

Annex VI - Case Study - Maldives

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VI.1. General description and basic economy

Maldives is a group of around 1200 atolls in the Indian Ocean, to the south-southwest of India. Many atolls are small, less than 1km², and only around 198 of these atolls are inhabited. The Maldives' extremely low population density is unique amongst even small island archipelagic states.⁵ The total land area comes to just under 300 sq km, with a total coastline length of 644km. The total population of Maldives is 394,451 (July 2012 est)¹ and has been growing steadily over the last two decades with an increasing percentage of the population living in urban areas (see Figure 6)². Tourism is Maldives' largest economic activity, accounting for 28% of GDP and at least 60% of income from foreign exchange. Further, tax from tourism and imports are crucial, making up more than 90% of the government's tax revenue.¹

Fish is an important national resource and fishing is the second most important sector after tourism, although fish stocks have sharply declined in recent years.¹ GDP has grown sharply over the last decade (see Figure 1), with a dip in 2005 reportedly due to the Indian Ocean Tsunami,¹ and there has been another reversal between 2010-11.

¹ CIA World Factbook- Maldives. <https://www.cia.gov/library/publications/the-world-factbook/geos/mv.html> Accessed 25 October 2012

² World Development Indicators 2012, The World Bank. <http://databank.worldbank.org/> accessed 19 October 2012.

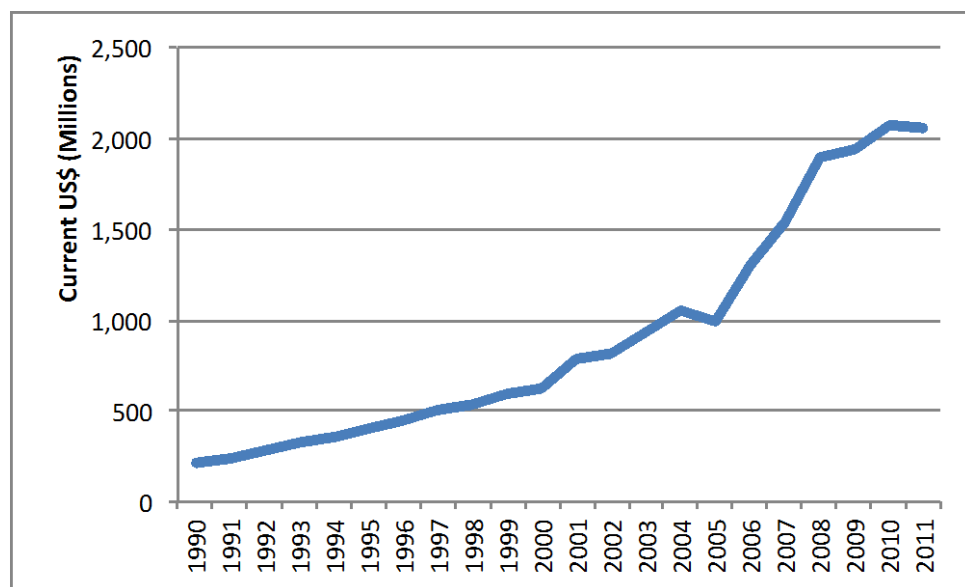


Figure 1 GDP of Maldives³

VI.2. Shipping and Aviation

VI.3.1 Aviation

Maldives has six airports, four of which are paved.⁵ Male is the only international airport for passengers, whereas the former military airport at Gan handles international freight transportation.⁴ Four airlines are registered nationally, all based in Male, and five additional national airlines have gone defunct. Most air travel transports nationals to distant atolls, and international tourists to resorts. The majority of planes Maldivian Air Taxi is the largest domestic airline and one of the largest seaplane operators in the world, running over 500 flights per week during the peak tourist season. Maldivian Air Taxi currently has a fleet of 24 Twin Otters and serves 40 of Maldives' 90 resorts.⁵

According to data from the World Development Indicator dataset, air transport for both freight and passengers rose sharply between 1994 and 2000 before experiencing a sharp drop between 2000 and 2001, with passenger numbers remaining around at 1995 levels, between 50-80,000 per year, and freight dropping to 0.07% of 2000 levels, rising to 2% of 2000 levels by 2010 (see Figure 2).³

³ World Development Indicators 2012, The World Bank.
<http://databank.worldbank.org/> accessed 19 October 2012.

