerable to the projected negative effects of climate change, which include health impacts. Climate change seriously affects social and environmental determinants of health such as clean air, safe drinking water, sufficient food, and secure shelter. Key health threats from climate change for the Maldives include heat stress and the spread of vector-borne diseases. In recent years, diseases such as dengue, scrub typhus, and toxoplasmosis have re-emerged due to the effects of climate change. Flooding also impacts health outcomes, including through extensive indirect health effects when impacting food production, water provision, and contamination; as well as disrupting health-care logistics and the ecosystem.²⁷⁹

Health Care System Structure

The Maldives spends 9% of its GDP on health. The health care system is organized into a three-tier system: 1) primary health centers at the island level, 2) a higher level of health facilities including specialty care hospitals at the atoll level (secondary care), and 3) tertiary care services at the urban or central level. In the capital of Malé the Indira Gandhi Memorial Hospital (IGMH) serves as the tertiary referral hospital. Six regional and 14 atoll hospitals across the country serve as the first referral while each of the inhabitant islands has a fully functional health center. However, all regional hospitals and health centers do not offer the same level of services.²⁸⁰

Primary medical facilities often struggle to operate effectively.

There are four tertiary hospitals in the country, with Indira Gandhi Memorial Hospital (IGMH) and Addu Equatorial Hospital (AEH) being government ones. Located in Malé, IGMH is the main and largest government healthcare facility, with approximately 300 beds and 21 departments, and is usually at 100% occupancy.²⁸¹ Located in Addu City, AEH opened in January 2020 as a 100-bed tertiary hospital converted out of the Addu Equatorial Center,²⁸² serving all four southern atolls of the Maldives, Addu, Fuvahmulah, Gaafu Dhaal, and Gaafu Alif.²⁸³ The other two tertiary hospitals are privately owned. These tertiary hospitals perform limited general and orthopedic surgery but have no trauma units and just a small number of ICU beds. Persons needing treatment not offered in Maldives will require evacuation to the nearest overseas medical facility.²⁸⁴ There are also six regional hospitals, 13 atoll hospitals, and 172 primary healthcare centers.²⁸⁵ The geographic dispersion of the islands poses a challenge for access to health care and necessary supplies, medicine, and equipment to the population.

There are a total of 4,922 medical personnel in the country according to 2018 statistics from the National Bureau of Statistics. Of these there are 961 doctors, 2,881 nurses, 574 allied health staff, 453 community health personnel, and 53 traditional birth attendants.²⁸⁶ Expatriate health professionals comprise 82% of the physicians and 55% of the nurses. The health care system faces the challenges of high turnover and assuring the quality of the health workforce.²⁸⁷

The Ministry of Health (MoH) aims to ensure nationwide health services. The MoH is primarily responsible for developing national health policies and strategies, delivering health services, providing public health protection, and overseeing health regulations to provide quality health services.²⁸⁸ The MoH also has primary responsibility for managing public health emergencies and coordinating response and recovery efforts with other agencies and partners. According to MoH's "Health

Emergency Operations Plan (HEOP)" (*for more information see below*), the Health Emergency Coordination Committee (HECC) serves as the executive body for strategic decision making and providing direction and guidance to the Health Emergency Operation Center (HEOC) and Incident Management Team (IMT).²⁸⁹

According to the HEOP, current evacuation strategies in emergencies are coordinated by the Maldives National Defence Force (MNDF), with supporting agencies such as the Maldives Police Service (MPS), Maldivian Red Crescent (MRC), and airline and seaplane operators assisting as needed. According to the MoH, the number of ambulances increased from 148 in 2014 to 216 in 2018; only four islands were without ambulances. A sea ambulance service was introduced in 2015, with 26 sea ambulances in operation by 2018.²⁹⁰

Health Protection Agency (HPA) was formed on 1 January 2013, under the Public Health Protection Act 7/12 and falls under the MoH. The main mission of HPA is to ensure health safety in the Maldives. The HPA is the lead national administrative and planning agency for public health initiatives and activities including public health emergency management. HPA works with local government, health sector, NGOs, and private partners to improve the nation's ability to respond to disasters and public health emergencies. It has responsibility for developing and maintaining the emergency preparedness and response plan for the health sector, maintaining ties with international health organization, providing information and advice to the government, and responding organizations.²⁹¹

Health Emergency Operations Center (HEOC) was established in April 2018 by the MoH, with the assistance of the WHO, for the coordination and management of public health emergency response and relief operations. In the MoH, the HEOC runs the Public Health Warning System, and manages data and information during emergencies. The HEOC serves as a central command and control facility responsible for carrying out health emergency preparedness and management. WHO's support

to the HEOC includes satellite communication equipment, video conferencing support, a mobile generator, laptops, and training. The system can be connected to global satellites.²⁹²

Figure 7 shows an overview of the Maldives' health sector emergency management system.²⁹³

Health Strategies and Surveillance

The Maldives and the World Health Organization (WHO) have developed a country cooperation strategy to guide national health development. Table 5 lays out the Maldives strategic health priorities and accompanying focus areas for cooperation with the WHO.²⁹⁴

Communicable Diseases

The Maldives has experienced outbreaks of several communicable diseases, including measles, dengue, chikungunya, and influenza. COVID-19 is addressed in its own section, following this one.

The Maldives used to be additionally burdened with malaria, but has made incredible

progress in fighting against that disease. In December 2015, the WHO declared the Maldives as the first Malaria Free country in the WHO South East Asia Region.²⁹⁵

Measles

In early January 2020, a measles outbreak was reported with 12 positive cases. In response to the outbreak in late February, Minister of Health H.E Abdulla Ameen launched the nationwide Maves Jahaifin (“I’ve received my shot”) Measles and Rubella mass vaccination campaign. The campaign was led and coordinated by the Health Protection Agency and the MoH in partnership with Ministry of Education, Ministry of Economic Development, WHO Maldives, and UNICEF Maldives. The campaign proposed the inclusion of the migrant population in order to bridge immunity gaps. In response to a request by the government of the Maldives, India provided 30,000 doses of Measles and Rubella (MR) vaccine to help contain the outbreak.²⁹⁶ Before the recent outbreak, the Maldives had been validated for Measles Elimination in 2017 by the WHO.²⁹⁷

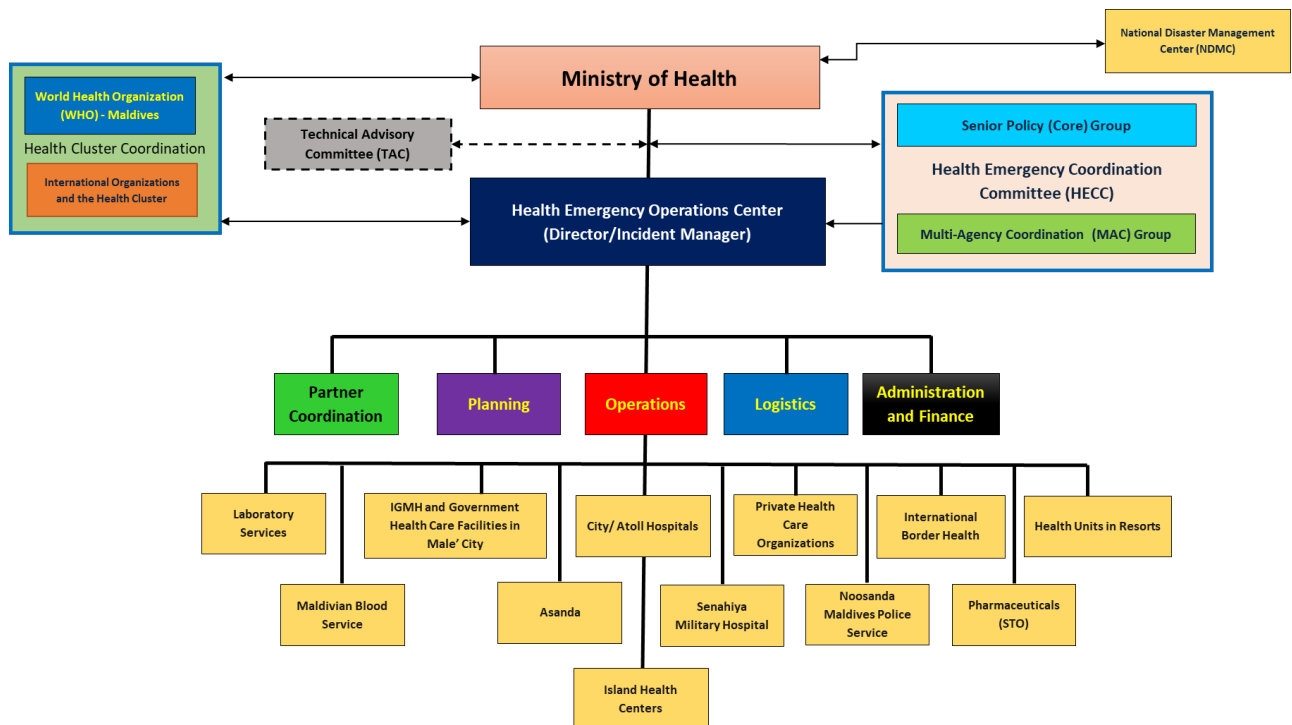


Figure 7: Health Sector Emergency Management System in the Maldives

Strategic Priorities	Main Focus Areas for WHO Cooperation
<p>STRATEGIC PRIORITY 1: Transforming Health Systems: Ensuring universal health coverage (UHC) and towards achieving the health related Sustainable Development Goals (SDGs)</p>	<p>'Health beyond health sector': Advocate for primary prevention of diseases by providing support to enhance intra ministerial and the multisectoral collaboration. Strengthen government's oversight functions to adopt a broader view of different risk factors and diseases related to environmental and social determinants of health.</p> <p>Strengthen governance: Scaling up capacities of the national regulatory authorities to develop and implement more efficient, equitable, evidence –based and gender sensitive policies and procedures.</p> <p>Local stewardship: Support in improving local stewardships for health, to ensure effective delivery of essential service package and implement Quality of Care Framework</p> <p>Human Resources for Health (HRH): Provide support to strengthen skill development process of different cadre of health professionals within the country and advocate for equitable distribution of the health workforce.</p> <p>Data for Decision Making: Support use of appropriate digital platforms/tools for strengthening HMIS and facilitate informed policy decisions</p> <p>Research & Knowledge management: Support to generate, utilize and disseminate local knowledge using innovative technologies on knowledge management and effective implementation of the NHRP.</p> <p>Financial protection: Advocate and support strengthening national capacity to develop equitable and efficient social, economic and health protection policies and frameworks.</p>
<p>STRATEGIC PRIORITY 2: Promote wellbeing - Empower people to lead healthy lives and enjoy responsive health services</p>	<p>NCD prevention and management: Reduce burden of noncommunicable diseases through promotion of life style change interventions, early detection, prevention and effective management through inter sectoral collaboration. Provide support and advocate effective implementation of the national "Multi-sectoral Action Plan for the Prevention and Control of Noncommunicable Diseases (2016-2020)"</p> <p>Tobacco Control: Support effective implementation of the Framework Convention on Tobacco Control (FCTC)</p> <p>Mental Health: Strengthen national capacities to prevent, diagnose, treat and rehabilitate mental disorders</p> <p>Migrant health: Increases access of migrants to health services and prevent introduction of noble or reintroduction of eliminated disease transmission in the country.</p> <p>New Vaccines: Support government to generate evidence on benefits of new vaccines and advocate introducing them for the well-being of peoples of the Maldives.</p>
<p>STRATEGIC PRIORITY 3: Ready to respond - addressing the emergencies</p>	<p>Emergency preparedness: Support the national and sub-national level capacity building process on emergency preparedness by considering that the community will be first responders and implementation of the Emergency Response Framework.</p> <p>Antimicrobial Resistance (AMR): Support implementation of National Action Plan on AMR:2017-2022 including advocating for implementation of one health approach</p> <p>Vector borne diseases: Intensify prevention, control and treatment of vector borne and neglected tropical diseases through generating local evidences including introduction of new and integrated tools and approaches.</p> <p>IHR: Support implementation of recommendations of JEE and build national capacity to attain and sustain IHR core capacity.</p> <p>Food Safety: Support to strengthen institutional capacity to implementation of the National Food Safety Policy: 2017-2026.</p> <p>Blood safety: Provide support to build capacity to increase access to safe blood and blood products and quality transfusion practices including comprehensive laboratory facilities</p>
<p>STRATEGIC PRIORITY 4: Protecting what matters the most: Create an enabling environment for safe and healthy living and address specific health issues of children, adolescents and women during reproductive age and beyond</p>	<p>Climate Resilience: Raise public and policy awareness on the health impacts of climate change across the entire society, and strengthen national capacity in building health systems resilience to climate change. Advocate and initiate greening of the health sector by adopting environment-friendly technologies, and using energy-efficient services;</p> <p>Health of young people: Increase health awareness; improve health seeking behavior and support preconception care and scaling up of adolescent and youth friendly health services through multi-sectoral approach.</p> <p>Reproductive, maternal and newborn health: Advocate and support quality of care through implementation of MPDSR, ENAP and sustaining birth defects surveillance, prevention and management. Enable reproductive choices for all women and men by supporting the implementation of the reproductive health policy and facilitating the provision of appropriate reproductive health services and information.</p>
<p>STRATEGIC PRIORITY 5: Fast tracking disease elimination: Accelerate efforts to eliminate priority diseases, sustain it and promote</p>	<p>Enabling advocacy platforms for disease elimination through accelerating progress towards the targeted elimination of Rubella, TB, Hepatitis, Mother to Child Transmission of HIV and Syphilis. Strengthen national capacity for integrated diseases surveillance with enhanced laboratory Systems. Provide technical support to mobilize resources and implement strategic plans. Articulating evidence-based policy options and innovations; and providing technical support for implementation, monitoring and assessment of epidemiological and programmatic trends.</p>

Table 5: Maldives-WHO Country Cooperation Strategic Agenda (2018–2022)

Dengue

Risk of Dengue transmission is present throughout the Maldives, with peak transmission occurring during the rainy season, from April to September.²⁹⁸ There are annual dengue outbreaks in the Maldives, although most cases are not life-threatening.²⁹⁹ In 2014, the health ministry said dengue fever has become endemic in the Maldives with annual outbreaks. A relatively severe outbreak of dengue in 2011 saw a record 12 fatalities.³⁰⁰

