#### Statement at the conclusion of country visit to Maldives

Dr. David R. Boyd Special Rapporteur on the human right to a clean, healthy and sustainable environment April 16-April 25, 2024

#### The beach where I used to play, collect shells and watch sunsets no longer exists.

#### Naff Asim, Maldivian marine biologist and youth climate activist'

#### **Introduction**

Today, I conclude my ten-day visit to Maldives. Scattered like sparkling jewels across a vast swath of the Indian Ocean, the islands of Maldives are a tropical paradise. Yet Maldives faces a potentially dystopian future because of the climate emergency caused by wealthy nations and wealthy individuals. With the highest point of land only 2.5 meters above sea level, scientific projections indicate that Maldives could disappear completely beneath the ocean at some point in the future due to sea level rise.

Long before that ultimate catastrophe, Maldives could become virtually uninhabitable due to the combined impacts of sea level rise, floods, coastal erosion, increased frequency of extreme weather events (e.g., cyclones, thunderstorms, storm surges, and strong winds), severe heat, intense and unpredictable rainfall patterns, extended dry seasons, saltwater contamination of freshwater and agricultural lands, increased sea surface temperatures, vector borne diseases, ocean acidification, and coral bleaching. These devastating present and future impacts of the climate emergency on the Maldives and other small island states are described in detail in the most recent report of the Intergovernmental Panel on Climate Change.<sup>2</sup>

Atoll nations, including Maldives, are among the most vulnerable places on Earth because of their low elevation, small land area, 360°-exposure to waves, limited fresh water supplies, fragile ecosystems, high population densities and limited technical, financial and human resources. Sea level rise is accelerating, with dire consequences.<sup>3</sup> As a rule of thumb, every 10 cm of sea level rise triples the frequency of coastal flooding and leads to a 10-meter retreat of unprotected coastlines.<sup>4</sup> By the end of this century, Maldives could be experiencing one-in-100-year coastal floods annually and infrastructure within 100 meters of the coast would be extremely vulnerable to inundation and damage.

Maldives consists of 26 natural atolls comprising approximately 1,190 islands, which are grouped into 20 administrative units. Although often described as a Small Island State, Maldives could also be considered a Big Ocean State, as 99 percent of its total territory is marine, while only 1 percent is land (approximately 300 square kilometres). The population of 515,000 (2022 census) is spread over 188 inhabited islands, with additional islands dedicated to tourist resorts. Malé, the capital, is one of the most densely populated cities in the world. The first resort island opened in 1972, and today tourism dominates the economy (30% of gross domestic product).

The plight of Maldives illustrates the unique nature of the human rights conundrum posed by the climate emergency: the people of the Maldives have made a negligible contribution to causing the problem (0.0003 percent of global emissions) but are being subjected to a disproportionate share of the impacts. The dire warning of the Intergovernmental Panel on Climate Change resonates with particular power in Maldives: "There is a rapidly closing window of opportunity to secure a livable and sustainable future for all ... The choices and actions implemented in this decade will have impacts now and for thousands of years."<sup>5</sup>

In some ways, the Maldives epitomizes a global economy based on the exploitation of people and nature. A burgeoning number of islands are being privatized, offering high end luxury resorts for wealthy foreigners at thousands of dollars per night, while nearly a third of the population of Maldives are migrant

workers, many of whom live and work in poor conditions, earning minimal wages. Foreign investors reap large profits while local communities suffer the loss of ecosystems that sustain them. Many airports are being built, even on islands with convenient speedboat access to other airports, yet air travel is the most carbon-intensive mode of transport.

During my visit to Maldives, I spent time in the capital, Malé, and traveled to a number of other islands and atolls including Hulhumalé, Thilafushi and Villingili (Kaafu Atoll), Kulhudhuffushi (Haa Dhaalu Atoll) and Hithadhoo, Maradhoo, and Feydhoo (Addu Atoll). I met with the Minister of Foreign Affairs, the Minister of Climate Change, Environment and Energy, the Minister of Economic Development and Trade, the Special Envoy for Climate Change from the President's Office, officials with the Ministry of Fisheries and Ocean Resources, the Ministry of Health, the Ministry of Land, Housing and Urban Development, the Attorney General's Office, Waste Management Corporation (WAMCO), the National Disaster Management Authority and the National Human Rights Commission, justices of the Supreme Court, the Maldivian Red Crescent, marine biologists, youth, and members of civil society.

My role as the UN Special Rapporteur on human rights and the environment is to promote the implementation of States' obligations relating to the right to a clean, healthy and sustainable environment. This fundamental human right, successfully championed by Maldives at the UN Human Rights Council (A/HRC/RES/48/13) and the UN General Assembly (A/RES/76/300), includes clean air, safe and sufficient water, healthy and sustainably produced food, non-toxic environments, healthy biodiversity and ecosystems and a safe climate. It also includes rights of access to environmental information, public participation in environmental decision-making, and access to justice with adequate remedies. My visit focused on the challenges Maldives must confront to successfully respect, protect and fulfil this right, the steps taken so far, the future actions being planned, and the barriers to progress.

# **International Legal Context**

As other special procedures mandate holders have observed on previous visits, Maldives has ratified eight out of the nine core international human rights treaties, along with five optional protocols. I encourage Maldives to ratify the International Convention on the protection of the rights of all migrant workers and members of their families. Maldives is also a State Party to all of the major international climate and environmental agreements, including the UN Framework Convention on Climate Change, the Paris Agreement, the UN Convention on Biodiversity and more. I encourage the Maldives to push for a human rights-based approach in the ongoing negotiations towards a global plastics treaty, a pandemic prevention, preparedness and response treaty, and a business and human rights treaty.