⁴ World Bank: Maldives Transport Sector.
<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/EXTSARREGTOPTRANSPORT/0,,contentMDK:20674800-menuPK:868841-pagePK:34004173-piPK:34003707-theSitePK:579598,00.html> Accessed 3 November 2012

⁵ World Airport Directory, Airline Update: 2012.
http://www.airlineupdate.com/content_public/airlines/indian_subcontinent/maldives.htm Accessed 13 October

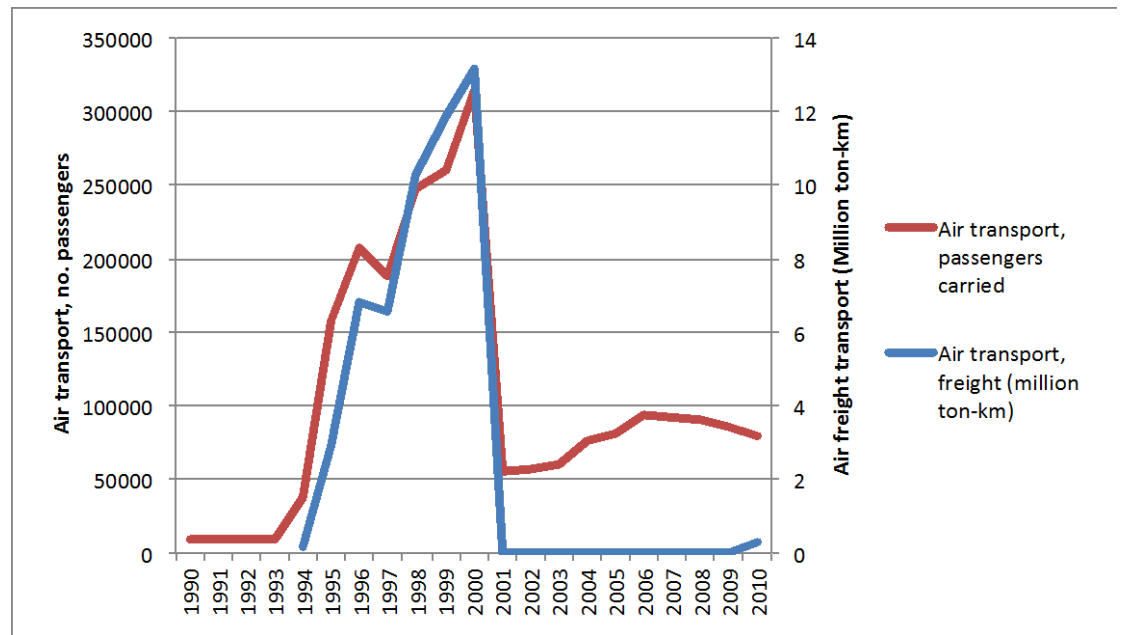


Figure 2 Maldives air transport, 1990-2010

VI.3.2 Shipping

Male has a 'well-developed' but small sea port, taking vessels up to 500 feet in length.⁶ The country has up to 90 further manmade and several natural harbours and jetties to access inhabited atolls.⁴

CIA notes 18 merchant marine vessels, broken down into the following categories:¹

- 1 bulk carrier,
- 14 cargo,
- 1 petroleum tanker,
- refrigerated cargo

A further 4 are foreign owned (by Singapore), and another 4 are registered in other countries. UNCTAD records the following 2012 statistics for Maldives' shipping fleet:

Table 1 Maldives Merchant Fleets, 2011 data.⁷

	Number of ships	Gross Tonnage in thousands	Dead weight tons in thousands
Total fleet	86	110.635	145.419
Oil tankers	13	5.69	11.694

⁶ World Port Resource http://www.worldportsource.com/ports/MDV_Port_of_Male_2325.php Accessed 3 November 2012.

⁷ Data from UNCTAD, UNCTADstat, <http://unctadstat.unctad.org/>

Bulk carriers	1	1.057	1.693
General cargo	44	91.948	125.23
Container ships	0
Other types of ships	28	11.94	6.802

VI.3. Trade and Tourism

Maldives imports and exports of goods and services have risen in real value since 1990, with a drop in imports and exports between 2009 and 2010, likely due to the global economic downturn (see Figure 3). Whilst prone to large fluctuation, exports are a decreasing percentage of GDP, and Maldives has operated on a trade deficit with imports exceeding exports since 2004.