A dengue outbreak affected the Maldives in 2019 with a sharp increase of cases in the first four months of the year. There were 2,746 dengue cases reported during the first half of 2019, an increase from 2018's 1,545 cases during the same period. Over 3,097 cases were reported in the country by July 2019, and at least one person died from the outbreak that month. In April, officials launched a nationwide vector control program which included fogging, treatment programs, surveillance, public awareness campaigns, and eliminating mosquito breeding sites.³⁰¹

In 2018, cases of dengue, flu, viral fever, and influenza spiked in the Maldives. There was at least one fatality in an influenza outbreak as hundreds of people sought flu and viral fever treatment every day. The number of cases began dropping off in June, according to the Health Ministry. Some 620 cases of dengue fever were reported in May, decreasing to 385 in June, while viral fever cases dropped to 8,363 in June, from 14,707 cases in May, and flu cases dropped to 19,958 from 30,735 in May.³⁰² In June, after some 374 cases of dengue had been reported since the start of the year, a ministerial task force was activated to formulate a national level response. In response to the outbreak, mosquito fogging took place in the capital and affected atolls for seven days. The MoH also cleaned out mosquito breeding sites in collaboration with the housing ministry, environment ministry, home ministry, and security services. The largest outbreak before 2015 was in 2012, when the country saw a total of 1,083 dengue cases.³⁰³

Chikungunya

More than 400 cases of chikungunya were reported between January and April 2019, during the same period a dengue outbreak was occurring. State Minister for Health Mohamed Zuhair said there had been a spike in the number of cases compared to the previous three years. The outbreaks instigated a month-long campaign of fogging, treatment programs, increased surveillance, raising public awareness, and eliminating mosquito breeding sites.³⁰⁴

Influenza

The Maldives experienced influenza outbreaks in 2017 and 2018. In early 2018, there was at least one fatality in an influenza outbreak as hundreds of people sought flu and viral fever treatment every day.³⁰⁵ More than 200 people came down with the influenza virus in early 2017, with six fatalities caused by the H1N1 or swine flu.³⁰⁶

Coronavirus Disease (COVID-19)

The COVID-19 pandemic is creating unprecedented health and socioeconomic impacts in the Maldives: “The sudden halt of international tourism brought an unprecedented economic shock, severely weakening the fiscal and external position, threatening the economic and developmental gains in the Maldives, increasing food insecurity due to disruptions in the supply chain. Social and livelihoods costs to people are immense: children’s learning is being severely affected, and people have lost incomes and require urgent protection.”³⁰⁷

Current COVID-19 Situation (as of April 2021)

As of 5 April 2021, the Maldives had reported a cumulative total of 24,783 confirmed cases, with 3,075 of those cases being active, including 83 hospitalized. The Maldives has an 87.3% recovery rate and a very low COVID-19 mortality rate of 0.27% (only 66 total deaths as of 5 April 2021).³⁰⁸ The Maldives experienced a 7-day average of 180 new daily COVID-19 cases as of 4 April 2021.³⁰⁹ People in the Maldives infected with COVID-19 have been 63% male

and 37% female, with men 21-40 years old particularly affected.³¹⁰

A total of 237,716 people had been vaccinated against the COVID-19 virus as of 31 March 2021, which included 2,034 people vaccinated that day. Maldives began its vaccination program on 1 February 2021, and has made vaccines available free of charge to all residents including migrant workers (irrespective of legal status) above the age of 18.³¹¹

A State of Public Health Emergency was initially declared on 12 March 2020 under the Public Health Act, and it has been extended several times since, due to the ongoing risk of COVID-19.³¹² However, the country opened up to international visitors on 15 July. The country had closed its border from 01 April to 14 July. All visitors must undergo a nucleic PCR test result 96 hours prior to their scheduled departure from their first point of embarkation en route to the Maldives.³¹³ Most resorts reportedly have their own testing facilities on site. A few resorts are also reportedly conducting in-resort testing as an extra level of protection against the virus, requiring visitors to quarantine for 14 days at the resort if the test comes back positive.³¹⁴

The country has 3 COVID-19 hospital facilities in greater Malé area with 263 beds, and an additional 5 COVID-19 hospital facilities across the country with 183 beds.³¹⁵

According to the INFORM COVID-19 Risk Index, which assesses “countries at risk from health and humanitarian impacts of COVID-19 that could overwhelm current national response capacity,” Maldives is in the “medium” COVID risk class, based on its INFORM COVID-19 risk of 4/10 (with 10 indicating highest risk).³¹⁶

A COVID-19 dashboard by the MoH’s Health Protection Agency (HPA), which provides daily updates can be found here: <https://covid19.health.gov.mv/dashboard/?c=0>

Background of COVID-19 in the Maldives

In late January 2020, before the virus became a global pandemic, the Health Minister began preparations for a COVID-19 outbreak by conducting a risk assessment and forming

a national response guideline and health emergency coordination committee. In February, Maldives arranged with the World Health Organization (WHO) to receive testing kits, and thermal cameras were fitted in the main airport to screen incoming passengers. Resorts were quarantined, and schools and other public spaces were closed.³¹⁷ The government imposed travel restrictions on persons coming from various countries that were affected by the disease.³¹⁸

On 3 March, the government designated the National Disaster Management Authority (NDMA) and Health Protection Agency (HPA) of the MoH to coordinate nationwide response effort. In early March, the National Emergency Operations Centre (NEOC) was established (co-chaired by MoH and the Ministry of Defence) to oversee response activities, and the National Emergency Preparedness, Readiness, and Response Plan for COVID19 was developed. The government activated its emergency plan and decided to grade the emergency in 4 levels nationally (color coded based on transmission scenario). The country was divided into 6 different zones, each zone to be graded individually for engagement, preparedness, and response, while a multi-sectoral Technical Advisory Group (TAG) was established to provide technical guidance. On 07 March 2020, Maldives reported its first positive “imported cases” from 2 foreign nationals staying at a resort. On 12 March, Maldives declared a public health emergency under Section 33 of the 7/2012 Public Health Act for a period of 30 days and it has been extended since then.³¹⁹

In late May, due to lower rates of transmission, measures to ease the lockdown were introduced and divided into several phases. The first Phase lasted from 29 May to 14 June; the second phase from 15-30 June 2020; and the third phase started 1 July.³²⁰ In July, due to a decrease in transmission, the Maldives response transitioned from the NEOC with duties transferred over to the MoH’s Health Emergency Operating Center (HEOC).³²¹

The Ministry of Health states, “Early implementation of a partial lockdown and

other public health measures, namely early detection, isolation and treatment of positive cases, extensive contact tracing and quarantine of contacts, and quarantine of persons who travel from Greater Malé area to the islands has prevented an exponential rise in the number of cases and has enabled to limit the epidemic largely to Greater Malé area.” Additionally, various health measures have been implemented for the tourist industry.³²² However, COVID-19 has proved particularly challenging for migrant workers, many of whom were trapped in country at the onset of the pandemic and live in crowded conditions.³²³

COVID-19 Facilities

There are three Isolation Facilities for tourists who test positive for COVID-19: Fun Island Isolation Facility (52 rooms), Velidhoo Isolation Facility (67 rooms), and the Central Isolation Facility (64 rooms). An Isolation Facility dedicated for expats is located at the Hiyaa Isolation Facility with 624 beds available.

According to the Ministry of Tourism, there are three designated COVID-19 hospital facilities in the Greater Malé Area. These are: Dharumavantha Hospital (DH11) with 10 ICU beds, Dharumavantha Hospital (DH16) (0 ICU beds), and Hulhumalé Medical Facility (28 ICU beds).

There are five hospital facilities for other atolls: Sh. Funadhoo COVID Facility (20 ICU beds), B. Eydhafushi COVID Facility (20 ICU beds), L. Gan COVID Facility (15 ICU beds), Ga. Villingili COVID Facility (18 ICU beds), and Addu COVID management facility (20 ICU beds).³²⁴

Additionally, according to the MoH, there are four clinics dedicated for COVID-19: Flu Clinic – Senahiya, Malé; Hulhumalé Flu Clinic – Hulhumalé Preschool; Villimalé Flu Clinic; and the ADK Hospital Online Flu Clinic.³²⁵

Humanitarian community response

The United Nations in Maldives is supporting the government’s efforts to recover better, and “the UN’s Socio-economic Response and Recovery Framework 2020-2021” is being

implemented to support the Government’s National Resilience and Recovery Plan 2020-2022.³²⁶ The World Health Organization (WHO) plays a prominent role in supporting the strengthening of essential health services in the Maldives and providing technical expertise and is a member of various technical committees established by the government. Additionally, WHO provides critical logistics to support the response in the Maldives.³²⁷ The WHO also provides critical medical supplies, equipping five regional health hubs with 25,000 testing kits together with UNDP.³²⁸

The UN Children’s Fund (UNICEF) supports the Government of Maldives on a number of fronts including: Risk Communication and Community Engagement (RCCE) to strengthen public communication and community engagement to prevent the spread of COVID-19 and support demand generation for COVID-19 vaccination; infection prevention and control (IPC) by providing critical medical and WASH supplies; supporting continued access to essential health, HIV, and nutrition services for women, children, and vulnerable communities; and ensuring access to continuous education online, strengthening child protection / gender-based violence services, mental health and psychosocial support, and social protection services.

The Maldivian Red Crescent (MRC) is responding to COVID-19 across its 8 branches supported by approximately 500 volunteers, addressing areas of hygiene promotion, meal provision, psychosocial support, assessments, and risk communications and community engagement. MRC volunteers have been working with public authorities in the front lines, and over 67 response team deployments have been made. Psychosocial Support (PSS) operations have reached over 3200 beneficiaries, and together with the Ministry of Education, MRC assisted 10,000 school teachers to build the capacity of teachers and school counselors to provide PSS in the schools.³²⁹ The MRC has traditionally assisted migrants, but this has been especially true this year, as migrants are disproportionately affected by COVID-19, particularly those who are undocumented.³³⁰ On

1 May, MRC launched a “COVID-19 Migrants Relief Fund.”³³¹ Additionally, a Migrant Support Center was established by the Malé Branch to provide support to migrants in the capitol. The International Federation of the Red Cross and Red Crescent Society (IFRC) Country Cluster Support Team based in Delhi, India, supports MRC with regular technical assistance.³³²

COVID-19 Social and Economic Impacts

The Maldives’ tourist-dependent economy has been hard hit by travel bans due to COVID-19 restrictions. The Ministry of Tourism stated on 27 May 2020 that zero tourist arrivals since March was “more devastating than the 2004 Tsunami and 2008 Global Financial Crisis.”³³³ According to the World Bank, tourism directly and indirectly accounts for two-thirds of the country’s GDP. In 2019 visitor arrivals grew by 14.7% (year on year), with total arrivals reaching a record 1.7 million, officials were hoping for 2 million arrivals in 2020.³³⁴

The pandemic and resulting recession have had very significant social impacts. Children’s learning has been severely affected, as schools closed nationwide starting 9 March 2020 for more than three months.³³⁵ Tele-classes reached 82% of students, but was not continuously offered, and only 72% of public-school students reportedly had access to broadband internet. People have lost incomes and are particularly vulnerable to food insecurity in Maldives, where most of the staple grain, rice, is imported. Disruptions to the supply chain have made food prices volatile, and imports of food increased by 25% from January to May 2020. Water security is also affected, as lockdowns exacerbate logistical challenges for the government in responding to emergency water requests. Many outer islands rely on harvested rainwater, the supply of which is strained by increased water demand and dry spells prolonged by climate change. At least 47 islands requested emergency water during the initial months of the COVID-19 crisis.

The pandemic has particularly affected women and migrant workers. Working women experienced increased unpaid domestic work during lockdown. Women comprise over 70% of

health workers and are disproportionately under pressure. Women largely work in the informal sector with no job security, as only 3% of resort workers are Maldivian women. Migrant workers are particularly vulnerable, as they account for nearly 50% of those made redundant in the tourism sector and represent 50% of COVID-19 cases.³³⁶

In late September, the Maldives Ministry of Tourism reported that the World Travel and Tourism Council (WTTC) said that the country had earned the “Safe Travels Stamp,” endorsed by the UN World Tourism Organization and more than 200 travel companies. According to the Ministry, it is the “world’s first ever global safety and hygiene stamp for Travel & Tourism, designed to address COVID-19 and similar outbreaks.”³³⁷ The number of tourists arriving in the Maldives has steadily climbed since the reopening of the border on 15 July according to statistics from the Ministry of Tourism.³³⁸

Around 148 tourist resorts and 401 guesthouses (including 55 guesthouses in Malé), are open for business as of 4 April 2021. The Ministry of Tourism (MoT) website keeps a current list of hotels and resorts, with MoT-approved opening dates, island and atoll location, number of rooms, and number of beds available at: https://www.tourism.gov.mv/en/announcements/approved_opening_dates_of_resorts_hotels_vessels_and_transit_facilities

Non-Communicable Diseases

Non-communicable diseases, such as respiratory diseases, cancer, diabetes, and cardiovascular diseases, caused 81% of deaths in the Maldives. In 2019, non-communicable diseases comprised the top four causes of death – heart disease, stroke, chronic obstructive pulmonary disease, and kidney disease – as depicted in Figure 8.³³⁹ The STEPS Noncommunicable Disease Risk Factor Survey revealed high rates of overweight and obesity, unhealthy diets, smoking, high blood pressure, and low levels of physical activity. The government has taken several steps to encourage

lesser consumption of tobacco and soft drinks in the country, including the announcement of a 40% increase in taxes on all tobacco products, a 20% increase in duty on sodas (fizzy drinks), and barring the sale of tobacco and soda in all schools and health facilities. The government has also developed the “Multisectoral Action Plan for the Prevention and Control of Noncommunicable Diseases in Maldives (2016–2020),” with a greater focus on preventive and promotive health interventions to spur lifestyle changes and reduce health risks.³⁴⁰

Training for Health Professionals

The first medical degree courses in the Maldives were recently established, in collaboration between the Maldives National University (MNU) and the Ministry of Health (MoH), and with assistance from the Pakistani government. The MNU was to offer medical degree courses for the first time in 2018.³⁴¹ In 2019, the MNU then announced that teaching programs were to commence in April of that year at the medical college developed in Dharumavantha Hospital.³⁴² The curriculum for basic science subjects is the same as that of the National University of Malaysia, which also provides support through teaching and learning

materials.³⁴³

Prior to the development of the medical college, the MNU’s Faculty of Health Sciences was the only facility that provided in-country training for health-related areas, which was limited to nursing, primary health care, pharmacy, medical laboratory technology, and traditional and complementary medicine. Maldivian students previously had to go overseas for medical training, incurring an estimated cost of US\$105,742 per person for basic medical qualifications (Bachelor of Medicine, Bachelor of Surgery/MBBS).³⁴⁴ It has been challenging to secure enough seats for medical students from recognized training facilities to build the Maldives’ health workforce adequately to meet the expected demand. The Maldives Medical and Dental Council lists 256 medical schools globally as recognized medical institutions, including 21 in the U.S.³⁴⁵ It is also a financial burden on the national budget to hire foreign doctors, given the higher costs associated with foreign recruitments. Staff retention is an issue due to the high proportion of foreign medical personnel, some of whom leave to work in regions with higher pay after gaining international experience. The planned medical school in the Maldives is expected to provide a stable way to increase needed medical personnel and save costs long term.