## **National Legal Context**

The Constitution of Maldives recognizes that every citizen has the right to a "healthy and ecologically balanced environment" (Article 23).<sup>6</sup> However, from a human rights perspective, this right should be enjoyed by everyone and not limited to citizens.<sup>7</sup> This appears to be the only constitution in the world to treat this fundamental human right in such a restrictive manner. This constitutional flaw takes on additional importance in Maldives because of the immense number of migrant workers (estimated at 150,000), some of whom are living or working in unsafe and unhealthy environments.

The main environmental law in the Maldives is the outdated Environment Protection and Preservation Act from 1993. Environmental laws and policies in Maldives are evolving, with a number of recent laws (e.g. Climate Emergency Act 2021, Waste Management Act, 2022) and bills not yet enacted (e.g. Environmental Protection and Conservation Act). Vital reforms to fossil fuel subsidies have been developed but not implemented. As noted in the Sustainable Development Goals Roadmap, Maldives needs to "Strengthen the institutional capacity for environmental management, including monitoring, assessment and enforcement capacity".<sup>8</sup>

## The Climate Emergency

As described earlier, Maldives is acutely vulnerable to the climate crisis, which is also a human rights crisis. The climate emergency is interfering with the enjoyment of a wide range of human rights, including the rights to life, health, food, water, housing, an adequate standard of living and a healthy environment, as well as cultural rights and the rights of the child. Potentially vulnerable and marginalized populations— women, children, older persons, persons with disabilities and persons living in poverty, whose adaptive capacity may be limited by lack of resources—are suffering disproportionate impacts.

According to research published in 2023, "The health risks associated with climate change in the Maldives are vast, and they include heat-related illness, water-borne diseases, food and water shortages due to flooding, mental illnesses, and an increase in the incidence of vector-borne diseases" including dengue fever.<sup>9</sup> Researchers described these problems as "a matter of urgent concern".<sup>10</sup> In addition, a five percent increase in both stillbirths and pre-term births results from every one degree increase in temperature.<sup>11</sup>

Like all States, Maldives has both adaptation and mitigation obligations pursuant to international human rights law. To its credit, Maldives is one of the first countries to establish a road map following the call from the United Nations Secretary General on Early Warnings for All. This important initiative is intended to ensure that every person on earth is protected from hazardous weather, water, or climate events through life-saving early warning systems by the end of 2027. The Climate Emergency Act (2021) is an important law, with one of its objectives being "to provide a mechanism to protect human rights from detrimental climate changes." At COP 28 in Dubai, the Maldives announced its intention to plant five million trees in five years. Land reclamation is a major element of Maldivian adaptation efforts and is discussed in detail below.

In its updated Nationally Determined Contribution under the Paris Agreement, Maldives committed to reduce greenhouse gas emissions 26 percent by 2030. Maldives also established a goal of becoming carbon neutral (or net zero carbon) by 2030 in its Nationally Determined Contribution. Although admirable in theory, these goals are unlikely to be met unless there is a rapid acceleration in the shift to renewable energy. Today's electricity and transport systems in the Maldives are heavily dependent on fossil fuels. For example, currently less than ten percent of electricity is generated via solar photovoltaic panels.

Maldives' heavy reliance on imported fossil fuels for generating electricity and fueling transport is expensive, contributes to air pollution, undermines the nation's international reputation as a leading voice for climate justice, and poses a massive obstacle to achieving carbon neutrality. In 2022, Maldives imported more than 800,000 tonnes of fuel.<sup>12</sup> The three major categories of fuel imported are diesel for electricity generation, petrol for vehicles, and cooking gas.<sup>13</sup>

In recent years, fossil fuel subsidies for electricity and petrol have cost the Government hundreds of millions of dollars annually.<sup>14</sup> The Asian Development Bank published a damning indictment of this problem, identifying barriers to the clean energy transition that include a weak policy and regulatory environment, limited development of local energy sources, absence of energy planning, inefficient energy use, and lack of long-term energy planning.<sup>15</sup> According to the Asian Development Bank, diesel electricity generating costs range between 0.30–70 cents per kilowatt-hour (kWh), approximately three to seven times higher than recent costs of producing solar electricity in Maldives.<sup>16</sup>

The rapidly declining cost of renewable energy provides a huge opportunity for Maldives. In 2022, 63 investors expressed interest in a major solar project in Maldives, and a record low price of 9.8 US cents was received.<sup>17</sup> In the words of the World Bank, "moving from a fossil-based to a renewable-based energy model is the best way to make electricity cheaper for everyone, reduce the fiscal risks and protect this island paradise."<sup>18</sup> Installed solar electricity generating capacity in Maldives jumped from 4 megawatts in 2014 to 37 megawatts in 2023, which is a good start but needs to accelerate.<sup>19</sup> Barbados, another small island state

with limited land area that is a global champion for climate justice, jumped from 1 megawatt in 2014 to 70 megawatts in 2023, nearly double Maldives.<sup>20</sup>

I applaud the Government's target to attain 33 percent of electricity production through renewable energy by 2028 and a proposed rooftop solar program, but note that these initiatives require addressing the preceding obstacles, and doing so quickly. Fossil fuel subsidies should be redirected to support renewable electricity and electric mobility. Excellent solar and storage initiatives are underway, funded largely by international financial institutions including the World Bank and Asian Development Bank. Projects include Accelerating Sustainable Private Investment in Renewable Energy (ASPIRE) and Accelerating Renewable Energy Integration and Sustainable Energy (ARISE), which are expected to install more than 53.5 megawatts of solar capacity and 50 megawatt-hours of battery storage. Preparing Outer Island for Sustainable Energy Development (POISED) is designed to install solar hybrid systems in 160 islands across Maldives.

