



CLIMATE CHANGE IMPACT CASE STUDY:

Marshall Islands

SUMMARY

This case study looks at climate change impacts in the Republic of the Marshall Islands, particularly its effects on public health and migration.

BACKGROUND

- Like other Pacific island nations, the Republic of the Marshall Islands (RMI) faces an existential threat from climate change.
- Cyclones, drought, flooding, heatwave, and tsunami are the most common natural hazards to affect RMI. Most of these can be exacerbated by climate change. (CFE-DM, 2022)
- Climate change is expected to affect the country through increased ocean acidification, sea level rise, and coral bleaching. The sea level around RMI has risen by an average of 7 mm (0.28 inches) every year since 1993 and is expected to rise by another 9 centimeters (3.5 inches) by 2030. (CFE-DM, 2022)
- According to a World Bank (WB) and Government of the Republic of the Marshall Islands (RMI) study, rising sea levels in RMI are projected to endanger 40 percent of existing buildings in the capital, Majuro, with 96 percent of the capital at risk of frequent flooding induced by climate change. (WB, 2021)
- The population of RMI is around 60,000. Marshallese live on 182 kilometers (km²) of land spanning across 200,000 km². (WB & Government of RMI, 2021)
- The urban areas of Majuro and Kwajalein are home to 74% of RMI's population, and in the coming years, these urban atolls are expected to house a larger share of the population. (WB & Government of RMI, 2021)
- Sea-level rise and extreme weather probably pose the most threat to Pacific island nations however, climate change also affects public health and may be a “less visible” driver to migration. (Brewington et al., 2021)
- According to a survey, more than 90 percent of Marshallese respondents had been affected by drought, half were affected by heat waves and 40 percent were impacted by king tides. (Brewington et al., 2021)
- Ocean acidification affects fish stocks, which can increase reliance on “less healthy” imported and processed foods that may exacerbate existing problems of diabetes and obesity. (Brewington et al., 2021)
- Drought and rising temperatures can limit drinking water, while heavy rains increase potential for disease transmission. (Brewington et al., 2021)
- Critical infrastructure such as medical facilities can be impacted by storms, sea-level rise and other natural disasters exacerbated by climate change. (Brewington et al., 2021)



The Marshall Islands coping with the effects of climate change and rising sea levels.

Source: Asian Development Bank (ADB). <https://flic.kr/p/2iuF3FG>

In 1989, then-President of the Marshall Islands Amata Kabua delivered these remarks at the opening of the first Intergovernmental Meeting on Climatic Change and Sea Level Rise in the South Pacific, held in Majuro: “We who live on coral atolls would be in the deepest trouble. The results will be erosion, flooding by salt water of our food crops, intrusion of salt water into the freshwater aquifer—all of which would become so ruinous that we would have to abandon our atolls to seek resettlement where land is dry and our people are welcomed.” (EWC, 2022)

KEY POINTS

- According to a report by the WB and Government of RMI, buildings and communities in the urban atolls of Majuro and Kwajalein are at high risk of inundation from sea level rise. The study finds that without adaptation, 37% of Majuro's buildings are at risk of permanent inundation from a 1 meter (M) sea level rise. In Ebeye, more than half the buildings could be permanently submerged by a 1M sea level rise. (WB & Government of RMI, 2021)
- Communities in Majuro and Ebeye face various coastal hazards and residents are already seeing coral bleaching, more frequent flooding, more intense cyclones, and droughts. "As oceans warm, Marshall Islands' water and food security will soon be threatened by collapsing reefs, saline intrusion into the aquifer, and more frequent storm surges or recurring king tides that damage agro-forestry systems. Sea level rise will exacerbate existing hazards and introduce new risks to urban atoll communities," the report states. (WB & Government of RMI, 2021)
- According to the study, while education, health, and economic opportunities are the current major drivers of migration out of the country, climate-related stressors may become a dominant driver in the future. (WB & Government of RMI)
- Climate change is introducing unprecedented challenges that disrupt traditional atoll livelihoods, according to the study. This has led to increased internal migration towards urban atolls and out-migration to other countries. The United States is home to some 27,000 Marshallese. (WB & Government of RMI, 2021)
- Due to consistent out-migration, the Pacific Community (SPC) projects a reduction in RMI's population by 2050. (WB & Government of RMI)
- The study, jointly produced by the Government of RMI and the WB, called "Adapting to Rising Sea Levels in Marshall Islands," provides visual projections and adaptation solutions to assist the nation facing rising sea levels and inundation over the next 100 years. (WB & Government of RMI 2021)
- RMI has developed plans for dealing with the climate crisis. In 2018, the Marshall Islands launched its "Til Eo 2050 Climate Strategy," which envisions net-zero emissions and 100% renewable energy use by 2050. RMI is also developing a national action plan (NAP) for climate change adaptation and resilience. (CFE-DM, 2022)