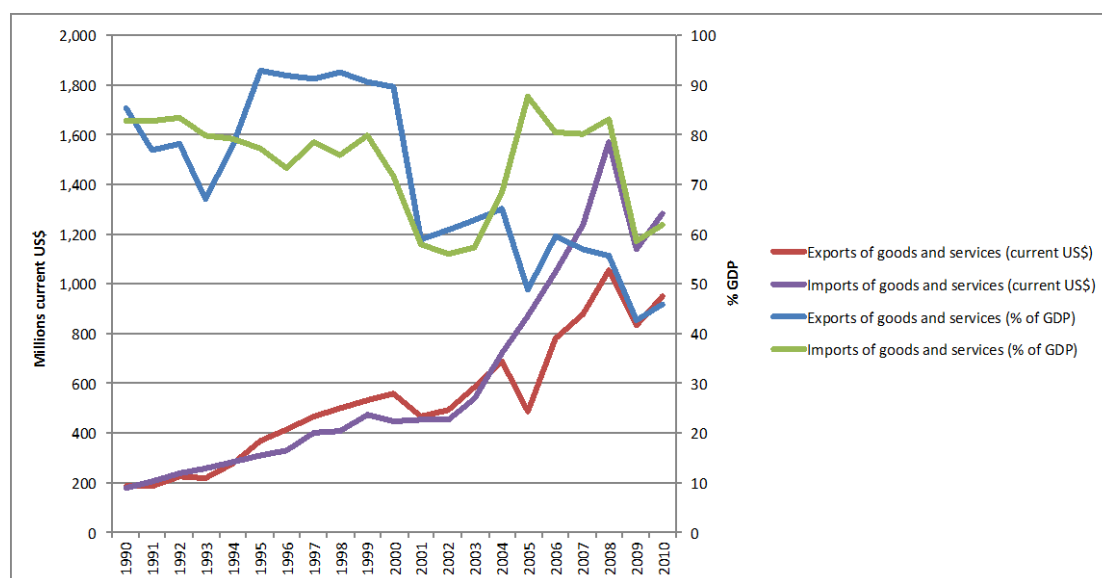


Figure 3 Imports and exports of Maldives, 1990-2010³

VI.3.1 Exports

Tourism is Maldives' most significant export, with Fish being the second most significant sector. As shown in Figure 4, tourism has remained at more than 60% of total exports since 1995, and is at a current high of 75%. A drop in numbers and revenue from tourism in 2005 was in the wake of the December 2004 Indian Ocean

Tsunami, seeing a drop in \$184 million (current USD) in receipts from tourism, which was 19% of national GDP in 2005 (current USD).