What causes the most deaths?

- Communicable, maternal, neonatal, and nutritional diseases
- Non-communicable diseases
- Injuries

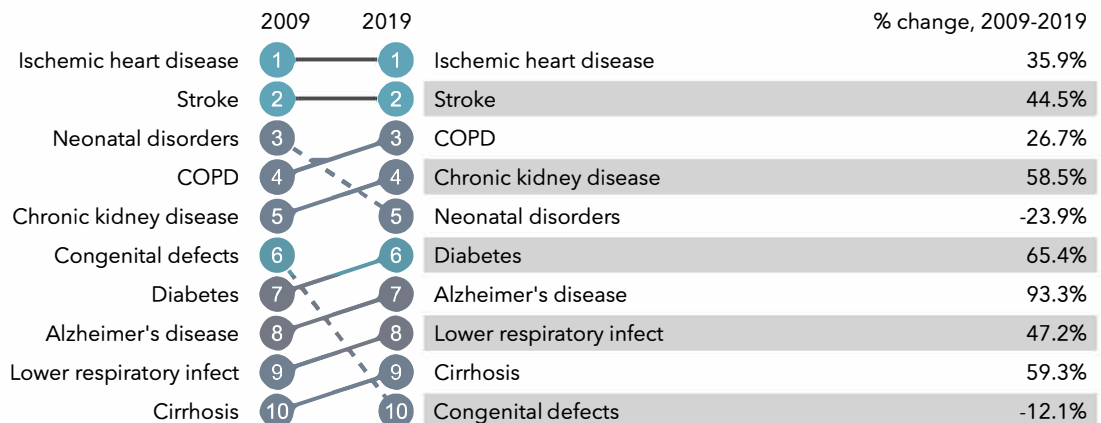


Figure 8: Non-communicable Diseases are the Leading Cause of Death in the Maldives

WOMEN, PEACE, AND SECURITY

In the Global Gender Gap Index 2020, the Maldives ranks 123rd out of 153 countries overall for gender equality, with a score of 0.646 on a scale of 0 to 1 (with 1 marking gender parity).³⁴⁶ However, disaggregated by subindex, there is a very wide range in the gender gaps across specific areas. The Maldives has achieved gender parity in education, with a score of 1.000 in Educational Attainment. This achievement is reflected in similarly high literacy rates among both men (97.3%) and women (98.1%). It is also close to gender parity in Health and Survival, with a high score of 0.953, despite a relative ranking of 147th out of 153 countries in that subindex. In Economic Participation and Opportunity, the Maldives has a score of 0.518, with a relative ranking of 131st. The greatest room for improvement lies in Political Empowerment, with a score of 0.111, and a relative ranking of 115th out of 153 countries. One area that reflects this challenge is that women comprise 4.6% of the members of parliament (4 out of 87 seats).^{347,348}

President Solih pledged to introduce a quota for women on island councils in a 2019 speech marking International Women’s Day. On the same occasion he announced increased parental leave for civil service employees, extending paid maternity leave to six months for women, and extending paid paternity leave to one month for men. President Solih further stated, “61% of the executive posts are held by men. Women comprises only 39%. I don’t believe this is how it should be...When talking about empowering women, this is a tradition that must be changed. We want to increase the role of women in executive posts of all sectors.”³⁴⁹

Women can own property but usually own only a fraction of the property that men do. While inheritance typically follows Islamic Sharia law, under which women inherit less than men, land is usually inherited equally between daughters and sons in accordance with civil

law.³⁵⁰

The Maldives is not one of the 90 countries that has established a National Action Plan for the Implementation of UNSCR 1325 on Women, Peace and Security (WPS), as of January 2021.³⁵¹ However, in a 2021 report entitled, “Women as Peace Builders and Agents of Change in the Maldives,” the government is exploring how improving women’s rights, increasing women’s participation in peacebuilding, and applying a gender perspective in political processes can improve outcomes for security and the whole of society.³⁵² Among the report’s findings are that an estimated 80% of women interviewed felt that men held women back or complained about sexual harassment and violence. Many interviewed women said that men often dismissed these problems as unimportant. Street harassment in Malé is prevalent enough that most women stated they were often afraid of walking on their own. The report also points out sensitivities that are critical to involving women in preventing violent extremism (PVE). Initial programs focused on women as wives and mothers on the assumption that women controlled the private sphere to influence husbands and children. Among the women interviewed, some believed they could influence their children, but almost none believed the same applied to their husbands or other men. Women feared that if the responsibility for PVE was being shifted to them from the state, they would bear the blame for extremism that they may not have had the ability to prevent in the first place. One recommendation was to focus on women as broad societal actors, not just mothers and wives. When they have had the power to do so, women in the Maldives have challenged extremism. Women are often more likely to observe behavioral patterns that potentially signal problems, but women need a public voice and access to power to effectively act.³⁵³

CONCLUSION

As a nation comprised of about 1,200 islands across 26 atolls, Maldives faces climate change as one of its greatest threats.³⁵⁴ With three-quarters of its land area lying less than one meter (three feet) above sea level, minimal sea level rise could have devastating effects, even without land disappearing. Only 13% of the Maldives' land is estimated to be cultivable, and salt water intrusion or salinization of the soil could threaten that.³⁵⁵ The low-lying islands are exposed and increasingly vulnerable to a number of hazards exacerbated by climate change, including coastal erosion, frequent monsoon flooding, and intense sea surges.

The small size of the islands has led to building up on the capital city of Malé, one of the world's most densely populated cities, where crowded conditions render it vulnerable to residential fires.³⁵⁶ Yet, building densely on reclaimed land may be a rising trend for the Maldives, as seen with the artificial island of Hulhumalé near the capital. Reclamation began in 1997, leading to more than 50,000 people living on the island by 2019, with up to 240,000 people envisioned living in high-rise buildings on Hulhumalé in the next decade.³⁵⁷ The building boom in high-rise dwellings is partially driven by increased infrastructure construction, as large causeway and bridge projects, funded previously by China and more recently by India, connect the capital, Malé, to the international airport and to other nearby islands. However, land reclamation is accompanied by a host of environmental issues, including poor drainage, flooding during heavy rainfall, and groundwater contamination. The lack of coastal vegetation in newly reclaimed areas exacerbates erosion and increases vulnerability to tsunamis.³⁵⁸

The Maldives established the National Disaster Management Center in the wake of the December 2004 Indian Ocean Tsunami. Although the tsunami did not arrive with sudden destructive waves, almost the entire country's land area was engulfed with the rising surge, devastating infrastructure and economic development. Since then, disaster management policy has continued to develop.³⁵⁹ As elsewhere, the front line of disaster response is at the local level, which occurs at island and atoll levels in the Maldives. Nationally, the lead disaster agency, the National Disaster Management Authority (NDMA), is supported by the Maldives National Defence Force (MNDF), Maldives Police Service (MPS), and Maldivian Red Crescent (MRC).³⁶⁰ In line with the role the local level plays and the importance of disaster prevention, which often accompanies climate change adaptation, one of NDMA's critical objectives to mainstream disaster risk reduction (DRR) at the national level and minimize the impact of disasters.³⁶¹ NDMA also runs a Community Based Disaster Risk Management Program to reduce risk and increase preparedness, resilience, and the capability to adapt.³⁶²

The Maldives has been hit particularly hard by the COVID-19 pandemic. Residents in dense areas, especially migrants, have been more vulnerable to transmission. Also, the country's economy, which is highly dependent on foreign tourism, in 2020 suffered its worst setback since the 2008 global financial crisis. However, the Maldivian population benefits from universal health insurance, and the country has an extremely low COVID-19 mortality rate of 0.27%. Maldives received their first COVID-19 vaccines in March 2021 and pledged to make the vaccines freely available to the population.³⁶³

APPENDICES

DoD DMHA Engagements in the Past Five Years (FY 2015-2020)

The list below describes defense engagements, particularly those relevant to DMHA, which the U.S. has had with the Maldives in the last five years:

Inaugural Defense and Security Dialogue, January 2021

On 5 January 2021, the U.S. Department of Defense and the Maldives' Ministry of Defence conducted their initial Defense and Security Dialogue in Malé, the capital of the Maldives. Both parties agreed on effective measures to operationalize the Security and Defense Relationship Framework signed in September 2020. The U.S. and the Maldives will focus on four areas: 1) exercises, 2) logistics, 3) information sharing, and 4) professional military education. Both sides agreed on activities in 2021 that will advance shared priorities, such as maritime security, counterterrorism, humanitarian assistance, and disaster relief. Mr. Anthony Tata, performing the duties of Under Secretary of Defense for Policy, co-chaired the meeting alongside Maldivian Minister of Defence Mariya Didi. The DoD commended the Maldives' success in rapidly responding to the COVID-19 pandemic, and both sides agreed to evaluate further cooperation opportunities in COVID-19 vaccine distribution. The U.S. and the Maldives professed their shared commitment to a free and open Indo-Pacific region, affirmed the importance of the dialogue, and are planning for the 2022 Defense and Security Dialogue.³⁶⁴

Bilateral Training, December 2020-January 2021

U.S. Special Operations Forces deployed to U.S. Special Operations Command Pacific (SOCPAC) completed a three-week military-to-military contact with members of the Maldives

National Defence Force (MNDF) on 5 January 2021. The exchange centered on communications and tactical combat casualty care. All participants had to quarantine and present as healthy during daily medical checks, which allowed hands-on medical training and a higher level of partnership and exchange. The medical training focused on tactical combat casualty care procedures, covering essential on-scene emergency response actions and culminating in a compressive medical evacuation mission profile. The communications training included both sides sharing best practices and participating in high frequency and line-of-sight relay practical exercises. The exchange culminated with MNDF and U.S. service members conducting a simulated joint, combined personnel recovery operation, which featured them seizing a captured vessel and nearby port facility, recovering personnel, and demonstrating tactical combat casualty care and communications procedures. MNDF participants included members of their Special Forces, Marine Corps, Signals Battalion, and Medical Corps. Maldivian Minister of Defence Mariya Ahmed Didi, Maldivian Chief of Defence Maj. Gen. Abdullah Shamaal, U.S. Ambassador to the Maldives Alaina Teplitz, U.S. Undersecretary of Defense for Policy Anthony Tata, U.S. Deputy Assistant Secretary of Defense for South and Southeast Asia Reed Werner, U.S. Defense Security Cooperation Agency Director Heidi Grant, and SOCPAC Commander Brig. Gen. Josh Rudd observed the conclusion of the exercise. The bilateral training followed the Maldives and U.S. signing a defense agreement three months prior.³⁶⁵

Maldives' Inaugural Participation in PACAF Conference, December 2020

On 9 December 2020, the Maldives attended the Pacific Air Chiefs (PAC) Video Teleconference (VTC) for the first time, three months after the Maldives and U.S. signed a defense agreement. The Pacific Air Forces

(PACAF) commander, Gen. Ken Wilsbach, hosted 23 air chiefs during the quarterly PAC VTC from Hickam Air Force Base, Hawaii. The PAC VTCs reaffirm PACAF's commitment to multilateral allies and partners by providing regular, continuing opportunities for high-level dialogue among air chiefs throughout the region. The topic of discussion for this VTC was, "How will our Air Forces look to connect with partners and sustain a collective presence in the region in 2021 and beyond?" The concept of the PAC VTC came from discussions during the 2019 Pacific Air Chief Symposium (PACS 19), an in-person gathering of Pacific air chiefs hosted by COMPACAF in Hawaii every two years.³⁶⁶

The Maldives and U.S. Sign Defense Agreement, September 2020

On 10 September 2020, the U.S. Deputy Assistant Secretary of Defense (DASD) for South and Southeast Asia, Reed Werner, and the Maldives Minister of Defence, Mariya Didi, signed the Framework for U.S. Department of Defense-Maldives Ministry of Defence Defense and Security Relationship" in Philadelphia. Marking a significant step forward in the defense partnership, the framework puts forward the intent of both countries to deepen engagement and cooperation, in support of maintaining peace and security in the Indian Ocean. DASD Werner and Minister Didi discussed U.S. support for the Maldives' response to COVID-19 and other areas of future cooperation. They agreed to work on scheduling the first Defense and Security Dialogue, and both affirmed their commitment to a free and open Indo-Pacific that promotes the security and prosperity of all nations in the region.³⁶⁷ The following month, on 28 October 2020, U.S. Secretary of State Mike Pompeo said the U.S. will establish an embassy in the Maldives for the first time since the countries started diplomatic relations in 1966.³⁶⁸

Medical Training, July 2017

USINDOPACOM medical experts and the U.S. Embassy completed training as of July 2017 for Maldivian doctors, nurses, schools, and the

Maldivian Red Crescent in Kulhudhuffushi, Haa Dhaalu Atoll, the northernmost atoll in Maldives. Additional Maldivian partners included the Ministry of Health and its Health Protection Agency, Atoll and Island Councils, Kulhudhuffushi Regional Hospital, Atoll Education Centre, Ameer Ameen School, and Afeefuddin School. Activities included hands-on training on controlling massive bleeding, securing airways, maintaining respiration and circulation, treating hypothermia and head injuries, cardiopulmonary resuscitation (CPR), and patient assessment and movement. The five-day program was part of U.S. assistance to help Maldivians provide better pre-hospital care and medical skills to respond to natural disasters and other emergencies, with the U.S. medical team additionally facilitating a donation to the Maldives worth approximately \$11,000 in medical supplies and equipment, which came from U.S. emergency response agencies in North Carolina. The life-saving effects of emergency pre-hospital care can be particularly significant on smaller, less resourced islands due to longer times for evacuation to medical centers.³⁶⁹