Maldives must leave no stone unturned in the quest for climate finance. Wealthy States have moral and legal obligations to increase the availability of funding, including through far larger contributions to the recently established Loss and Damage Fund. I recommend that the Government reach out to the Just Energy Transition Partnership for financing to dramatically accelerate the switch to renewable energy. This partnership, led by the EU, Canada, and the United States, has already pledged more than \$40 billion in capital to States including Indonesia, South Africa, Vietnam and Senegal.<sup>21</sup> To date it does not appear that any small island states have been beneficiaries. Maldives has a compelling case to be the first. Other attractive options are debt for renewables or debt for climate swaps, where creditors reduce debt obligations in exchange for commitments to invest in specified climate actions.<sup>22</sup>

I was impressed by the electric transport system on Villingili, involving buses, electric motorcycles and electric bicycles. Electric buses operated by the Maldives Transport and Contracting Company employ solar powered charging stations, contributing to reduced greenhouse gas emissions, cleaner air, less noise and a greener, cleaner, healthier island. This concept should be expanded to other islands, including Malé and Ras Malé, through subsidies for electric bikes, motorbikes and vehicles.<sup>23</sup>

## Land Reclamation

The most controversial environment and human rights related topic in Maldives involves land reclamation. This process of dredging sand to expand existing islands or create new islands has accelerated in recent years, with the introduction of the Safe Island development programme after the devastating 2004 Indian Ocean tsunami. Associated activities, including channel blasting, harbor developments, and construction of jetties and breakwaters, also pose significant threats to the marine and coastal environment. Nearly two-thirds of inhabited islands in Maldives have undergone substantial changes through land reclamation since 2006.<sup>24</sup> The Government's rationales include social, economic and environmental arguments. Additional land is needed for housing, infrastructure and industry. Land reclamation is also depicted as a means of adapting to climate change, particularly to the threat of rising sea levels. The Intergovernmental Panel on Climate Change reports that land reclamation is potentially effective in reducing the risks from sea level rise.<sup>25</sup>

Opponents of land reclamation assert that the process is damaging, and in some cases, destroying coral reefs and lagoons, ecosystems that are not only environmentally sensitive and valuable but also the basis of local peoples' livelihoods and cultures. They also argue that the main beneficiaries are often foreign businesses and the economic and political elite of the Maldives. Although individual environmental impact assessments are conducted for land reclamation projects, there does not appear to be an assessment of the cumulative risk to biodiversity, the health of reef ecosystems, local livelihoods and human rights across the Maldives despite the escalating pace and magnitude of development.

There is extensive scientific evidence to support the position that land reclamation causes significant environmental damage.<sup>26</sup> In the words of the Intergovernmental Panel on Climate Change, "Land reclamation and coastal protection structures negatively impact coastal and marine ecosystems, including reefs and mangroves, which compromise the protection services that they deliver to island communities through wave energy attenuation and sediment supply and may impact the long-term sustainable adaptive planning of islands. In addition, these construction activities disrupt natural coastal processes, thereby causing coastal erosion, which in turn increases the risk of flooding".<sup>27</sup> The IPCC concluded that reclamation causes "widespread ecosystem destruction".<sup>28</sup>

The Maldives appears to be stuck between a rock and a hard place. It is untenable to do nothing to protect these extraordinarily vulnerable islands from the existential threat of rising sea levels. Yet reclamation projects are problematic because they damage nature's defense mechanisms, jeopardize marine biodiversity, and sabotage the ecosystems that attract millions of tourists annually.

Land reclamation projects for climate adaptation should be distinguished from projects done for luxury tourism. If land reclamation for the former could be done in a genuinely sustainable manner, with the full participation and support of local communities, it could be a valuable means of building resilience and adapting to the inevitable impacts of the climate emergency. This is true not only for Maldives and other atoll nations, but for many small island states and vulnerable, low lying coastal communities.

# Water

Fulfilling the right to safe and sufficient water has been a major challenge for Maldives. As of 2019, 78 percent of the population had access to piped water in their homes, while 86 percent had access to sewage networks.<sup>29</sup> Groundwater is found on some islands, but is limited in quantity and often contaminated by human waste and saltwater intrusion. Some households collect rainwater, but maintenance of the systems is uneven (e.g. cleaning roofs, cleaning tanks), and made more difficult by erratic and unpredictable precipitation patterns attributed to the climate crisis. Some islands also have communal water tanks. During the dry season, the Government delivers water by tanker to approximately 80 islands. However, this is expensive, polluting (due to fuel use), and can be delayed or canceled by bad weather and stormy seas, leaving people without an adequate water supply. This approach should be replaced by more sustainable solutions, including increased attention to protecting and recharging groundwater.

Water in Maldives is increasingly provided by desalination plants. If powered by renewable energy, this is a reasonably sustainable solution. A recent \$25 million project carried out by the Government with support from the UN Development Programme and the Green Climate Fund improved access to safe drinking water for 20,000 people on 29 islands, improved resilience of groundwater quality for 49 islands, supported development of the Water and Sewerage Act, and will save millions of dollars in the future by reducing costs of delivering water during dry seasons. A recent collaboration between China and Maldives built five desalination plants powered by solar and wind systems for a total cost of \$13 million.<sup>30</sup> Each plant has the capacity to produce 200,000 liters of water daily.

## Non-toxic environments where people can live, work, learn and play

## Waste management

Maldives has serious waste management problems, including open burning, dumping of waste, and microplastic contamination. Litter is ubiquitous, cluttering streets, beaches, the ocean, and the roots of trees. The rare public trash receptacles are overflowing with garbage. With a growing population, increasing wealth, and rapidly rising numbers of tourists, garbage production has skyrocketed. The volume of waste generated per capita has jumped roughly 60% in recent years.<sup>31</sup>

Hundreds of tonnes of trash from the Greater Malé region and tourism islands are transported to an immense dump on Thilafushi Island. Burning of waste on Thilafushi is no longer permitted but continues on more

remote islands, producing carcinogenic smoke and depositing toxic substances in soil and water, threatening both human and ecosystem health.<sup>32</sup> According to scientists, "these findings highlight the need for immediate changes in waste management policies in the Archipelago, in order to reduce the release of Persistent Organic Pollutants (POPs) in the fragile local environment."<sup>33</sup>