Public Health and Climate Change

- A paper by the East-West Center (EWC) addresses the intersection of climate change, health and migration in RMI. While extreme weather and sea-level rise pose the most visible threats to Pacific nations, climate change also affects overall public health, according to the authors. (Brewington et al., 2021)
- In RMI, climate change impacts exacerbate ongoing health threats such as drinking water supplies, inadequate nutrition and poor infrastructure. "Changing climate has resulted in direct, indirect and diffuse health impacts in the Marshall Islands," the report states. (Brewington et al., 2021)
- According to the EWC study, vector-borne diseases such as dengue fever, is an indirect consideration associated with climate change. There is potential for other vector-borne diseases transmitted by contaminated floodwaters, another hazard exacerbated by climate change. Respiratory illnesses can also be influenced by weather events that may be connected to climate change. (Brewington et al., 2021)
- According to a recent survey in RMI, nearly half of respondents identified poor health care as one of the top five most pressing problems. (Brewington et al., 2021)
- The EWC study authors say that: "Climate change is expected to have broad effects on human health and well-being, natural resources, livelihoods, and traditional practices in the Marshall Islands." (Brewington, 2021)

Migration and Health

- The EWC paper points out that climate change and its public health impact in RMI is a "less visible" driver to migration. (Brewington et al., 2021)
- Climate change impacts amplify health risks in vulnerable populations and also influences mobility, the report says. "Migration can be one result of the complex interaction between climate change, environmental degradation and changes in health." (Brewington et al., 2021)
- The International Organization for Migration (IOM) reports that natural hazards such as drought and flooding have already led to internal migration. (Brewington et al., 2021)
- Internally, Marshallese have migrated from the outer atolls to the urban centers of Majuro and Ebeye, where overcrowding and unsanitary conditions are public health concerns, according to the EWC report. (Brewington et al., 2022)
- A lack of access to adequate health care is also a driver to out-migration from RMI. (Brewington et al., 2021)
- Former RMI President Hilda Heine and the IOM have said education, health and job seeking are some of the main drivers of out-migration, "while also acknowledging that the threats of climate change likely play a role." (Brewington et al., 2021)
- "Internally, the urban population in the Marshall Islands increased from 35,000 to 41,500 between 2000 and 2010, with overcrowding causing yet another strain on public health. Meanwhile, the number of Marshallese living in the United States nearly tripled during the same 10-year period, from 6,700 to 22,400," the report states. (Brewington et al., 2021)
- The paper authors caution that it is not always possible to draw a clear line between the health impacts of climate change and migration, since the decision to migrate is often driven by a multitude of factors. (Brewington et al., 2021)
- Unfortunately, the study found that many who have migrated consider climate-related threats to be a barrier to their return. (Brewington et al., 2021)
- According to the study authors, RMI's response may serve as a "blueprint" for other Pacific nations due to its planning efforts, including its National Adaptation Plan (NAP). (Brewington et al., 2021)

"If we manage to save my country, we'll manage to save the world," - Former RMI Foreign Minister Tony De Brum (WB & Government of RMI, 2021)

SOURCES

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