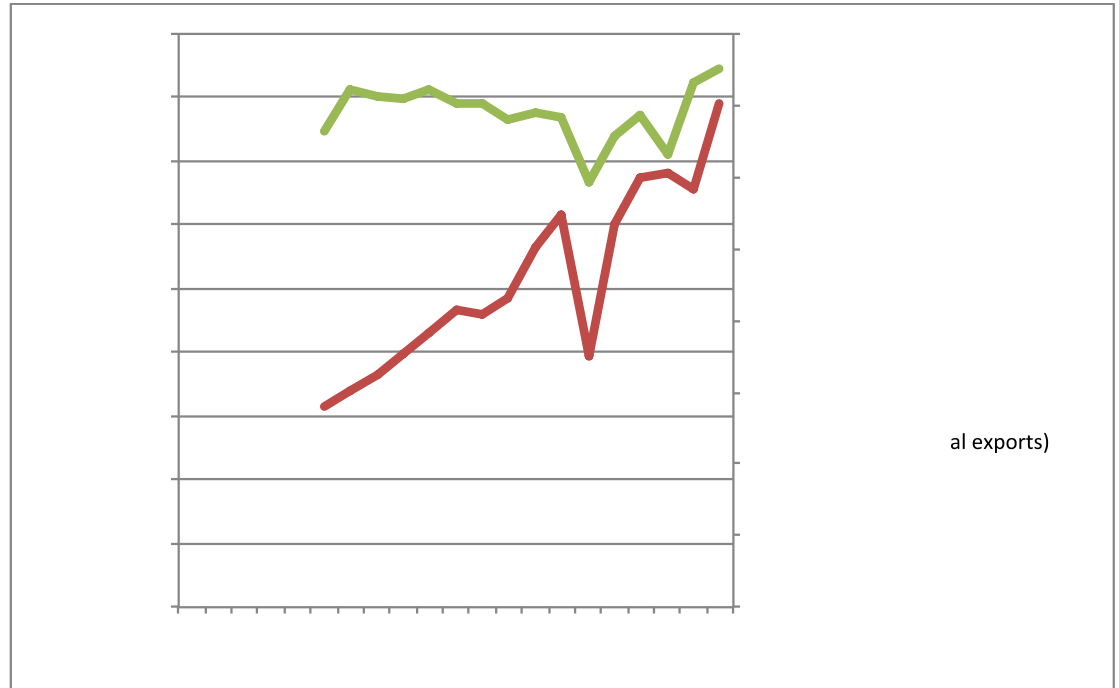


Figure 4 Maldives tourism - number of arrivals and % exports²

The European Union is the destination for almost 50% of Maldives' merchandise trade exports (2011 data⁸), with France accounting for almost 17% of exports. After the EU 27 countries, Thailand, India and Sri Lanka are the most important export destinations.

In terms of trade value, the category 'Mineral fuels, oils & product of their distillations' is by far the largest at USD 315,000 (2009), with 'Dairy prod; birds eggs; natural honey; edible prod' the second largest category and an order of magnitude smaller.⁹ As Figure 5 shows, ores and metal exports are historically a very small percentage of merchandise exports, and although exports have risen significantly over the last decade they remain at 3.8% of merchandise exports.

⁸ WTO Trade Profile, Maldives, http://stat.wto.org/CountryProfiles/MV_e.htm
Accessed 3 November 2012

⁹ UNTACD TRAIID data, accessed via WB Databank, 2010 data.