The first waste management law was enacted in 2022 and actions are underway to address the problem, including planned separation of waste streams, closed containers for waste transfer between islands, a 13 megawatt waste to energy incinerator, and a biodigester for organic waste. A last-minute amendment to the Waste Management Act allows waste to be imported. Given the garbage challenges facing Maldives, this provision should be repealed.<sup>34</sup>

Waste management centres have been established on 79 islands and are promised for 100 more, but are generally not fenced, not coordinated, and are not separating waste streams (recyclable, compostable, residue). Many sewage and waste water systems in the Maldives are rudimentary, consisting of simple collection systems with little treatment. Raw sewage effluent and solids are discharged through pipes into the ocean, threatening lagoons, beaches and reefs.<sup>35</sup>

Researchers found "one of the highest densities of microplastics found anywhere on the planet" in coastal waters adjacent to Maldivian islands.<sup>36</sup> Maldives, somewhat surprisingly, ranks among the world's worst plastic polluters on a per capita basis.<sup>37</sup> Plastic water bottles and other forms of plastic trash are visible on streets, beaches and floating in the sea because of the inadequate solid waste management system, discharges of sewage and wastewater, the lack of environmentally responsible behaviour, and transport by currents from neighbouring countries in the Indian Ocean. Plastic pollution is not only ugly but threatens human health, wildlife and ecosystems.

Maldives recently introduced a ban on certain types of single use plastics.<sup>38</sup> The production, import and use of the following single-use plastic items were banned: drinking straws, plates, cutlery and stirrers, plastic shopping bags below  $30 \times 30$  cm, styrofoam food containers, drinking cups of less than 250 mL, cotton buds with plastic stems and shampoo, soap, conditioner and lotion bottles that are less than 50 mL. This is a good initiative, but must be implemented and enforced to be effective.

It should be noted that waste incineration can cause additional problems including toxic air pollution and toxic residue. Strong environmental standards based on the best available science need to be established before the Thilafushi incinerator begin to operate. Smaller incinerators on other islands should also be governed by strong environmental standards and must be sited away from local communities and ecologically sensitive areas.

A bright spot in waste management is the "Green Climate Smart Hospital Policy and Strategy" that is addressing medical waste. Also important is a project supported by the Global Environment Facility that achieved the safeguarding of up to 30 tonnes of PCB- contaminated transformers and switchgears in a temporary storage and progressed with arrangements for packaging, shipment, and final disposal of the PCB waste at a certified destruction facility abroad.

The Maldives is encouraged to develop extended producer responsibility programs to shift the operational and financial burden of waste management to the businesses responsible for creating and importing the materials that become waste.<sup>39</sup> For example, one of the most commonly littered items are drink containers. These should be subject to an industry financed and operated deposit/refund system. Maldives needs to invest in public education on proper waste management (e.g. ending open burning, dealing with food waste, segregating waste) and strictly enforce rules against littering. The recent crackdown on littering in Malé prior to Ramadan was an encouraging initiative, with 100 people fined.<sup>40</sup>

## Air pollution

Despite the remoteness of the Maldives and the small population, air pollution is a significant health concern. Annual average levels of fine particulate ( $PM_{2.5}$ ) in Malé are four times higher (19 µg/m3) than the level recommended by the World Health Organization (5 µg/m3). In other parts of Maldives, levels are lower than in Malé but still exceed WHO levels.<sup>41</sup> At certain times of the year, half of the air pollution is due to transboundary transport of air pollution. It is estimated that 160 premature deaths per year in Maldives are caused by air pollution.<sup>42</sup>

Maldives has a National Action Plan on Air Pollutants (2019). Recognizing the link between climate change and air pollution, most of the measures in the Action Plan repeat measures pledged in the Nationally Determined Contribution to the Paris Agreement, such as expanding solar electricity generation, improving the energy efficiency of air conditioners and refrigerators, and reducing the open burning of waste. If implemented, these actions would reduce greenhouse gas emissions 26 percent and fine particulate emissions 35 percent. Additional actions, including strengthening and enforcing emission standards for road vehicles and the marine fleet, would result in a 60 percent reduction in direct PM2.5 emissions, 40 percent reduction in black carbon emissions, and 27 percent reduction in nitrogen oxide emissions by 2030 compared to a business as usual scenario. However, implementation is the primary challenge.

# Toxic chemicals

A growing number of States have banned hazardous pesticides because of their dangers to human and ecosystem health. However, pesticide imports in Maldives have risen sharply in recent years. More than 14 types of potentially carcinogenic pesticides were imported in 2021.<sup>43</sup>

Other concerns include chemicals used in the boat building and repair sector (e.g. formaldehyde, a known human carcinogen, and styrene, a probable human carcinogen) and asbestos, a known carcinogen imported in large volumes in asbestos-cement sheets (used in construction).<sup>44</sup> The World Health Organization urges the States to stop using all products containing asbestos because of the severe risks of cancer and other diseases.<sup>45</sup>

Recommended actions including enacting a Hazardous Substances law, stopping the import and use of all asbestos products, and eliminating reliance on cancer causing pesticides. The government should also: strengthen occupational health and safety standards in key economic sectors, such as boat building, construction, and agriculture;<sup>46</sup> increase awareness and understanding about the importance of sound chemical management; and boost capacity for testing, monitoring and enforcement of rules.

## **Biodiversity**

The Maldives archipelago's coral reefs, mangrove forests, seagrass meadows, sandy lagoons and other marine ecosystems are among the most abundant and diverse anywhere in the world. In particular, the size, complexity, and rich diversity of the Maldives' coral reef ecosystem—including 1,200 species of fish—make it globally significant. Of the 100+ endangered species in Maldives, most are corals, along with some turtles, sharks, rays and birds.<sup>47</sup>

Scientists are very concerned about the declining health of coral reefs in Maldives, especially in the more heavily developed central atolls.<sup>48</sup> Corals are under pressure from the combination of climate change (ocean heating and acidification) and localized impacts (land reclamation, pollution, tourism). Maldives lost 75% of its corals in the devastating 2016 bleaching event. Reductions in coral abundance and diversity lead to declines in fish and invertebrate populations, harming local communities that depend on these species and undermining the long-term health of the reefs themselves.