Medical Training, January-February 2017

From 29 January to 2 February 2017, U.S. Pacific Command medical personnel partnered with the Maldives National Defence Force (MNDF) and Ministry of Health to provide emergency medical training in Addu Atoll, the southernmost atoll in Maldives. Members of the MNDF Southern Area Command, Hithadoo Regional Hospital, and Maldivian Red Crescent participated in the training. Topics included emergency trauma care, cardiopulmonary resuscitation, triage, and transportation. First responder training is particularly crucial for remote islands, as it can take hours to transport a trauma patient to a medical facility.³⁷⁰

U.S. Coast Guard Engagement on Maldives Port Security, August 2016

A U.S. Coast Guard International Port Security (IPS) team completed a bilateral engagement with Maldivian officials in

August 2016. The engagement involved sharing best practices and visiting with the Maldives Transport Authority to observe the implementation of the International Ship and Port Facility Security (ISPS) Code at three port facilities in Malé and in the southern Addu Atoll. The U.S. Coast Guard developed the IPS Program in 2003 to assist seaports in overcoming security challenges and reinforce the implementation of the ISPS Code, which the Maldives became signatory to in 2004. The ISPS Program seeks to reduce risk to U.S. maritime interests, including U.S. ports and ships, and to facilitate secure maritime trade globally. A U.S. Coast Guard IPS team conducts an annual visit to assess the effectiveness of seaport anti-terrorism measures and provides recommendations to government officials to reduce the risk of a maritime security incidents and impacts to the global supply chain. The U.S. Coast Guard's Activities Far East unit, located in Tokyo, coordinates with more than 40 countries to execute these bilateral engagements.³⁷¹

SOC PAC Commander Visits Maldives, April 2016

From 20-23 April 2016, Rear Admiral Colin J. Kilrain, Commander of U.S. Special Operations Command, Pacific (SOC PAC) visited the Maldives and Sri Lanka. RADM Kilrain discussed the future role both the Maldives and Sri Lankan security forces could play in humanitarian assistance, responding to natural disasters, and increased security cooperation operations. "The United States remains committed to strengthening maritime security relationships to ensure free and safe navigation in the Indian Ocean's vital shipping lanes," said U.S. Ambassador to Sri Lanka and Maldives Atul Keshap.³⁷²

International/Foreign Relations

India has long been a close ally of the Maldives. China's influence rose significantly from 2013-2018. Since 2018, the Maldives has

been reaching out more to other countries, including the U.S., Japan, and European nations.

India has been one of the Maldives' closest and most significant allies, with relations generally being friendly and close in strategic, economic, and military cooperation. In 1965 India was one of the first countries to recognize the Maldives after it gained independence from the British. In 1988 it helped thwart a coup attempt against the Maldives' longtime dictator Maumoon Abdul Gayoom (1978-2008) by sending in paratroopers to rescue Gayoom and restore order. In 2004, following the Indian Ocean tsunami which killed thousands in India, three Indian navy vessels were dispatched to deliver aid to the Maldives.³⁷³ The tsunami killed at least 82 people in the Maldives but affected the entire population and set back development two decades. While the 2004 tsunami did not manifest in the Maldives as destructive waves, a rising surge swept over almost every inch of the low-lying nation, badly damaging infrastructure, affecting 50% of the homes in the country, and rendering 10% of the islands uninhabitable.³⁷⁴ During a water crisis following the 2014 fire at a desalination plant in Malé, India quickly flew in more than 150 tons of water and shipped in more than 800 tons of fresh water, for which the Maldives expressed appreciation.³⁷⁵ India-Maldives relations continued to remain close during the leadership of the Maldives' first democratically elected president, Mohamed Nashid (2008-2012); however, ties to India were set back with the 2013 election of pro-China Maldivian President Abdulla Yameen.

China's influence was seen as more ascendant during the administration of autocratic-leaning Abdulla Yameen, from 2013-2018. Under Yameen, the Maldives experienced a construction boom funded by Chinese loans. The construction loans were part of China's Belt and Road Initiative, Beijing's global infrastructure development strategy to invest in dozens of countries ostensibly for mutual long-term economic gain, though skeptics are concerned with the debt risk for countries accepting Beijing's loans. Under Yameen's tenure,

construction projects in the Maldives included a building 7,000 apartments in a public housing project on the reclaimed island of Hulhumalé,³⁷⁶ further development of the international airport, and building a 2.1-km (1.3-mile) bridge between the island the capital is on and the island hosting the airport. The bridge, also known as the China-Maldives Friendship Bridge, was the flagship project of China's infrastructure boom in the Maldives. In 2018, Yameen suffered a surprising electoral defeat to Ibrahim Solih, followed by Yameen being convicted in 2019 of money laundering after facing allegations of awarding large infrastructure contracts to Chinese companies at inflated prices. The exact amount of Maldives' debt to China, primarily accrued under Yameen, has been disputed. In September 2020, former President Nasheed, who is now Speaker of Parliament under the Solih administration, claimed the new administration discovered the amount of Chinese debt to be \$3.1 billion, though he asserts the debt on paper exceeds the money received. Former Maldivian officials, as well as Chinese representatives, put the amount of debt between \$1.1 and \$1.4 billion – which is still a huge sum for the Maldives, which has a GDP of around \$4.9 billion.³⁷⁷ In December 2020, Nasheed took complaints to Twitter about the lack of concessions from Chinese banks during the COVID-19 economic crisis, stating the Maldives must pay more than \$15 million over 14 days, which “represent over 50% of government income” during that time period.³⁷⁸

India has been providing increasing assistance and regaining diplomatic influence with the current administration led by President Ibrahim Solih since 2018. Two months after President Solih was elected, amid growing concern over Maldivian debt to China, Indian Prime Minister Modi announced in December 2018 that India would provide the Maldives with financial assistance of US\$1.4 billion in the form of budgetary support, currency swap agreements, and concessional lines of credit.³⁷⁹ In August 2020, India announced a US\$500 million aid package to the Maldives, in a move regionally

perceived to counter China's influence. The funds will support the largest civilian infrastructure project in the Maldives, which will connect the capital, Malé, via bridge and causeway links with the three nearby islands of Villingili, Gulhifahu, and Thilafushi.³⁸⁰ In September 2020, to mitigate the COVID-19 impact, India provided a US\$250 million loan under favorable terms, via Treasury Bonds sold to the State Bank of India for handover to Malé, so as to not reflect on the Maldives' external borrowings and with no principal due for a decade to reduce debt liability.³⁸¹ The tourism-dependent Maldivian economy has been hit hard by COVID-19, which reduced foreign tourist arrivals to zero from April to June 2020. The easy terms of the Indian loan contrasted with the Maldives' concern over the massive debt previously racked up to China under stricter terms during Yameen's rule.³⁸² In February 2021, Maldivian Foreign Minister Abdulla Shahid said that since the Solih administration came to power in 2018, India has been a great ally to the Maldives, especially in terms of funding community development projects. Shahid also said that India has greatly contributed to the safety of the region with its 'Neighborhood First' policy, and hopes India will advocate against climate change on international platforms.³⁸³ Since President Solih was elected, India's total pledged financial assistance to the Maldives has surpassed \$2 billion, which is “really quite unprecedented for India, in terms of the scale of the assistance and also the speed in which it has been deployed,” said David Brewster of the Australian National University's National Security College.³⁸⁴

The Maldives has also been reaching out to other countries, such as the U.S. and Japan. In September 2020, Japan extended a \$47.5 million loan to support the Maldives amid the COVID-19 crisis, which comprised the largest concessional loan Japan has ever given the island nation. Also in September, the U.S. and the Maldives signed a defense agreement.³⁸⁵ India has historically been wary of foreign military presence so close to its borders, and thwarted a 2013 attempted Status of Forces Agreement

between the U.S. and Maldives that was drafted under a previous administration but scuttled by Yameen. In significant contrast, India now supports the U.S.-Maldives defense agreement. Indian officials have reportedly said that most of the points in the defense agreement “are very much aligned to our interest, like countering violent extremism, HADR [humanitarian assistance and disaster response] and support for rules based-order in the region.” Indian support also stems from what the U.S.-Maldives defense agreement signals politically, with an Indian official reportedly stating, “There cannot be more clarity that Maldives is saying that it is part of the Indo-Pacific,” referring to the U.S. concept of a Free and Open Indo-Pacific.³⁸⁶ The following month, during a five-day tour through Asia in October 2020, then Secretary of State Mike Pompeo announced the U.S. would open an embassy in Malé and appoint a resident ambassador. This is the first time the U.S. will establish an embassy in the Maldives since the countries opened diplomatic relations in 1966, in another move seen as competing with China for influence in the region.³⁸⁷ U.S. foreign assistance to the Maldives has significantly increased in the last several years. Since 2018, the U.S. has provided \$10.8 million in Foreign Military Financing under the Bay of Bengal Initiative, in support of Maldives’ maritime security capacity. In February 2019, the U.S. Department of State committed nearly \$10 million in Economic Support Funds during Maldivian Foreign Minister Shahid’s visit to Washington, DC. In 2020, in response to the COVID-19 crisis, the U.S. provided approximately \$3 million in assistance to Maldives, in support of social-protection services led by local civil-society organizations and to assist them in advocating effectively for COVID recovery policies.³⁸⁸ U.S. foreign assistance to the Maldives aims to strengthen democratic institutions, civil society, fiscal transparency, maritime security, counterterrorism, and law enforcement.

The Maldives has extended strong support to U.S. efforts to combat terrorism and terrorist financing. Violent extremism has been a

very significant concern in the Maldives. At a December 2019 conference for councilors, security forces confirmed a foiled 2017 airplane bomb plot and announced the presence of 1,400 Maldivians who adhere to extremist ideology to the point of being willing to kill. According to Commissioner of Police Mohamed Hameed, 423 Maldivians attempted to join terrorist organizations in Syria and Iraq, of which 173 people managed to enter the war zones, and “hundreds” of local extremists also travelled to Pakistan and Afghanistan before the Syrian civil war, some of whom have been spreading radical ideologies since returning to the Maldives. In giving the conference’s concluding remarks, President Solih said there was no benefit in keeping the information about extremism hidden from the public. The numbers announced at the conference were significantly higher than the figure of 69 jihadi fighters offered by the previous administration, which downplayed the issue.³⁸⁹ A 2017 Norwegian Refugee Council publication stated the Maldives has the world’s highest number of foreign fighters per capita and describes the attitude among many Maldivians as admiring the bravery of ISIS fighters. Extending the analysis to street gangs, the 2017 report stated approximately 30 gangs rule Malé, with each of them having up to 500 affiliates – on an island which only has 130,000 registered residents (though its actual has been estimated as double that).³⁹⁰ There are many complex factors contributing to extremism in the Maldives, and Saudi proselytization is an important one. Saudi sponsorship of Wahhabism, a conservative strain of Islam, has resulted in Wahhabism being exported internationally. Although Wahhabi-inspired Islam in the Maldives can be traced back to the 1970s and 1980s when many students returned home from studying in Wahhabi madrasas, it did not rapidly make inroads in the Maldives until the last 1-2 decades. Ironically, the Maldives’ transition to democracy and political liberalization in the mid-2000s also allowed Wahhabi activists to have greater influence over politics and society. Under Yameen’s rule from 2013-2018, Maldives deepened its ties to Saudi

Arabia. Saudi companies had also won large construction contracts, and Riyadh had promised over \$300 million in loans at one point. Although Sunni Islam is the Maldives' state religion with citizens legally required to adhere to it, the puritanical Wahhabism is in sharp contrast to the tolerant Sufi-orientated Shafi'i Sunni Islam traditional to the Maldives.³⁹¹

The government of the Maldives has undertaken numerous policy steps over the past decade to counter terrorism. Under the Ministry of Defence and National Security, the Office for Counter Terrorism was established in 2012, then upgraded in 2014 to the Department of Counter Terrorism. In 2015, the Prevention of Terrorism Act was passed, marking a major update from the previous legislation and enabling more robust and unified efforts against terrorism and violent extremism. The 2015 act also paved the way for the National Counter Terrorism Centre (NCTC) to be established in February 2016. NCTC is under the direct supervision of the Minister of Defence and National Security and staffed by personnel from the MNDF.³⁹²

Participation in International Organizations

The Maldives participates in the following international organizations:

Asian Development Bank (ADB), Asian Disaster Preparedness Center (ADPC), Alliance of Small Island States (AOSIS), Coalition for Disaster Resilient Infrastructure (CDRI), The Commonwealth, Food and Agriculture Organization of the United Nations (FAO), Group of 77 (G-77), International Bank for Reconstruction and Development (IBRD), International Civil Aviation Organization (ICAO), International Criminal Court, International Development Association (IDA), International Fund for Agricultural Development (IFAD), International Finance Corporation (IFC), International Federation of Red Cross and Red Crescent Societies (IFRC), International

Labour Organization (ILO), International Monetary Fund (IMF), International Maritime Organization (IMO), International Criminal Police Organisation (INTERPOL), International Olympic Committee (IOC), International Organization for Migration (IOM), Inter-Parliamentary Union (IPU), International Telecommunication Union (ITU), Multilateral Investment Guarantee Agency (MIGA), Non-Aligned Movement (NAM), Organisation of Islamic Cooperation (OIC), Organisation for the Prohibition of Chemical Weapons (OPCW), Regional Consultative Committee on Disaster Management (RCC), Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES), South Asian Association for Regional Cooperation (SAARC), South Asia Cooperative Environment Program (SACEP), United Nations (UN), United Nations Conference on Trade and Development (UNCTAD), UN Educational, Scientific, and Cultural Organization (UNESCO), UN Industrial Development Organization (UNIDO), World Tourism Organization (UNWTO), Universal Postal Union (UPU), World Customs Organization (WCO), World Health Organization (WHO), World Intellectual Property Organization (WIPO), World Meteorological Organization (WMO), and the World Trade Organization (WTO).³⁹³

Force Protection/Pre-Deployment Information

The following information is provided for pre-deployment planning and preparations. Visit www.travel.state.gov prior to deployments for further up-to-date information. Unless otherwise cited, most of the information in this section is from the U.S. Department of State.³⁹⁴ DoD personnel must review the Foreign Clearance Guide (FCG) for travel to the Maldives (www.fcg.pentagon.mil). All official travel and active duty personal travel must be submitted through an APACS request. Contact information for the Defense Attaché Office can be found in the FCG if you have additional questions.

Passport/Visa

Passport Validity: Must be valid for six months from expected date of departure from Maldives.

Blank Passport Pages: One page required for entry stamp.

Tourist Visa Required: Visitor visa available at the airport for stays up to 30 days.

Vaccinations: Required for yellow fever if arriving from an infected area.

Currency Restrictions For Entry: None.

