

THE MALDIVES FACTFILE

BBC: The Maldives is an Islamic republic which lies off the Indian sub-continent. It is made up of a chain of nearly 1,200 islands, most of them uninhabited.

As the flattest country on Earth, the Republic of Maldives is extremely vulnerable to rising sea level and faces the very real possibility that the majority of its land area will be underwater by the end of this century. Today, the white sand beaches and extensive coral reefs of the Maldives' 1,190 islands draw more than 600,000 tourists annually

None of the coral islands measures more than 1.8 metres (six feet) above sea level, making the country vulnerable to a rise in sea levels associated with global warming.

With its abundant sea life and sandy beaches, The Maldives is portrayed by travel companies as a tropical paradise.

The economy revolves around tourism, and scores of islands have been developed for the top end of the tourist market.

Islands at risk



There are many examples of islands that are at risk from rising sea levels. These include the Maldives in the Indian Ocean, and Tuvalu and Vanuatu in the Pacific. Many of the most at risk islands are coral atolls only 1 to 3 m above sea level.

The Maldives has a population of 340,000 people spread out across 1200 islands, although many islands are uninhabited. The highest point in the country is a mere 2.3 m above sea level. A sea level rise of 50 cm by 2100 would mean the Maldives losing 77 per cent of its land area. Areas that remained above sea level would become vulnerable to storm surges and erosion. Very small changes in sea level translate into major losses of land because of the country's unusual topography.

Figure 10.13 shows Malé, the capital city island, and surrounding islands. The Maldivians have gone to extraordinary lengths to create new inhabitable space and protect against rising sea levels. Malé is ringed by a 3 m high sea wall. Hulhumalé is a new artificial island built from coral and sediment dredged from the seabed between 1997 and 2002 at a cost of US\$32 million. It is a full metre higher than Malé, which may come in useful in decades to come.



Figure 10.13 A satellite view of Malé and its surrounding islands in the Maldives (Google and the Google logo are registered trademarks of Google Inc., used with permission. Imagery ©2016 Data SIO NOAA, US Navy, NGA, GEBCO, Landsat, DigitalGlobe, CNES/Astrium, Map data ©2016 Google)

Housing and critical infrastructure in the Maldives, including five airports and 128 harbours, are concentrated along coastlines. The country's two international airports, for example—critical components of the tourism sector—lie within 165 feet (50 meters) of the coastline.

Sea level rise is also likely to place added stress on the Maldives' already scarce freshwater resources. While the nation provides drinking water to about 87 percent of the population by collecting rainwater, groundwater is required for non-drinking purposes, and for drinking water during dry season months.¹¹ Groundwater aquifers on the islands are shallow, and high extraction levels have made them vulnerable to inundation by saltwater.¹¹

What the Future Holds

The Maldivian Ministry of Home Affairs, Housing and Environment has identified potential measures to help the country adapt to rising seas. These include protecting groundwater and increasing rainwater harvesting, as well as increasing the elevation of critical infrastructure.

Migration is also a potential solution for Maldivians. In November 2008, the president announced the country's interest in buying a new homeland, though this approach would come at a high price, both financially and culturally.

Can China save the day?

The Chinese Government have invested \$1.5 billion in the Maldives. They are experts in land reclamation and providing funds and expertise to enable them to do this. Chinese firms have helped build Hulhulmale and connected it to the main Male with a new bridge.

Will the Maldives be able to pay it back? What will happen if they cant?