To take just one example, the 2022 Environmental Impact Assessment for the Addu Land Reclamation Project estimated that 20.88 hectares of coral reef would be lost, representing a cost of \$US 340.6 million

to \$US 851.5 million (up to ten times the budgeted cost of the reclamation project).<sup>49</sup> The loss of 98 hectares of seagrass meadows in the same EIA had an estimated cost of \$US 3.7 million.<sup>50</sup>

Mangroves provide resources for local communities are important as nurseries for reef fish species, bird habitat and a variety of vital ecosystem services. Destruction and reclamation of mangroves and coastal areas for the development of infrastructure deprives women who are dependent on these natural resources for their livelihoods, leading to increased financial dependability and vulnerability in the households. This is precisely what happened when an extensive area of mangroves was destroyed to build the Kulhudhuffushi airport.<sup>51</sup> The economic, social, and cultural rights and the right to a healthy environment of hundreds of women reliant on handicrafts were violated. Coastal vegetation provides many benefits and should be protected whenever possible.

Percentages of protected areas in Maldives are well below the international commitment of all States to protect 30 percent of land and marine territory by 2030, under the Kunming-Montreal Global Biodiversity Framework. Data available indicate that in Maldives, 2.3 percent of terrestrial area is protected and 0.7 percent of the marine area, well below other small island nations (e.g. Seychelles with 62 percent and 33 percent respectively).<sup>52</sup> Rights-based conservation requires inclusive involvement of local communities.

Protected areas appear to lack adequate government support. For example, responsibility for the Addu Atoll UNESCO Biosphere Reserve was transferred from the Ministry of Environment to a local city council. Unlike the Baa Atoll Biosphere Reserve, the Addu Atoll Biosphere Reserve does not receive any financial support from the central government. The Addu Atoll Biosphere Reserve is a global treasure that deserves the full support of the government of Maldives, including sufficient financial and human resources to develop and implement a management plan to attract more visitors and ensure its sustainability.

A recent regulatory change allows dredging for land reclamation in marine protected areas. This type of regression is not consistent with the government's obligation to respect the right to a healthy environment.

## Food

Fishing remains an important part of the economy of the Maldives and a major source of nutrients. The key species are skipjack and yellowfin tuna, which are caught using sustainable fishing gear including pole and line and hand lines, respectively. Tuna represent 98 percent of fisheries in Maldives, and roughly half the catch is exported. Since 2005 the volume of tuna catch has been declining due to overfishing by other nations and oceanic changes (e.g. increased ocean surface temperatures) linked to the climate emergency.

It is important to emphasize the impressively sustainable practices of the Maldivian tuna fishery, which include low levels of bycatch, relatively low levels of fuel consumption, and catch levels below the country's quotas established by the Indian Ocean Tuna Commission.<sup>53</sup> It is unjust that European Union fishing fleets catch more skipjack and yellowfin tuna in the Indian Ocean than any State in the region (including Maldives).<sup>54</sup>

A profoundly troubling possibility is that the foregoing factors could completely eliminate the tuna fishery that employs more than 10,000 people and is at the heart of the healthy diet enjoyed by many Maldivians (with per capita consumption of almost 100 kilograms per year).<sup>55</sup> The loss of the tuna fishery would be devastating for people's health and their right to healthy and sustainably produced food, as well as causing social, cultural and economic losses.

## Procedural elements of the right to a healthy environment

In order to fully enjoy their right to a healthy environment, people must have access to information, the ability to participate in decision making, and access to justice with effective remedies when their rights are

being threatened or violated. Some sources raised concerns about delays in gaining timely access to information, extra difficulties getting information about state-owned enterprises, and the use of "national security" as an excuse for denying access to information. Others criticized public participation opportunities as limited, directed towards favourable stakeholders only (such as local councils), and treated as "box-checking exercises." In the words of one individual, there is a "communication gap" between the government and the people.

One of the key vehicles for implementing the procedural elements of the right to a healthy environment and achieving sustainable development is the environmental impact assessment (EIA) process. Disaster risk reduction, such as adequate drainage, should be consistently integrated in EIAs for land reclamation projects, but this is apparently not the case, or sometimes recommendations are not implemented. Numerous harbour, airport, and other land reclamation projects have exacerbated flooding risks, as illustrated by the rise in flooding in Kulhudhuffushi City after land reclamation and road construction for an airport destroyed a large area of mangroves.<sup>56</sup>

Other critiques directed at the EIA process include lack of new information (copy/paste from previous EIA studies), studies done in a rush, resulting in a lack of comprehensive seasonal data, projects are politically pre-approved, work on projects begins prior to completion of the EIA process, and a failure to implement EIA recommendations. EIA should include health and human rights considerations, including the rights of the child and the right to a healthy environment. The Environmental Protection Agency needs additional resources in order to monitor and enforce mitigation and restoration recommendations made in EIA reports. These recommendations should be legally binding conditions for the granting of permits.

There are a growing number of court challenges to government decisions that are harming or have the potential to harm the right to a healthy environment in Maldives. Some disturbing examples were given about local magistrates being influenced by pro-development public pressure to dismiss cases on spurious grounds, and environmental advocates being harassed for bringing these important public interest lawsuits. It is essential to the integrity of the judicial system for magistrates and judges be free from all external influences. One important case involving land reclamation for port development at Gulhifalhu is currently before the Supreme Court, which overturned an interim injunction granted by the High Court to stop dredging.<sup>57</sup>

Recommendations include training magistrates and judges about human rights and the environment (through programs offered by the UN Environment Programme), adopting procedural rules to expedite environmental cases before irreparable damage is done (as in the Philippines<sup>58</sup>), and encouraging lawyers to represent environmental clients (potentially as a pro bono element of their practice).