Currency Restrictions For Exit: None.

Safety and Security

Concerns have significantly increased about a small number of violent Maldivian extremists who advocate for attacks against secular Maldivians and are involved with transnational terrorist groups. U.S. citizens traveling to Maldives should be aware of violent attacks and threats made against local media, political parties, and civil society. In the past there have been several killings and violent attacks against secular bloggers and activists. Maldives has a history of political protests. Young men frequently stage spontaneous protests throughout Malé, often at night. Some of these protests have involved use of anti-Western rhetoric. There are no reports of unrest or demonstrations on the resort islands or at Ibrahim Nasir International Airport. Travelers should not engage in political activity in Maldives. Visitors should exercise caution, particularly at night, and should steer clear of demonstrations and spontaneous gatherings. Those who encounter demonstrations or large crowds should avoid confrontation, remain calm, and depart the area quickly. U.S. Embassy employees are not resident in Maldives; Embassy staff in Sri Lanka are accredited to Maldives and make regular visits. This will constrain the Embassy's ability to provide services to U.S. citizens in Maldives during an emergency. Many tourist resorts are several

hours' distance from Malé by boat, necessitating lengthy response times by authorities in case of medical or criminal emergencies.

Crime: Maldives has a moderate crime rate, although crime on resort islands is rare. Valuables may be stolen when left unattended on beaches or in hotels. Drug use is on the rise among young Maldivians and the penalty for drug use is severe. The capital, Malé, experienced increased gang violence in August 2014, with several attacks involving the use of edged weapons. Gang activity and violence in Malé appears to be on the rise.

Victims of Crime: If you or someone you know becomes the victim of a crime abroad, you should contact the local police and the nearest U.S. embassy or consulate.

The local equivalent to the "911" emergency line in Maldives is 119. Note: This number is only for the police, not for emergency medical services.

Domestic Violence: U.S. citizen victims of domestic violence may contact the Embassy for assistance.

Tourism: The tourism industry is unevenly regulated, and safety inspections for equipment and facilities do not commonly occur. Hazardous areas/activities are not always identified with appropriate signage, and staff may not be trained or certified either by the host government or by recognized authorities in the field. In the event of an injury, appropriate medical treatment is typically available only in/near major cities. First responders are generally unable to access areas outside of major cities and to provide urgent medical treatment. U.S. citizens are encouraged to purchase medical evacuation insurance.

Emergency Contact Information

The local emergency line in Maldives is 119. This number is only for the police, not for emergency medical services.

U.S. Embassy staff in Sri Lanka are accredited to Maldives and make regular visits; U.S. Embassy employees are not resident in Maldives as of April 2021.

U.S. Embassy Colombo
210 Galle Road,
Colombo 03,
Sri Lanka
Telephone: +(94) (11) 249-8500
Emergency After-Hours Telephone: +(94) (11)
249-8888
Fax: +(94) (11) 249-8590
colomboacs@state.gov

In October 2020, the U.S. announced plans to establish an embassy and resident ambassador in the Maldives for the first time, which is still pending implementation as of April 2021.³⁹⁵ The U.S. operates an American Center in Malé, which provides employment and leadership skills for youth, promotes English language learning, and fosters goodwill and mutual understanding.³⁹⁶ The American Center is not recommended for emergency services – see above contacts instead. More information can be found at the U.S. Mission to Maldives website at: <https://mv.usmission.gov/>

Currency Information

The currency in the Maldives is the Maldivian rufiyaa (MVR). The rufiyaa is subdivided into 100 laari.

1 USD ~ 15.2 MVR, as of 29 March 2021.³⁹⁷

Travel Health Information

The Centers for Disease Control and Prevention (CDC) provides guidance that all travelers to the Maldives should be up to date on routine vaccinations. The following are additional recommendations for travel to the Maldives. The information in Table 6 is taken directly from the CDC website under the Travelers Health Section (<https://wwwnc.cdc.gov/travel/destinations/list/>).³⁹⁸

Health Alerts for the Maldives: As of 28 March 2021, the COVID-19 risk alert is at “Level 4: Very High Level of COVID-19 in Maldives.” The CDC warns, “Travelers should avoid all travel to Maldives.”³⁹⁹

EAT AND DRINK SAFELY

Unclean food and water can cause travelers’ diarrhea and other diseases. Reduce your risk by sticking to safe food and water habits.

Eat

- Food that is cooked and served hot
- Hard-cooked eggs
- Fruits and vegetables you have washed in clean water or peeled yourself
- Pasteurized dairy products

Don’t Eat

- Food served at room temperature
- Food from street vendors
- Raw or soft-cooked (runny) eggs
- Raw or undercooked (rare) meat or fish
- Unwashed or unpeeled raw fruits and vegetables
- Unpasteurized dairy products
- “Bushmeat” (monkeys, bats, or other wild game)

Drink

- Bottled water that is sealed
- Water that has been disinfected
- Ice made with bottled or disinfected water
- Carbonated drinks
- Hot coffee or tea
- Pasteurized milk

Don’t Drink

- Tap or well water
- Ice made with tap or well water
- Drinks made with tap or well water (such as reconstituted juice)
- Unpasteurized milk

Take Medicine

Talk with your doctor about taking prescription or over-the-counter drugs with you on your trip in case you get sick.

PREVENT BUG BITES

Bugs (like mosquitoes, ticks, and fleas) can spread a number of diseases in the Maldives. Many of these diseases cannot be prevented with

a vaccine or medicine. You can reduce your risk by taking steps to prevent bug bites.

What can I do to prevent bug bites?

- Cover exposed skin by wearing long-sleeved shirts, long pants, and hats.
- Use an appropriate insect repellent (see below).
- Use permethrin-treated clothing and gear (such as boots, pants, socks, and tents). Do not use permethrin directly on skin.
- Stay and sleep in air-conditioned or screened rooms.
- Use a bed net if the area where you are sleeping is exposed to the outdoors.

What type of insect repellent should I use?

- FOR PROTECTION AGAINST TICKS AND MOSQUITOES: Use a repellent that contains 20% or more DEET for protection that lasts up to several hours.
- FOR PROTECTION AGAINST MOSQUITOES ONLY: Products with one of the following active ingredients can also help prevent mosquito bites. Higher percentages of active ingredient provide

longer protection.

- DEET
- Picaridin (also known as KBR 3023, Bayrepel, and icaridin)
- Oil of lemon eucalyptus (OLE) or para-menthane-diol (PMD)
- IR3535
- 2-undecanone
- Always use insect repellent as directed.

What should I do if I am bitten by bugs?

Avoid scratching bug bites, and apply hydrocortisone cream or calamine lotion to reduce the itching.

Check your entire body for ticks after outdoor activity. Be sure to remove ticks properly.

What can I do to avoid bed bugs?

Although bed bugs do not carry disease, they are an annoyance. For advice on bed bugs, see: <https://wwwnc.cdc.gov/travel/page/avoid-bug-bites>

Note that conditions can change rapidly in a country at any time. To receive updated Travel Advisories and Alerts for the countries you choose, sign up at step.state.gov.

Vaccines for disease	Recommendations
Routine vaccines	Make sure you are up-to-date on all routine vaccines before every trip. Some of these vaccines include <ul style="list-style-type: none"> • Chickenpox (Varicella) • Diphtheria-Tetanus-Pertussis • Flu (influenza) • Measles-Mumps-Rubella (MMR) • Polio
Hepatitis A (for most travelers)	Recommended for unvaccinated travelers one year old or older going to the Maldives. Infants 6 to 11 months old should also be vaccinated against Hepatitis A. The dose does not count toward the routine 2-dose series. Travelers allergic to a vaccine component or who are younger than 6 months should receive a single dose of immune globulin, which provides effective protection for up to 2 months depending on dosage given. Unvaccinated travelers who are over 40 years old, immunocompromised, or have chronic medical conditions planning to depart to a risk area in less than 2 weeks should get the initial dose of vaccine and at the same appointment receive immune globulin.
Hepatitis B	Recommended for unvaccinated travelers of all ages to the Maldives.
Measles	Infants 6 to 11 months old traveling internationally should get 1 dose of measles-mumps-rubella (MMR) vaccine before travel. This dose does not count as part of the routine childhood vaccination series.

Table 6: CDC Travel Health Information for the Maldives

Typhoid	Recommended for most travelers, especially those staying with friends or relatives or visiting smaller cities or rural areas.
Yellow Fever	Required if traveling from a country with risk of YF virus transmission and ≥9 months of age, including transit >12 hours in an airport located in a country with risk of YF virus transmission. ¹ Note: Yellow fever vaccine availability in the United States is currently limited. Travelers may need to schedule appointments well in advance and visit a clinic some distance away.
Rabies (Some travelers)	Rabies can be found in dogs, bats, and other mammals in Laos, so CDC recommends this vaccine for the following groups: <ul style="list-style-type: none"> • Travelers involved in outdoor and other activities (such as camping, hiking, biking, adventure travel, and caving) that put them at risk for animal bites. • People who will be working with or around animals (such as veterinarians, wildlife professionals, and researchers). • People who are taking long trips or moving to Laos • Children, because they tend to play with animals, might not report bites, and are more likely to have animal bites on their head and neck.
Yellow Fever (Some travelers)	Required if traveling from a country with risk of Yellow Fever virus transmission. NOTE: Yellow fever vaccine availability in the United States is currently limited. If you need to be vaccinated before your trip, you may need to travel some distance and schedule your appointment well in advance.
Non-Vaccine-Preventable Diseases Advice: Avoid Bug Bites	
Disease Name	How most people get sick (most common modes of transmission)
Chikungunya	Mosquitoes carrying chikungunya bite during the day and night, both indoors and outdoors, and often live around buildings Advice: Avoid bug bites.
Dengue	Mosquitoes carrying dengue bite during the day and night, both indoors and outdoors, and often live around buildings Leading cause of febrile illness among travelers returning from the Caribbean, South America, and South and Southeast Asia Advice: Avoid bug bites.
Zika	We do not have accurate information on the current level of risk. There may be delays in detection and reporting of new outbreaks. Because Zika is a cause of severe birth defects, CDC recommends pregnant women and couples trying to become pregnant within the next 3 months work with their health care providers to carefully consider the risks and possible consequences of travel to areas with risk of Zika. Advice: Avoid bug bites.

Table 6: CDC Travel Health Information for the Maldives (cont.)

Sendai Framework

The Sendai Framework is the global blueprint and fifteen-year plan to build the world's resilience to natural disasters.⁴⁰⁰ The information in this section is sourced directly from the Sendai Framework. The Sendai Framework for Disaster Risk Reduction 2015-2030 outlines seven clear targets and four priorities for action to prevent new and reduce existing disaster risks:

The Seven Global Targets include:

- Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality rates in the decade 2020-2030 compared to the period 2005-2015.
- Substantially reduce the number of affected people globally by 2030, aiming to lower average global figure per 100,000 in the decade 2020 -2030 compared to the period 2005-2015.
- Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030.
- Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030.
- Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020.

- Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this Framework by 2030.
- Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.⁴⁰¹

The Four Priorities of Action include:

- Understanding disaster risk;
- Strengthening disaster risk governance to manage disaster risk;
- Investing in disaster reduction for resilience; and
- Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation, and reconstruction.

The Sendai Framework aims to achieve the substantial reduction of disaster risk and losses in lives, livelihoods, and health and in the economic, physical, social, cultural, and environmental assets of persons, businesses, communities, and countries over the next 15 years. It was adopted at the Third United Nations World Conference on Disaster Risk Reduction in Sendai, Japan in 2015.⁴⁰² The Sendai Framework is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters.⁴⁰³ Figure 9 shows the Sendai DRR Framework.⁴⁰⁴

Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030

Scope and purpose

The present framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors

Expected outcome

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

Goal

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience

Targets

Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared to 2005-2015	Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2005-2015	Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030	Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030	Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020	Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030	Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030
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Figure 9: UN Sendai Framework for Disaster Risk Reduction 2015-2030

HFA Country Progress Report

The Hyogo Framework for Action (HFA) was adopted as a guideline to reduce vulnerabilities to natural hazards. The HFA assists participating countries to become more resilient and to better manage the hazards that threaten their development. The most recent levels of progress results published from the country are from 2011-2013 and are represented in Figure 10 and Table 7. Table 8 provides an overview of the overall challenges and the future outlook statement from the HFA report. The 2013 Report is the most recent HFA report available for the Maldives. The information in this section is sourced directly from the HFA Country Progress Report.⁴⁰⁵

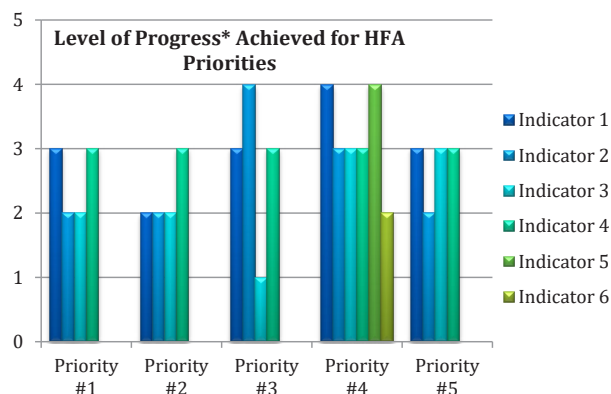


Figure 10: HFA Level of Progress Achieved

Priority for Action #1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.		
Core Indicator*	Indicator Description	Level of progress Achieved*
1	National policy and legal framework for disaster risk reduction exists with decentralized responsibilities and capacities at all levels.	3
2	Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels.	2
3	Community participation and decentralization is ensured through the delegation of authority and resources to local levels.	2
4	A national multi sectoral platform for disaster risk reduction is functioning.	3
Priority for Action #2: Identify, assess and monitor disaster risks and enhance early warning.		
1	National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.	2
2	Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities.	2
3	Early warning systems are in place for all major hazards, with outreach to communities.	2
4	National and local risk assessments take account of regional / trans-boundary risks, with a view to regional cooperation on risk reduction.	3
Priority for Action #3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels		
1	Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems, etc.).	3
2	School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.	4
3	Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.	1
4	Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.	3

Table 7: National Progress Report on the Implementation of the HFA

Priority for Action #4: Reduce the underlying risk factors.		
1	Disaster risk reduction is an integral objective of environment related policies and plans, including for land use natural resource management and adaptation to climate change.	4
2	Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk.	3
3	Economic and productive sectorial policies and plans have been implemented to reduce the vulnerability of economic activities.	3
4	Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes.	3
5	Disaster risk reduction measures are integrated into post disaster recovery and rehabilitation processes.	4
6	Procedures are in place to assess the disaster risk impacts of major development projects, especially infrastructure.	2
Priority for Action #5: Strengthen disaster preparedness for effective response at all levels.		
1	Strong policy, technical and institutional capacities and mechanisms for disaster risk management, with a disaster risk reduction perspective are in place.	3
2	Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programs.	2
3	Financial reserves and contingency mechanisms are in place to support effective response and recovery when required.	3
4	Procedures are in place to exchange relevant information during hazard events and disasters, and to undertake post-event reviews.	3

Table Notes:

*Level of Progress:

1 – Minor progress with few signs of forward action in plans or policy

2 – Some progress, but without systematic policy and/ or institutional commitment

3 – Institutional commitment attained, but achievements are neither comprehensive nor substantial

4 – Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

5 – Comprehensive achievement with sustained commitment and capacities at all levels

Table 7: National Progress Report on the Implementation of the HFA (cont.)