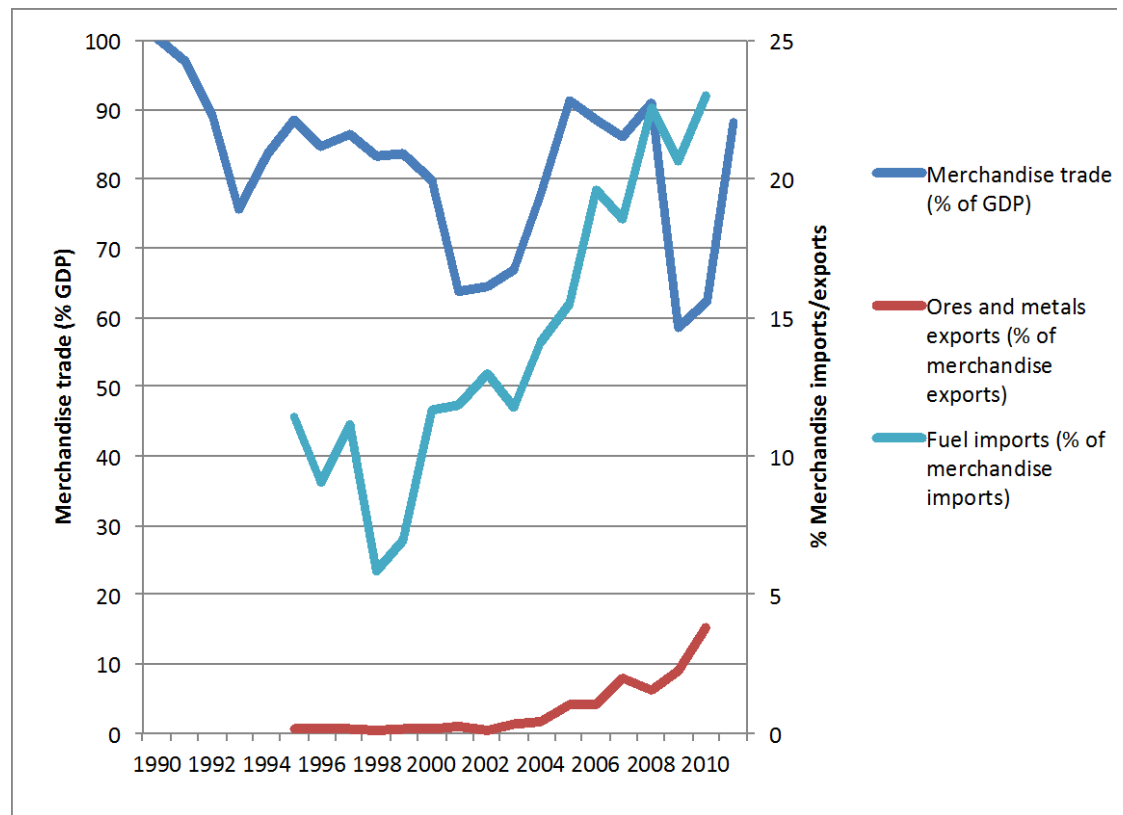


Figure 5 Maldives key merchandise imports and exports³

VI.3.2 Imports

The CIA World Factbook lists important import commodities for Maldives as ‘petroleum products, ships, foodstuffs, clothing, intermediate and capital goods’.¹ The WTO Trade Profile breaks down imports as 48.7% Manufactures, 26.0% fuels and mining products, and 21.7% agricultural produces.⁸ As Figure 5 shows, fuel imports have increased from 6% to 23% of merchandise imports between 1998 and 2010.³

For imported goods, United Arab Emirates and Singapore are the two most important trade partners for Maldives, each accounting for just under 22% of imported goods, with India, the EU and Sri Lanka following.⁸

VI.4. Key Demographics

The main ethnic groups of the Maldives people are South Indian, Sinhalese and Arab, and the official language is Dhivehi, a dialect of Sinhala, and the script of which is derived from Arabic. English is also spoken by many. Sunni Muslim is the official religion, and the age structure is as follows:

- 0-14 years: 21.2%
- 15-64 years: 74.6%
- 65 years and over: 4.1% (2012 est.)¹

Around 40% of the population is considered urban, with a rate of urbanisation between 2010 and 2015 estimated at 4.2%.¹ As Figure 6 shows, the change in population from rural to urban has been significant over the last decade.

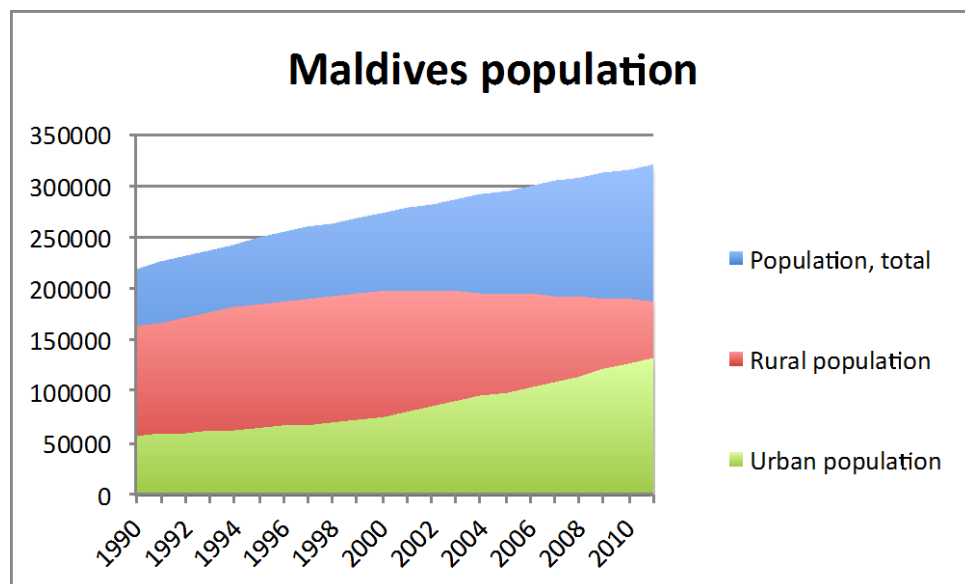


Figure 6 Maldives population²

Literacy is relatively high at 93.4% for the total population, and school life expectancy is 12 years for females and 13 years for males. Employment across the total population is 55%, but this varies across the state, with 75% employment in Malé and just 44% across the Atolls. Across sexes, more females are self-employed, especially across the Atolls. In Malé, almost three quarters of employed persons work in 'organised sectors': government (32%), corporations (23%) and private sector establishments (17%).¹⁰

The HDI rating for Maldives is 0.661, placing it in the medium human development category or 109 out of 187 countries and territories. Between 2000 and 2011, Maldives's HDI value increased from 0.576 to 0.661, an increase of 15.0 per cent or average annual increase of about 1.3 per cent.¹¹

VI.5. Impacts on Tourism and Trade

Given the high proportion of national income made up from tourism, an increase in prices of air travel could have serious impacts for the Maldives' economic status. An indicator of this was the December 2004 Indian Ocean Tsunami, which saw a large drop in international arrivals and led to a drop in receipts from international tourism between 2004 and 2005 of \$184 million (current USD), equivalent to 19% of national GDP at that time. Further, much aviation-based travel is amongst Maldives nationals

¹⁰ Population and Housing Census 2006, Ministry of Planning and National Development.
<http://planning.gov.mv/en/images/stories/publications/analysiscd/index.html#>
 Accessed 3 November 2012.