Several disturbing accounts were shared of harassment and intimidation, including death threats, against environmental human rights defenders. This is completely unacceptable. The government should have zero tolerance for this kind of behaviour and should celebrate the work of advocates who are promoting sustainable development and seeking environmental justice. Those responsible for threats and harassment should be investigated and, where appropriate, prosecuted.

It is a positive development that human rights complaints (related to civil and political rights) can be brought to the Human Rights Commission and the Civil Rights Office of the Attorney General. Efforts to have the Human Rights Commission comply with the Paris Principles established by the Global Alliance of National Human Rights Institutions should continue.

Environmental education is a right for every child and should be woven throughout the entire curriculum in Maldives, from pre-school through university. The Green Schools pilot project in seven schools is a promising initiative in this regard.

## Urban planning

Access to green space is very important for both physical and mental health, especially for children. There is much more green space in Phase I of Hulhumalé than in Malé, but green space originally planned for Phase II has been replaced by additional housing. This unfortunate regression should be reconsidered.

Traffic congestion in Malé is causing air pollution and accidents. I recommend investing in safer infrastructure for pedestrians and cyclists, as well as improving public transit services. Some streets should be closed to private vehicles, beginning on a trial basis, a strategy that has enjoyed great success in many cities. Encouraging developments from the perspective of sustainable development planning include a recently completed Urban Development Policy as well as work on a National Planning bill, a 20-year Long-term Development Plan, and an Urban Planning and Development bill.

# **Gender Equality**

Evidence demonstrates that having more women in government leads to improved environmental protection and performance.<sup>59</sup> Women's participation in public institutions in Maldives remains limited. For example, their representation in decision-making bodies such as the Parliament, and executive positions remains disproportionately low. Following this week's election, women held only three seats in the People's Majlis, (the Maldivian Parliament), and only 3 out of 22 ministers are women. A positive step forward was the amendment of the Decentralization Act (2019), introducing a quota of 33 percent for the representation of women in local councils. Similar quotas for all public institutions, including Parliament, are encouraged. In 2022, the UN Working Group on discrimination against women and girls recommended increasing women's participation and decision-making related to climate action and environmental protection.<sup>60</sup>

According to the Intergovernmental Panel on Climate Change, research from the Maldives suggests that women and men do not possess equal capacities to use mobility as a strategy to adapt to climate change.<sup>61</sup> Women are less able to employ migration as an adaptation strategy due to gender norms, social expectations, economic structures, religious doctrines, and cultural practices.

## **Conclusion**

In conclusion, I would like to express my sincere appreciation to the Government of Maldives for the invitation to undertake this visit and for its excellent cooperation before and during the visit. Maldives deserves credit for being a vocal champion for the right to a clean, healthy and sustainable environment at the United Nations, both in Geneva at the Human Rights Council and in New York at the General Assembly. I would also like to express my genuine gratitude to the UN Country team for their valuable support and assistance. I appreciate the remarkable efforts being made with very limited resources by civil society organizations in Maldives working on pollution, plastic waste, tree planting, environmental education, biodiversity conservation and climate change. The people doing this work, many of whom are volunteers, are heroes for human rights and the planet.

This end of mission statement highlights my preliminary findings from the ten-day visit. It will be followed by a full report with a more detailed and comprehensive analysis, including extensive recommendations, which will be presented at the 58<sup>th</sup> session of the Human Rights Council in March 2025.

I would like to close on an optimistic note. Scientists have conducted remarkable experiments in the Maldives to revive damaged coral reefs by breeding heat tolerant coral larvae and using recordings of fish noises to attract those larvae to damaged reefs.<sup>62</sup> This research illustrates the remarkable resilience of nature. However, this technique will only work if every country in the world, including Maldives, tackles the climate emergency with increased urgency. As the IPCC has concluded, "Every bit of warming matters, every year matters, every choice matters."<sup>63</sup>

# **Endnotes**

<sup>1</sup> https://www.unicef.org/rosa/blog/were-being-swallowed-ocean-and-running-out-freshwater

<sup>2</sup> Mycoo, M., M. Wairiu, D. Campbell, V. Duvat, Y. Golbuu, S. Maharaj, J. Nalau, P. Nunn, J. Pinnegar, and O. Warrick, 2022: Small Islands. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 2043–2121, doi:10.1017/9781009325844.017.

<sup>4</sup> See <u>https://nccarf.edu.au/wp-content/uploads/2019/05/Rules-of-thumb-for-managing-coastal-processes.pdf</u> and

https://theconversation.com/climate-explained-why-coastal-floods-are-becoming-more-frequent-as-seas-rise-127202 <sup>5</sup> https://www.ipcc.ch/report/ar6/syr/resources/spm-headline-statements/

<sup>6</sup>23. Economic and social rights

Every citizen the following rights pursuant to this Constitution, and the State undertakes to achieve the progressive realisation of these rights by reasonable measures within its ability and resources:

<sup>7</sup> It should also be noted that pursuant to the Constitution of Maldives, "a non-Muslim may not become a citizen of the Maldives" (Article 9(4)).

<sup>8</sup> Government of Maldives and United Nations, 2022, Maldives SDG Roadmap,

https://maldives.un.org/sites/default/files/2023-05/Maldives%20SDG%20Roadmap%20Oct%202022%20Final.pdf <sup>9</sup> Eya LI, Adam IM, Ruvaisha A, Adam IM. Readiness of the Maldivian Health System to Climate Change. Asia Pac J Public Health. 2023 Mar;35(2-3):230-231. doi: 10.1177/10105395231158683. Epub 2023 Feb 23. PMID: 36824019.

<sup>10</sup> Ibid.