Future Outlook 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.	
Challenges:	<p>The overall challenges towards disaster prevention, mitigation, preparedness and vulnerability reduction includes:</p> <ul style="list-style-type: none"> • Weak institutional establishments to integrate at all levels of government • Inadequate awareness and advocacy including gender sensitive policies and plans • Limited capacity to interpret technical information into analysis to guide development planning and policy design
Future Outlook Statement:	<p>All the challenges identified are considered and known to the Government authorities resulting in gradual progress being made in all relevant areas of DRR and DRM. This includes international best practices, either studies or practices [practical] experiences, have helped facilitated action from the relevant government authorities.</p>

Table 8: HFA Country Progress Report Future Outlook Areas, the Maldives

Future Outlook 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.	
Challenges:	<p>Maldives is at the infant stage of systematically contributing to building resilience to hazards due to various factors and one being Disaster Management was not a top priority until the lessons learnt from the Tsunami in the region. Other challenges include:</p> <ul style="list-style-type: none"> • No clear mandates for coordination, monitoring and reporting; • Inadequate funding and at times financial restrictions and shortfalls; • Inadequate human capacity in terms of new and emerging disaster preparedness, prevention and response under DRR strategies as well as limited technical expertise available in country; • No legal framework on DRR is a major setback in a lot of the national initiatives on DRR; and • Political instability due to the transition phase of Maldives towards a democratic and decentralized government system with the enabling policy and legislative frameworks
Future Outlook Statement:	<p>A great deal of efforts has to target sensitization of politicians in the country to generate continued political will to prioritise strengthening of institutions with required capacity and resource through the endorsement of the Disaster Management. With considerable experience and help from other countries who have developed their disaster management mechanisms, the government is positive to building a resilient country.</p>
Future Outlook 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.	
Challenges:	<p>Prior to the Tsunami, emergency preparedness and response programs in the reconstruction were quite new in the country and highly likely to gain momentum however the main challenge is remains in the different sectoral codes of practices, guidelines and standards as there is no formal mechanism for tracking and reporting.</p>
Future Outlook Statement:	<p>Incorporation of risk reduction approaches in taking place slowly and with decentralized responsibilities the government hopes to make significant improvements particularly in enforcement so that relevant sectors can adhere to specific emergency preparedness, response and recovery guidelines and standards.</p>
Future Outlook Area 4: The United Nations General Assembly Resolution 66/199, requested the development of a post-2015 framework for disaster risk reduction. A first outline will be developed for the next Global Platform in 2013, and a draft should be finalized towards the end of 2014 to be ready for consideration and adoption at the World Conference on Disaster Reduction in 2015.	
Challenges	<p>The Government's suggestions for consideration are:</p> <ul style="list-style-type: none"> • Enhance capacity on Climate Change Adaptation and Disaster Risk Reduction and perhaps merge intervention where necessary; • Increase financing for specific DRR inventions at national levels; • Improvements in technology and/or equipment for DRR outreach including alternative Early Warning Systems

Table 8: HFA Country Progress Report Future Outlook Areas, the Maldives (cont.)

Country Profile

The information in the Country Profile section is sourced directly from the CIA World Fact book for the Maldives. Additional numbers on country comparison to the world can be found by going directly to the CIA website (<https://www.cia.gov>). It discusses topics including geography, people and society, government, economy, energy, communications, military and security, transportation, terrorism, and transnational issues.⁴⁰⁶

INTRODUCTION

Background

A sultanate since the 12th century, the Maldives became a British protectorate in 1887. The islands became a republic in 1968, three years after independence. President Maumoon Abdul GAYOOM dominated Maldives' political scene for 30 years, elected to six successive terms by single-party referendums. Following political demonstrations in the capital Male in August 2003, GAYOOM and his government pledged to embark upon a process of liberalization and democratic reforms, including a more representative political system and expanded political freedoms. Political parties were legalized in 2005.

In June 2008, a constituent assembly - termed the "Special Majlis" - finalized a new constitution ratified by GAYOOM in August 2008. The first-ever presidential elections under a multi-candidate, multi-party system were held in October 2008. GAYOOM was defeated in a runoff poll by Mohamed NASHEED, a political activist who had been jailed several years earlier by the GAYOOM regime. In early February 2012, after several weeks of street protests in response to his ordering the arrest of a top judge, NASHEED purportedly resigned the presidency and handed over power to Vice President Mohammed WAHEED Hassan Maniku. A government-appointed Commission of National Inquiry concluded there was no evidence of

a coup, but NASHEED contends that police and military personnel forced him to resign. NASHEED, WAHEED, and Abdulla YAMEEN Abdul Gayoom ran in the 2013 elections with YAMEEN ultimately winning the presidency after three rounds of voting. As president, YAMEEN weakened democratic institutions, curtailed civil liberties, jailed his political opponents, restricted the press, and exerted control over the judiciary to strengthen his hold on power and limit dissent. In September 2018, YAMEEN lost his reelection bid to Ibrahim Mohamed SOLIH, a parliamentarian of the Maldivian Democratic Party (MDP), who had the support of a coalition of four parties that came together to defeat YAMEEN and restore democratic norms to Maldives. In April 2019, SOLIH's MDP won 65 of 87 seats in parliament.

GEOGRAPHY

Location

Southern Asia, group of atolls in the Indian Ocean, south-southwest of India

Geographic coordinates

3 15 N, 73 00 E

Map references

Asia

Area

total: 298 sq km

land: 298 sq km

water: 0 sq km

country comparison to the world: 209

Area - comparative

about 1.7 times the size of Washington, DC

Land boundaries

total: 0 km

Coastline

644 km

Maritime claims

territorial sea: 12 nm
 contiguous zone: 24 nm
 exclusive economic zone: 200 nm
 measured from claimed archipelagic straight baselines

Climate

tropical; hot, humid; dry, northeast monsoon (November to March); rainy, southwest monsoon (June to August)

Terrain

flat, with white sandy beaches

Elevation

mean elevation: 2 m
 lowest point: Indian Ocean 0 m
 highest point: 8th tee, golf course, Villingi Island 5 m

Natural resources

fish

Land use

agricultural land: 23.3% (2018 est.)
 arable land: 10% (2018 est.)
 permanent crops: 10% (2018 est.)
 permanent pasture: 3.3% (2018 est.)
 forest: 3% (2018 est.)
 other: 73.7% (2018 est.)

Irrigated land

0 sq km (2012)

Population distribution

About a third of the population lives in the centrally located capital city of Male and almost a tenth in southern Addu City; the remainder of the populace is spread over the 200 or so populated islands of the archipelago.

Natural hazards

tsunamis; low elevation of islands makes them sensitive to sea level rise

Geography - note

Smallest Asian country; archipelago of 1,190 coral islands grouped into 26 atolls (200 inhabited islands, plus 80 islands with tourist resorts); strategic location astride and along major sea lanes in Indian Ocean

PEOPLE AND SOCIETY**Population**

390,669 (July 2021 est.)
 country comparison to the world: 176

Nationality

noun: Maldivian(s)
 adjective: Maldivian

Ethnic groups

homogeneous mixture of Sinhalese, Dravidian, Arab, Australasian, and African resulting from historical changes in regional hegemony over marine trade routes

Languages

Dhivehi (official, dialect of Sinhala, script derived from Arabic), English (spoken by most government officials)

Religions

Sunni Muslim (official)

Age structure

0-14 years: 22.13% (male 44,260/female 42,477)
 15-24 years: 17.24% (male 37,826/female 29,745)
 25-54 years: 48.91% (male 104,217/female 87,465)
 55-64 years: 6.91% (male 12,942/female 14,123)
 65 years and over: 4.81% (male 8,417/female 10,432) (2020 est.)

Figure 11 illustrates the above age structure.⁴⁰⁷

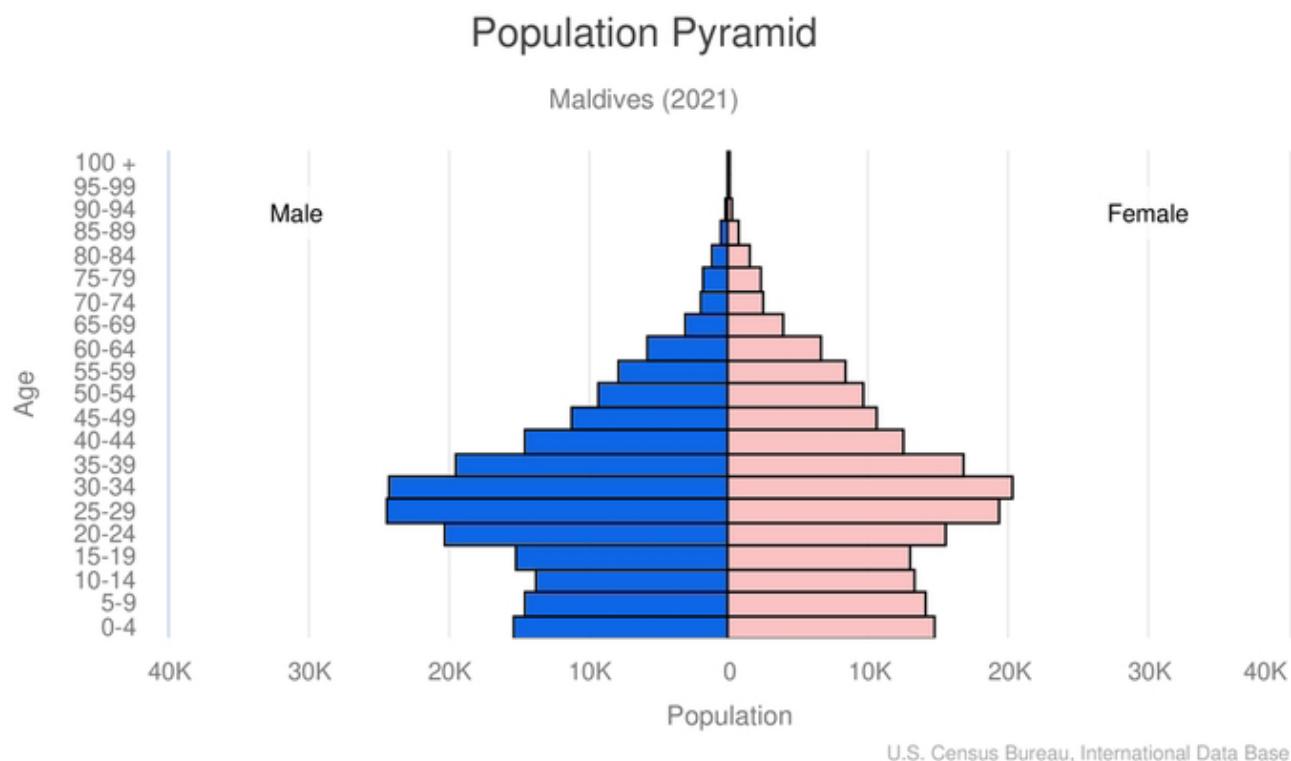


Figure 11: Population Pyramid for Maldives

Dependency ratios

total dependency ratio: 30.2
 youth dependency ratio: 25.5
 elderly dependency ratio: 4.7
 potential support ratio: 21.4 (2020 est.)

Median age

total: 29.5 years
 male: 29.2 years
 female: 30 years (2020 est.)
 country comparison to the world: 129

Population growth rate

-0.12% (2021 est.)
 country comparison to the world: 205

Birth rate

15.69 births/1,000 population (2021 est.)
 country comparison to the world: 112

Death rate

4.12 deaths/1,000 population (2021 est.)
 country comparison to the world: 212

Net migration rate

-12.76 migrant(s)/1,000 population (2021 est.)
 country comparison to the world: 225

Population distribution

About a third of the population lives in the centrally located capital city of Male and almost a tenth in southern Addu City; the remainder of the populace is spread over the 200 or so populated islands of the archipelago/.

Urbanization

urban population: 40.7% of total population (2020)
 rate of urbanization: 2.93% annual rate of change (2015-20 est.)

Major urban areas - population

177,000 MALE (capital) (2018)

Sex ratio

at birth: 1.05 male(s)/female
 0-14 years: 1.04 male(s)/female
 15-24 years: 1.27 male(s)/female
 25-54 years: 1.19 male(s)/female
 55-64 years: 0.92 male(s)/female
 65 years and over: 0.81 male(s)/female
 total population: 1.13 male(s)/female (2020 est.)

Mother's mean age at first birth

24.5 years (2009 est.)
 note: median age at first birth among women
 25-29

Maternal mortality rate

53 deaths/100,000 live births (2017 est.)
 country comparison to the world: 92

Infant mortality rate

total: 26.4 deaths/1,000 live births
 male: 29.53 deaths/1,000 live births
 female: 23.1 deaths/1,000 live births (2021 est.)
 country comparison to the world: 66

Life expectancy at birth

total population: 76.69 years
 male: 74.31 years
 female: 79.18 years (2021 est.)
 country comparison to the world: 98

Total fertility rate

1.71 children born/woman (2021 est.)
 country comparison to the world: 170

Contraceptive prevalence rate

18.8% (2016/17)

Drinking water source

Improved:
 urban: 98.3% of population
 rural: 100% of population
 total: 100% of population
 Unimproved:
 urban: 1.7% of population
 rural: 0% of population
 total: 0% of population (2017 est.)

Current Health Expenditure

9.4% (2018)

Physicians density

4.56 physicians/1,000 population (2018)

Hospital bed density

4.3 beds/1,000 population (2009)

Sanitation facility access

Improved:
 urban: 100% of population
 rural: 100% of population
 total: 100% of population
 Unimproved:
 urban: 0% of population
 rural: 0% of population
 total: 0% of population (2017 est.)