¹¹ UNDP Human Development Report 2011:
<http://hdrstats.undp.org/images/explanations/MDV.pdf>

travelling between distant atolls, meaning that impacts of increased aviation prices could have wider impacts across the nation.

Given the high and increasing percentage of imports related to fuel, the isolation and low population density of the country, and the already high import costs per container (at over USD 1,500 per container, three times the costs for China), increases in maritime costs could be expected to significantly impact the economy. Impacts on prices of intra-Maldives passenger transport would impact lower income groups most and restrict employment and education opportunities, listed as the main reasons for within-country migration.¹⁰

VI.6. Planned Port Expansions

According to the World Bank Maldives transport profile,⁴ in order to consolidate the population and promote employment opportunities outside Male, the Maldives Government is planning two regional growth centres: one in the Haa Dhalu Atoll in the far North, and another in the Addu Atoll in the far South of the country. These developments are to have airports and ports for improved social and infrastructure services, and to help bring tourism and other economic opportunities to the more isolated atolls. The government is also apparently considering expansion of the international airport and the sea port at Malé in response to increasing demand. A Male port expansion project funded by the World Bank dates to 2006, and a new terminal capable of holding 12 aircraft is planned for the airport, and a seaplane port, from which a maximum of 42 aircraft will be able to operate. This is anticipated to boost annual passenger capacity from 2.6m to 5m.¹²

VI.7. Modelling results

Modelling results from the Global Emissions Trading for international aviation and shipping (MBM1a) scenario predict a negative impact on GDP of -0.182% in 2025. The impact from aviation (-0.22%) is offset by a predicted positive impact on maritime (0.038%). These predictions are lower than might be expected given Maldives' high dependence on tourism, making up nearly 30% of GDP and necessarily dependent upon air travel. However, a trade deficit present since 2004 may explain the lower than anticipated impact on GDP, with reductions in negative trade balances masking negative impacts from tourism; as explained in several cases above, this does not necessarily equate to a less negative social economic impact.

When the MBMs auctioning or tax revenues are used to reduce employers' social security contributions then in case of the Global Emissions Trading for international aviation and shipping (MBM1a) 2025 the expected impacts on GDP in 2025 are reduced to -0.011%, with predicted impacts across aviation reduced to -0.071% and shipping impacts increasingly positive (0.060%).

VI.8. Similar Countries

¹² Airport International News: Maldives International Airport Expansion Planned. <http://www.airport-int.com/news/maldives-international-airport-expansion-planned.html> Accessed 4 November 2012.

Maldives is defined by its unique geographical setting, and a high dependence upon tourism, fish and imports of fossil fuels. Micronesia could be considered similar given its geographical setting as a collection of small islands, and also an important tourism industry and high export dependence upon fish. Bahamas, Cayman Islands and Cocos Islands are comparable again given the small island(s) setting and a high dependence upon tourism, and the Falkland, Faroe and Solomon Islands for their heavy dependence upon fishing.¹ Seychelles, an archipelago also in the Indian Ocean, have a similarly high import intensity with imports almost equal to GDP according to WDI.²

Maldives is a member of the AOSIS (Alliance of Small Island States) negotiating group at international United Nations climate negotiations. Nations in the coalition are mostly at a similar level of development, and may have political and economic similarities to Maldives in addition to filling the category of small island states. Ones not yet mentioned are listed below:

Antigua and Barbuda, Bahamas, Belize, Cape Verde, Comoros, Cook Islands, Cuba, Dominica, Dominican Republic, Fiji, Gabon, Grenada, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, Mauritius, Nauru, Niue, Palau, Papua New Guinea, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Sao Tome and Principe, Suriname, Timor-Leste, Tonga, Trinidad and Tobago, Tuvalu, Vanuatu.¹³

¹³ <http://aosis.org/members/>