<sup>11</sup> Chersich MF, Pham MD, Areal A, Haghighi MM, Manyuchi A, Swift CP, Wernecke B, Robinson M, Hetem R, Boeckmann M, Hajat S; Climate Change and Heat-Health Study Group. Associations between high temperatures in pregnancy and risk of preterm birth, low birth weight, and stillbirths: systematic review and meta-analysis. BMJ. 2020 Nov 4;371:m3811. doi: 10.1136/bmj.m3811.

<sup>12</sup> Maldives Ministry of National Planning, Housing and Infrastructure, 2023. Maldives Second Voluntary National Review on the Implementation of the Sustainable Development Goals Maldives.

https://hlpf.un.org/sites/default/files/vnrs/2023/VNR%20Maldives%202023.pdf

<sup>13</sup> https://mfr.mv/industry/maldives-set-to-spend-more-on-fuel-in-2022

<sup>14</sup> https://edition.mv/features/29574

<sup>15</sup> Asian Development Bank, 2020, Energy Sector Assessment: Summary.

https://www.adb.org/projects/documents/mld-46122-005-rrp

<sup>16</sup> Asian Development Bank, 2020, Energy Sector Assessment: Summary.

https://www.adb.org/projects/documents/mld-46122-005-rrp

<sup>17</sup> <u>https://blogs.worldbank.org/en/endpovertyinsouthasia/why-maldives-5-mw-solar-project-game-changer</u>
<sup>18</sup> Ibid.

<sup>19</sup> International Renewable Energy Agency. 2024. Renewable Energy Capacity Statistics, 2024, p. 21.

https://www.irena.org/Publications/2024/Mar/Renewable-capacity-statistics-2024

<sup>20</sup> İbid.

<sup>21</sup> <u>https://dgap.org/en/research/glossary/climate-foreign-policy/just-energy-transition-partnerships</u>

<sup>22</sup> See <u>https://lki.lk/publication/debt-for-renewables-swaps-how-to-address-climate-debt-and-energy-sector-vulnerabilities-in-sri-lanka/</u> and

https://theconversation.com/how-debt-for-climate-swaps-can-help-solve-low-income-countries-crushing-debt-andenvironmental-challenges-at-the-same-time-191161

<sup>23</sup> https://atolltimes.mv/post/news/6925

<sup>24</sup> Duvat, V.K.E., Magnan, A.K. Rapid human-driven undermining of atoll island capacity to adjust to ocean climate-related pressures. *Sci Rep* **9**, 15129 (2019). <u>https://doi.org/10.1038/s41598-019-51468-3</u>

<sup>25</sup> Intergovernmental Panel on Climate Change, Special Report on Oceans and Cryosphere in a Changing Climate: Summary for Policymakers, 2019, p. 33. See also 4.4.2.4.5

<sup>26</sup> Duvat, V.K.E., Magnan, A.K. Rapid human-driven undermining of atoll island capacity to adjust to ocean climate-related pressures. *Sci Rep* 9, 15129 (2019). <u>https://doi.org/10.1038/s41598-019-51468-3</u> See also https://www.maldivescoral.org/projects

<sup>&</sup>lt;sup>3</sup> https://yaleclimateconnections.org/2023/07/how-fast-are-the-seas-rising/

<sup>27</sup> Mycoo, M., M. Wairiu, D. Campbell, V. Duvat, Y. Golbuu, S. Maharaj, J. Nalau, P. Nunn, J. Pinnegar, and O. Warrick, 2022: Small Islands. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 2043–2121, doi:10.1017/9781009325844.017.

<sup>29</sup> Maldives Ministry of National Planning, Housing and Infrastructure, 2023. Maldives Second Voluntary National Review on the Implementation of the Sustainable Development Goals Maldives.

https://hlpf.un.org/sites/default/files/vnrs/2023/VNR%20Maldives%202023.pdf

<sup>30</sup> https://edition.mv/news/31382

<sup>31</sup> Toby B. Patti, Emily K. Fobert, Simon E. Reeves, Karen Burke da Silva, 2020.

Spatial distribution of microplastics around an inhabited coral island in the Maldives, Indian Ocean, Science of The Total Environment, 748: 141263, https://doi.org/10.1016/j.scitotenv.2020.141263.

<sup>32</sup> Colombo A, Bettinetti R, Strona G, Cambria F, Fanelli R, Zubair Z, Galli P. Maldives: an archipelago that burns. A first survey of PCDD/Fs and DL-PCBs from human activities. Sci Total Environ. 2014 Nov 1;497-498:499-507. doi: 10.1016/j.scitotenv.2014.08.013. Epub 2014 Aug 23. PMID: 25151268.

<sup>33</sup> Colombo A, Bettinetti R, Strona G, Cambria F, Fanelli R, Zubair Z, Galli P. Maldives: an archipelago that burns. A first survey of PCDD/Fs and DL-PCBs from human activities. Sci Total Environ. 2014 Nov 1;497-498:499-507. doi: 10.1016/j.scitotenv.2014.08.013.

<sup>34</sup> Walker TR. The Maldives should not become the world's garbage dump by importing plastic waste. Mar Pollut Bull. 2023 Apr;189:114749. doi: 10.1016/j.marpolbul.2023.114749. Epub 2023 Feb 22. See also

https://www.hrw.org/news/2022/12/19/dont-turn-maldives-worlds-garbage-

 $dump \#:\sim: text = Section \% 2044 \% 20 of \% 20 the \% 20 law, of \% 20 waste \% 20 into \% 20 the \% 20 country.$ 

<sup>35</sup> B. Cowburn, C. Moritz, C. Birrell, G. Grimsditch, A. Abdulla. Can luxury and environmental sustainability coexist? Assessing the environmental impact of resort tourism on coral reefs in the Maldives. Ocean Coastal Management, 158 (2018), pp. 120-127.