HIV/AIDS - adult prevalence rate

NA

HIV/AIDS - people living with HIV/AIDS

NA

HIV/AIDS - deaths

NA

Obesity - adult prevalence rate

8.6% (2016)
 country comparison to the world: 148

Children under the age of 5 years underweight

17.7% (2009)
 country comparison to the world: 32

Education expenditures

4.1% of GDP (2016)
 country comparison to the world: 93

Literacy

definition: age 15 and over can read and write
 total population: 97.7%
 male: 97.3%
 female: 98.1% (2016)

Unemployment, youth ages 15-24

total: 15.9%

male: 19.1%

female: 12.1% (2016 est.)

country comparison to the world: 85

GOVERNMENT

Country name

conventional long form: Republic of Maldives

conventional short form: Maldives

local long form: Dhivehi Raajjeyge Jumhooriyyaa

local short form: Dhivehi Raajje

etymology: archipelago apparently named after the main island (and capital) of Male; the word “Maldives” means “the islands (dives) of Male”; alternatively, the name may derive from the Sanskrit word “maladvipa” meaning “garland of islands”; Dhivehi Raajje in Dhivehi means “Kingdom of the Dhivehi people”

Government type

presidential republic

Capital

name: Male

geographic coordinates: 4 10 N, 73 30 E

time difference: UTC+5 (10 hours ahead of Washington, DC, during Standard Time)

etymology: derived from the Sanskrit word “mahaalay” meaning “big house”

Administrative divisions

21 administrative atolls (atholhuthah, singular - atholhu); Addu (Addu City), Ariatholhu Dhekunuburi (South Ari Atoll), Ariatholhu Uthuruburi (North Ari Atoll), Faadhippolhu, Felidhuatholhu (Felidhu Atoll), Fuvammulah, Hahdhunmathi, Huvadhuatholhu Dhekunuburi (South Huvadhu Atoll), Huvadhuatholhu Uthuruburi (North Huvadhu Atoll), Kolhumadulu, Maale (Male), Maaleatholhu (Male Atoll), Maalhosmadulu Dhekunuburi (South Maalhosmadulu), Maalhosmadulu Uthuruburi (North Maalhosmadulu), Miladhunmadulu Dhekunuburi (South

Miladhunmadulu), Miladhunmadulu Uthuruburi (North Miladhunmadulu), Mulakatholhu (Mulaku Atoll), Nilandheatholhu Dhekunuburi (South Nilandhe Atoll), Nilandheatholhu Uthuruburi (North Nilandhe Atoll), Thiladhunmathee Dhekunuburi (South Thiladhunmathi), Thiladhunmathee Uthuruburi (North Thiladhunmathi)

Independence

26 July 1965 (from the UK)

National holiday

Independence Day, 26 July (1965)

Constitution

history: many previous; latest ratified 7 August 2008

amendments: proposed by Parliament; passage requires at least three-quarters majority vote by its membership and the signature of the president of the republic; passage of amendments to constitutional articles on rights and freedoms and the terms of office of Parliament and of the president also requires a majority vote in a referendum; amended 2015

Legal system

Islamic (sharia) legal system with English common law influences, primarily in commercial matters

International law organization participation

has not submitted an ICJ jurisdiction declaration; accepts ICCT jurisdiction

Citizenship

citizenship by birth: no

citizenship by descent only: at least one parent must be a citizen of Maldives

dual citizenship recognized: yes

residency requirement for naturalization: unknown

Suffrage

18 years of age; universal

Executive branch

chief of state: President Ibrahim “Ibu” Mohamed SOLIH (since 17 November 2018); Vice President Faisal NASEEM (since 17 November 2018); the president is both chief of state and head of government

head of government: President Ibrahim Mohamed SOLIH (since 17 November 2018); Vice President Faisal NASEEM (since 17 November 2018)

cabinet: Cabinet of Ministers appointed by the president, approved by Parliament

elections/appointments: president directly elected by absolute majority popular vote in 2 rounds if needed for a 5-year term (eligible for a second term); election last held on 23 September 2018 (next to be held in 2023)

election results: Ibrahim Mohamed SOLIH elected president (in 1 round); Ibrahim Mohamed SOLIH (MDP) 58.3%, Abdulla YAMEEN Abdul Gayoom (PPM) 41.7%

Legislative branch

description: unicameral Parliament or People’s Majlis (87 seats - includes 2 seats added by the Elections Commission in late 2018; members directly elected in single-seat constituencies by simple majority vote to serve 5-year terms)

elections: last held on 6 April 2019 (next to be held in 2023)

election results: percent of vote - MDP 44.7%, JP 10.8%, PPM 8.7%, PNC 6.4%, MDA 2.8%, other 5.6%, independent 21%; seats by party - MDP 65, JP 5, PPM 5, PNC 3, MDA 2, independent 7; composition - men 83, women 4, percent of women 4.6%

Judicial branch

highest courts: Supreme Court (consists of the chief justice and 4-6 justices; note - 3 justices as of late 2019)

judge selection and term of office: Supreme Court judges appointed by the president in consultation with the Judicial Service Commission - a 10-member body of selected high government officials and the public - and upon confirmation by voting members of the People’s Majlis; judges serve until mandatory retirement at age 70

subordinate courts: High Court; Criminal, Civil, Family, Juvenile, and Drug Courts; Magistrate Courts (on each of the inhabited islands)

Political parties and leaders

Adhaalath (Justice) Party or AP [Sheikh Imran ABDULLA]

Dhivehi Rayyithunge Party or DRP [Ahmed Thasmeen ALI]

Maldives Development Alliance or MDA [Ahmed Shiyam MOHAMED]

Maldivian Democratic Party or MDP [Mohamed NASHEED]

Maldives Labor and Social Democratic Party or MLSDP [Ahmed SHIHAM]

Maldives Thirdway Democrats or MTD [Ahmed ADEEB]

Maumoon/Maldives Reform Movement or MRM [Maumoon Abdul GAYOOM]

National Democratic Congress [Yousuf Maaniu] (formed in 2020)

People’s National Congress or PNC [Abdul Raheem ABDULLA] (formed in early 2019)

Progressive Party of Maldives or PPM

Republican (Jumhooree) Party or JP [Qasim IBRAHIM] (2020)

International organization participation

ADB, AOSIS, C, CP, FAO, G-77, IBRD, ICAO, ICC (NGOs), ICt, IDA, IDB, IFAD, IFC, IFRCS, ILO, IMF, IMO, Interpol, IOC, IOM, IPU, ITU, MIGA, NAM, OIC, OPCW, SAARC, SACEP, UN, UNCTAD, UNESCO, UNIDO, UNWTO, UPU, WCO, WHO, WIPO, WMO, WTO

Diplomatic representation in the US

chief of mission: Ambassador THILMEEZA Hussain (since 8 July 2019);
There is currently no Maldives Embassy in Washington, DC, but its permanent representative to the United Nations in New York is accredited currently as ambassador to the United States. Jul 27, 2020 (2020)

chancery: 801 Second Avenue, Suite 400E, New York, NY 10017

telephone: [1] (212) 599-6194 and 599-6195

fax: [1] (212) 661-6405

Diplomatic representation from the US

embassy: the US does not have an embassy in Maldives; US Ambassador to Sri Lanka and Maldives, Alaina TEPLITZ (since 1 November 2018), is accredited to both countries; note: Secretary of State Mike Pompeo spoke of establishing an embassy on his trip to Maldives in October of 2020

Flag description

red with a large green rectangle in the center bearing a vertical white crescent moon; the closed side of the crescent is on the hoist side of the flag; red recalls those who have sacrificed their lives in defense of their country, the green rectangle represents peace and prosperity, and the white crescent signifies Islam

National symbol(s)

coconut palm, yellowfin tuna; national colors: red, green, white

National anthem

name: “Gaumees Salaam” (National Salute)
lyrics/music: Mohamed Jameel DIDI/
Wannakuwattawaduge DON AMARADEVA
note: lyrics adopted 1948, music adopted 1972; between 1948 and 1972, the lyrics were sung to the tune of “Auld Lang Syne”

ECONOMY

Economic overview

Maldives has quickly become a middle-income country, driven by the rapid growth of its tourism and fisheries sectors, but the country still contends with a large and growing fiscal deficit. Infrastructure projects, largely funded by China, could add significantly to debt levels. Political turmoil and the declaration of a state of emergency in February 2018 led to the issuance of travel warnings by several countries whose citizens visit Maldives in significant numbers, but the overall impact on tourism revenue was unclear.

In 2015, Maldives’ Parliament passed a constitutional amendment legalizing foreign ownership of land; foreign land-buyers must reclaim at least 70% of the desired land from the ocean and invest at least \$1 billion in a construction project approved by Parliament.

Diversifying the economy beyond tourism and fishing, reforming public finance, increasing employment opportunities, and combating corruption, cronyism, and a growing drug problem are near-term challenges facing the government. Over the longer term, Maldivian authorities worry about the impact of erosion and possible global warming on their low-lying country; 80% of the area is 1 meter or less above sea level.

Real GDP growth rate

4.8% (2017 est.)

4.5% (2016 est.)

2.2% (2015 est.)

country comparison to the world: 54

Inflation rate (consumer prices)

2.3% (2017 est.)

0.8% (2016 est.)

country comparison to the world: 123

Credit ratings

Fitch rating: CCC (2020)

Moody's rating: B3 (2020)

Real GDP (purchasing power parity)

\$10.37 billion (2019 est.)

\$9.692 billion (2018 est.)

\$8.964 billion (2017 est.)

note: data are in 2017 dollars

country comparison to the world: 162

GDP (official exchange rate)

\$4.505 billion (2017 est.)

Real GDP per capita

\$19,531 (2019 est.)

\$18,796 (2018 est.)

\$18,058 (2017 est.)

note: data are in 2017 dollars

country comparison to the world: 92

Gross national saving

18.4% of GDP (2019 est.)

19.6% of GDP (2018 est.)

20.5% of GDP (2017 est.)

country comparison to the world: 120

GDP - composition, by sector of origin

agriculture: 3% (2015 est.)

industry: 16% (2015 est.)

services: 81% (2015 est.)

GDP - composition, by end use

household consumption: NA (2016 est.)

government consumption: NA (2016 est.)

investment in fixed capital: NA (2016 est.)

investment in inventories: NA (2016 est.)

exports of goods and services: 93.6% (2016 est.)

imports of goods and services: 89% (2016 est.)

Ease of Doing Business Index scores

89.2 (2020)

Agricultural products

papayas, vegetables, roots/tubers, nuts, fruit,
other meat, tomatoes, coconuts, bananas, maize

Industries

tourism, fish processing, shipping, boat
building, coconut processing, woven mats, rope,
handicrafts, coral and sand mining

Industrial production growth rate

14% (2012 est.)

country comparison to the world: 4

Labor force

222,200 (2017 est.)

country comparison to the world: 167

Labor force - by occupation

agriculture: 7.7%

industry: 22.8%

services: 69.5% (2017 est.)

Unemployment rate

2.9% (2017 est.)

3.2% (2016 est.)

country comparison to the world: 36

Population below poverty line

15% (2009 est.)

Gini Index coefficient - distribution of family income

31.3 (2016 est.)

37.4 (2004 est.)

country comparison to the world: 145

Household income or consumption by percentage share

lowest 10%: 1.2%

highest 10%: 33.3% (FY09/10)

Budget

revenues: 1.19 billion (2016 est.)

expenditures: 1.643 billion (2016 est.)

Taxes and other revenues

26.4% (of GDP) (2016 est.)

country comparison to the world: 111

Budget surplus (+) or deficit (-)

-10.1% (of GDP) (2016 est.)
country comparison to the world: 212

Public debt

63.9% of GDP (2017 est.)
61.7% of GDP (2016 est.)
country comparison to the world: 62

Fiscal year

calendar year

Current account balance

-\$876 million (2017 est.)
-\$1.033 billion (2016 est.)
country comparison to the world: 140

Exports

\$256.2 million (2016 est.)
\$239.8 million (2015 est.)
country comparison to the world: 188

Exports - partners

Thailand 42.8%, Sri Lanka 8.7%, Bangladesh 6.4%, France 6.2%, US 6.1%, Germany 5%, Ireland 4.6% (2017)

Exports - commodities

fish

Imports

\$2.125 billion (2016 est.)
\$1.896 billion (2015 est.)
country comparison to the world: 170

Imports - partners

UAE 17.1%, India 13.5%, Singapore 13.3%, China 10.8%, Sri Lanka 6.7%, Malaysia 6%, Thailand 4.5% (2017)

Imports - commodities

petroleum products, clothing, intermediate and capital goods

Reserves of foreign exchange and gold

\$477.9 million (31 December 2016 est.)
\$575.8 million (31 December 2015 est.)
country comparison to the world: 153

Debt - external

\$848.8 million (31 December 2016 est.)
\$696.2 million (31 December 2015 est.)
country comparison to the world: 167

Exchange rates

rufiyaa (MVR) per US dollar -
15.42 (2017 est.)
15.35 (2016 est.)

ENERGY

Electricity access

electrification - total population: 100% (2020)

Electricity - production

402 million kWh (2016 est.)
country comparison to the world: 171

Electricity - consumption

373.9 million kWh (2016 est.)
country comparison to the world: 178

Electricity - exports

0 kWh (2016 est.)
country comparison to the world: 165

Electricity - imports

0 kWh (2016 est.)
country comparison to the world: 171

Electricity - installed generating capacity

278,000 kW (2016 est.)
country comparison to the world: 161

Electricity - from fossil fuels

96% of total installed capacity (2016 est.)
country comparison to the world: 39

Electricity - from nuclear fuels

0% of total installed capacity (2017 est.)
country comparison to the world: 137

Electricity - from hydroelectric plants

0% of total installed capacity (2017 est.)
country comparison to the world: 185

Electricity - from other renewable sources

4% of total installed capacity (2017 est.)

country comparison to the world: 114

Crude oil - production

0 bbl/day (2018 est.)

country comparison to the world: 169

Crude oil - exports

0 bbl/day (2015 est.)

country comparison to the world: 160

Crude oil - imports

0 bbl/day (2015 est.)

country comparison to the world: 160

Crude oil - proved reserves

0 bbl (1 January 2018 est.)

country comparison to the world: 164

Refined petroleum products - production

0 bbl/day (2015 est.)

country comparison to the world: 172

Refined petroleum products - consumption

11,000 bbl/day (2016 est.)

country comparison to the world: 160

Refined petroleum products - exports

0 bbl/day (2015 est.)

country comparison to the world: 177

Refined petroleum products - imports

10,840 bbl/day (2015 est.)

country comparison to the world: 144

Natural gas - production

0 cu m (2017 est.)

country comparison to the world: 165

Natural gas - consumption

0 cu m (2017 est.)

country comparison to the world: 171

Natural gas - exports

0 cu m (2017 est.)

country comparison to the world: 146

Natural gas - imports

0 cu m (2017 est.)

country comparison to the world: 153

Natural gas - proved reserves

0 cu m (1 January 2016 est.)

country comparison to the world: 166

Carbon dioxide emissions from consumption of energy

1.648 million Mt (2017 est.)

country comparison to the world: 161

COMMUNICATIONS**Telephones - fixed lines**

total subscriptions: 12,316

subscriptions per 100 inhabitants: 3.14 (2019 est.)

country comparison to the world: 186

Telephones - mobile cellular

total subscriptions: 611,662

subscriptions per 100 inhabitants: 155.95 (2019 est.)

country comparison to the world: 170

Telecommunication systems

general assessment: upgrades to telecom infrastructure extended to outer islands; two mobile operators extend LTE coverage; tourism has strengthened the telecom market with investment and accounts for the high mobile penetration rate; mobile penetration passes 250%; launches 5G trials (2020)

domestic: fixed-line is at 3 per 100 persons and high mobile-cellular subscriptions stands at 156 per 100 persons (2019)

international: country code - 960; landing points for Dhiraagu Cable Network, NaSCOM, Dhiraagu-SLT Submarine Cable Networks and WARF submarine cables providing connections to 8 points in Maldives, India, and Sri Lanka; satellite earth station - 3 Intelsat (Indian Ocean) (2019)

note: the COVID-19 outbreak is negatively impacting telecommunications production and supply chains globally; consumer spending on telecom devices and services has also slowed due to the pandemic's effect on economies worldwide; overall progress towards improvements in all facets of the telecom industry - mobile, fixed-line, broadband, submarine cable and satellite - has moderated

Broadcast media

state-owned radio and TV monopoly until recently; 4 state-operated and 7 privately owned TV stations and 4 state-operated and 7 privately owned radio stations (2019)

Internet country code

.mv

Internet users

total: 248,004
percent of population: 63.19% (July 2018 est.)
country comparison to the world: 170

Broadband - fixed subscriptions

total: 53,470
subscriptions per 100 inhabitants: 14 (2018 est.)
country comparison to the world: 133

TRANSPORTATION

National air transport system

number of registered air carriers: 3 (2020)
inventory of registered aircraft operated by air carriers: 36
annual passenger traffic on registered air carriers: 1,147,247 (2018)
annual freight traffic on registered air carriers: 7.75 million (2018)

Civil aircraft registration country code prefix
8Q (2016)

Airports

total: 9 (2013)
country comparison to the world: 157

Airports - with paved runways

total: 7 (2017)
over 3,047 m: 1 (2017)
2,438 to 3,047 m: 1 (2017)
1,524 to 2,437 m: 1 (2017)
914 to 1,523 m: 4 (2017)

Airports - with unpaved runways

total: 2 (2013)
914 to 1,523 m: 2 (2013)

Roadways

total: 93 km (2018)
paved: 93 km - 60 km in Male; 16 km on Addu Atolis; 17 km on Laamu (2018)
note: island roads are mainly compacted coral
country comparison to the world: 214

Merchant marine

total: 67
by type: general cargo 21, oil tanker 18, other 28 (2020)
country comparison to the world: 106

Ports and terminals

major seaport(s): Male

MILITARY AND SECURITY

Military and security forces

the Republic of Maldives has no distinct army, navy, or air force but a single security unit called the Maldives National Defence Force (MNDF) comprised of ground forces, an air element, a coastguard, a presidential security division, and a special protection group (2020)
note: the MNDF is primarily tasked to reinforce the Maldives Police Service (MPS) and ensure security in the country's exclusive economic zone

Military and security service personnel strengths

the Maldives National Defense Force (MNDF) has approximately 2,500 personnel (2019 est.)

Military equipment inventories and acquisitions

India has provided most of the equipment in the MNDF's inventory (2020)

Military service age and obligation

18-28 years of age for voluntary service; no conscription; 10th grade or equivalent education required; must not be a member of a political party

TERRORISM**Terrorist group(s)**

Islamic State of Iraq and ash-Sham (ISIS) (2020)
note: details about the history, aims, leadership, organization, areas of operation, tactics, targets, weapons, size, and sources of support of the group(s) appear(s) in Appendix-T

TRANSNATIONAL ISSUES**Disputes - international**

none

Trafficking in persons

current situation: Maldives is a destination country for men, women, and children subjected to forced labor and sex trafficking and a source country for women and children subjected to labor and sex trafficking; primarily Bangladeshi and Indian migrants working both legally and illegally in the construction and service sectors face conditions of forced labor, including fraudulent recruitment, confiscation of identity and travel documents, nonpayment

and withholding of wages, and debt bondage; a small number of women from Asia, Eastern Europe, and former Soviet states are trafficked to Maldives for sexual exploitation; Maldivian women may be subjected to sex trafficking domestically or in Sri Lanka; some Maldivian children are transported to the capital for domestic service, where they may also be victims of sexual abuse and forced labor

tier rating: Tier 2 Watch List – Maldives does not fully comply with the minimum standards for the elimination of trafficking; however, it is making significant efforts to do so; the government adopted a national action plan for 2015-19 and is continuing to develop victim identification, protection, and referral procedures, but overall its anti-trafficking efforts did not increase; only five trafficking investigations were conducted, no new prosecutions were initiated for the second consecutive year, and no convictions were made, down from one in 2013; some officials warned businesses in advance of planned raids for suspected trafficking offenses; victim protection deteriorated when the state-run shelter for female victims barred access to victims shortly after opening in January 2014, in part because of bureaucratic disputes, which dissuaded victims from pursuing charges against perpetrators; the government did not prosecute or hold accountable any employers or government officials for withholding passports (2015)

The U.S. Department of State's Trafficking in Persons Report 2020 as pertains to the Maldives is at: <https://mv.usmission.gov/wp-content/uploads/sites/212/Maldives-2020-TIP-Report.pdf>

Acronyms and Abbreviations

ADPC	Asian Disaster Preparedness Center
ADRC	Asian Disaster Reduction Center
AEH	Addu Equatorial Hospital
AHA Center	ASEAN Coordinating Centre for Humanitarian Assistance and Disaster Management
APAN	All Partners Access Network
ARISE	Accelerating Renewable Energy Integration and Sustainable Energy
ASPIRE	Accelerating Sustainable Private Investments in Renewable Energy
BGAN	Broadband Global Area Network
BHA	Bureau for Humanitarian Assistance (of U.S. Government)
CAM	Communications Authority of Maldives
CBDRM	Community-Based Disaster Risk Management
CBDRR	community-based disaster risk reduction
CCA	Climate Change Adaptation
CERT	Community Emergency Response Teams
CFE-DM	Center for Excellence in Disaster Management and Humanitarian Assistance (of the U.S. Department of Defense)
Changi RHCC	Changi Regional HADR Coordination Centre
CISN	California Integrated Seismic Network
COVID-19	Coronavirus Disease 2019
CSO	Civil society organization
DASD	Deputy Assistant Secretary of Defense (U.S.)
DGPH	Director-General of Public Health
DKI-APCSS	Daniel K. Inouye Asia-Pacific Center for Security Studies (of the U.S. Department of Defense)
DMA	Disaster Management Act
DMC	Disaster Management Committee
DMHA	Disaster Management and Humanitarian Assistance
DoD	Department of Defense
DRM	disaster risk management
DRR	disaster risk reduction
DWT	deadweight tonnage
ECO	Emergency Control Organization
EMOPS	Emergency Operations System
EOC	Emergency Operations Center
EPA	Environmental Protection Agency (of the Maldives)
EPC	Emergency Planning Committee
EPRP	Education Sector Emergency Preparedness and Response Plan
ERT	Emergency Response Team
ESF	Emergency Support Functions
FAO	Food and Agriculture Organization (of the UN)

FRS	Fire and Rescue Service (of Maldives National Defence Force)
ft	feet
GARD	Get Airports Ready for Disaster
GDACS	Global Disaster Alert and Coordination System
GDP	gross domestic product
GITEWS	German Indonesian Tsunami Early Warning System
gWh	gigawatt hours
HA	Humanitarian Assistance
HADR	Humanitarian Assistance and Disaster Response
HCT	Humanitarian Country Team
HDX	Humanitarian Data Exchange
HEI	higher education institution
HEOC	Health Emergency Operations Center
HEOP	Health Emergency Operations Plan
HERP	Health Emergency Response Plan
HERT	Hospital Emergency Readiness Training
HMT	Hulhumale International Terminal
HPA	Health Protection Agency
HPL	Hithadhoo Ports Limited
HRP	Hithadhoo Regional Port
HSPA	High Speed Packet Access
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICG	Intergovernmental Coordination Group
ICRC	International Committee of the Red Cross
ICT	information and communication technology
IEHK	Intra-agency Emergency Health Kits
IEP	Individual Education Plan
IFAD	International Fund for Agricultural Development
IFRC	International Federation of Red Cross and Red Crescent Societies
IGMH	Indira Gandhi Memorial Hospital
IGO	International Governmental Organization
IHR	International Health Regulations
ILO	International Labour Organization
INFORM	The Index for Risk Management
INGO	international non-governmental organization
IOC-UNESCO	Intergovernmental Oceanographic Commission of UNESCO
IOM	International Organization on Migration
IOTWS	Indian Ocean Tsunami Warning and Mitigation System
IPS	International Port Security Program (U.S. Coast Guard)

APPENDICES

IS	information sharing
ISPS	International Ship and Port Facility Security Code
JTWC	Joint Typhoon Warning Center
km	kilometer(s)
KPL	Kulhudhufushi Ports Limited
KRP	Kulhudhufushi Regional Port
kWh	kilowatt hours
kWp	kilowatts peak
LNG	Liquid natural gas
LPG	Liquid petroleum gas
LTE	Long-Term Evolution
m	meter(s)
MACS	Multi-Agency Coordination System
MBBS	Bachelor of Medicine, Bachelor of Surgery
MBC	Maldives Broadcasting Commission
MCH	Malé Commercial Harbor
MCIP	Multinational Communications Interoperability Program
MDP	Maldivian Democratic Party
MEMIS	Maldives Education Management Information System
MIP	Maamigili International Port
MMS	Maldives Meteorological Service
MMWM	Mission for Migrant Workers Maldives
MNDF	Maldives National Defence Force
MNDF FRS	MNDF Fire and Rescue Services
MNH	Malé North Harbor
MNU	Maldives National University
MoD	Ministry of Defence
MoH	Ministry of Health
MoHA	Ministry of Home Affairs
MPA	Maldives Port Authority (now Maldives Port Limited)
MPL	Maldives Ports Limited
MPS	Maldives Police Service
MRC	Maldivian Red Crescent
MRCC	Maritime Rescue and Coordination Center
MTCC	Maldives Transport and Contracting Company
MVR	Maldivian rufiyaa
MW	megawatt
MWp	megawatts-peak
MWSC	Malé Water and Sewerage Company
NALO	National Assessment of Learning Outcomes

NAPA	National Adaptation Plan of Action
NAPA	National Adaptation Programme of Action
NCTC	National Counter Terrorism Centre
NDC	Nationally Determined Contribution
NDMA	National Disaster Management Authority
NDMC	National Disaster Management Center (now the National Disaster Management Authority)
NDMP	National Disaster Management Plan
NEOP	National Emergency Operations Plan
NGO	non-government organizations
NSPA	National Social Protection Agency
NTWC	National Tsunami Warning Center
OCHA	Office for the Coordination of Humanitarian Affairs (of the United Nations)
OSOCC	On-Site Operations Coordination Center
PAC	Pacific Air Chiefs (U.S.)
PACAF	Pacific Air Forces (U.S.)
PACS	Pacific Air Chief Symposium (U.S.)
PDC	Pacific Disaster Center (also “PDC Global”)
PFM	Public Financial Management
POISED	Preparing Outer Islands for Sustainable Energy Development
PPA	power purchase agreement
PPM	Progressive Party of Maldives
PRIME	Promoting Resilience in Maldives
PSS	psychosocial support
PV	photovoltaic
PVE	Preventing Violent Extremism
REGENERATE	Reefs Generate Environmental and Economic Resiliency for Atoll Ecosystems
Rf	Maldivian Rufiyaa
RHCC	Changi Regional HADR Coordination Centre
RIMES	Regional Integrated Multi-Hazard Early Warning System for Africa and Asia
ROAP	Regional Office for Asia and the Pacific (of UN OCHA)
RRT	Rapid Response Training
RTSP	Regional Tsunami Service Providers
SAARC	South Asian Association for Regional Cooperation
SAFTA	South Asian Free Trade Area
SAMBRO	Sahana Alerting and Messaging Broker
SAP	Strategic Action Plan
SARS-CoV-2	Severe Acute Respiratory Syndrome – Coronavirus – 2
SASCOF	South Asian Climate Outlook Forum
SCZMC	SAARC Coastal Zone Management Centre
SDMC	SAARC Disaster Management Centre

APPENDICES

SEN	Special Educational Needs
SEOP	School Emergency Operations Plans
SFC	SAARC Forestry Centre
SIM	subscriber identification module
SIMD	Strong and Inclusive Maldivian Democracy
SMRC	SAARC Meteorological Research Centre
SNAP	Strategic National Action Plan
SOCAP	Special Operations Command Pacific (U.S.)
sq.	square
SSAC	School Safety Advisory Committee
STELCO	State Electric Company Ltd.
STP	sewage treatment plant
TEU	twenty-foot equivalent units
TVET	Technical and Vocational Education and Training
U.S.	United States
UAE	United Arab Emirates
UISS	Unclassified Information Sharing Service
UN	United Nations
UNCT	United Nations Country Team
UNDP	United Nations Development Programme
UNDRR	United Nations Office of Disaster Risk Reduction
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner on Refugees
UNICEF	United Nations' Children's Fund
UNISDR	United Nations International Strategy for Disaster Risk Reduction (now UNDRR)
UNODC	United Nations Office on Drugs and Crime
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
USAR	Urban search and rescue
USD	U.S. Dollar
USG	United States Government
USGS	United States Geological Survey
VSAT	very-small-aperture terminal
VTC	Video Teleconference
WHO	World Health Organization
WPS	Women, Peace, and Security

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