<sup>36</sup> Patti, T. B., Fobert, E. K., Reeves, S. E., & Burke da Silva, K. (2020). Spatial distribution of microplastics around an inhabited coral island in the Maldives, Indian Ocean. *Science of The Total Environment*, 748, Article 141263. https://doi.org/10.1016/j.scitotenv.2020.141263

<sup>37</sup> Barnes SJ. Understanding plastics pollution: The role of economic development and technological research. Environ Pollut. 2019 Jun;249:812-821. doi: 10.1016/j.envpol.2019.03.108. Epub 2019 Mar 29.

<sup>38</sup> https://zerowastemaldives.com/the-maldives-bans-the-imports-of-certain-single-use-plastics/

<sup>39</sup> See British Columbia, Extended Producer Responsibility Five-Year Action Plan 2021–2026; and British Columbia, Environmental Management Act, Recycling Regulation No. 449/2004.
<sup>40</sup> https://edition.mv/news/32279

<sup>41</sup> Budhavant K, Andersson A, Bosch C, Kruså M, Murthaza A, Zahid, Gustafsson Ö. Apportioned contributions of PM2.5 fine aerosol particles over the Maldives (northern Indian Ocean) from local sources vs long-range transport. Sci Total Environ. 2015 Dec 1;536:72-78. doi: 10.1016/j.scitotenv.2015.07.059. Epub 2015 Jul 18. PMID: 26196071.

<sup>42</sup> World Health Organization, 2023, Monitoring progress on universal health coverage and the health-related Sustainable Development Goals in the WHO South-East Asia Region – 2023 update, p. 61,

https://iris.who.int/bitstream/handle/10665/373775/9789290210917-eng.pdf?sequence=4

<sup>43</sup> Ministry of Environment Climate Change and Technology. 2022. Baseline Assessment on National Use of Chemicals and Associated Risks.

<sup>44</sup> Ministry of Environment Climate Change and Technology. 2022. Baseline Assessment on National Use of Chemicals and Associated Risks.

<sup>45</sup> World Health Organization, 2014, Elimination of asbestos related diseases,

https://iris.who.int/bitstream/handle/10665/340579/WHO-FWC-PHE-EPE-14.01-eng.pdf?sequence=1

<sup>46</sup> The proposed occupational health and safety bill should be enacted and must apply equally to all workers, both resident and migrant.

<sup>47</sup> Maldives Red List, <u>https://www.environment.gov.mv/v2/en/maldives-red-list</u> See also http://www.earthsendangered.com/search-regions3.asp

<sup>48</sup> Zampa G, Azzola A, Bianchi CN, Morri C, Oprandi A, Montefalcone M. Patterns of change in coral reef communities of a remote Maldivian atoll revisited after eleven years. PeerJ. 2023 Oct 24;11:e16071. doi: 10.7717/peerj.16071. PMID: 38077433; PMCID: PMC10710173.

<sup>&</sup>lt;sup>28</sup> Ibid.

Pancrazi et al. (2020) Pancrazi I, Ahmed H, Cerrano C, Montefalcone M. Synergic effect of global thermal anomalies and local dredging activities on coral reefs of the Maldives. *Marine Pollution Bulletin*. 2020;160:111585. doi: 10.1016/j.marpolbul.2020.111585.

<sup>49</sup> Additional Information - EIA for the Proposed Reclamation Project at Addu City, September 2022.
<sup>50</sup> Ibid.

<sup>51</sup> https://www.hrw.org/report/2023/10/18/we-still-havent-recovered/local-communities-harmed-reclamation-projects-maldives

<sup>52</sup> See https://www.protectedplanet.net/country/MDV and https://www.protectedplanet.net/country/SYC

<sup>53</sup> https://ipnlf.org/wp-content/uploads/2020/11/rates-of-fuel-consumption-in-the-maldives-pole-and-line-tuna-fishery-lr.pdf

<sup>54</sup> H. Sinan et al., Subsidies and allocation: A legacy of distortion and intergenerational loss, *Front. Hum. Dyn.* 4:1044321.

doi: 10.3389/fhumd.2022.1044321

<sup>55</sup> Nadhiya A, Khandaker MU, Mahmud S, Abdullah WH. The presence of toxic heavy metals in tuna fishes from Laccadive sea and concomitant health risk. Radiat Prot Dosimetry. 2023 Nov 2;199(18):2224-2228. doi: 10.1093/rpd/ncad213. PMID: 37934996.

<sup>56</sup> Human Rights Watch, 2023. We Still haven't Recovered: Local Communities Harmed by Reclamation projects in the Maldives. <u>https://www.hrw.org/report/2023/10/18/we-still-havent-recovered/local-communities-harmed-reclamation-projects-maldives#\_ftn42</u>

See also

https://raajje.mv/66950#:~:text=Kulhudhuffushi%20island%20council%20has%20revealed,been%20affected%20by %20flood%20damage.

<sup>57</sup> Humaida Abdul Ghafoor v. Ministry of National Planning, Housing and Infrastructure and Ministry of Environment, Climate Change and Technology, Case 2023/HC-A/267, 14 February 2024, High Court of Maldives. https://miveshi.com/wp-content/uploads/2024/04/Unofficial-Translation-High-Court-Judgment-2023-HC-A-267-14-Feb-2024.pdf

<sup>58</sup> https://lawphil.net/courts/supreme/am/am\_09-6-8-sc\_2010.html

<sup>59</sup> Report of the Special Rapporteur on the right to a clean, healthy and sustainable environment, David Boyd, 2023, A/HRC/52/33

60 A/HRC/53/39/Add.2

<sup>61</sup> Mycoo, M., M. Wairiu, D. Campbell, V. Duvat, Y. Golbuu, S. Maharaj, J. Nalau, P. Nunn, J. Pinnegar, and O. Warrick, 2022: Small Islands. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 2043–2121, doi:10.1017/9781009325844.017.

<sup>62</sup> https://www.theguardian.com/environment/2024/apr/20/scientists-experiment-is-beacon-of-hope-for-coral-reefs-on-brink-of-global-collapse

<sup>63</sup> IPCC, *Global Warming of 1.5°C*, Foreword at (vi).