

# REPUBLIC OF THE MARSHALL ISLANDS STATE OF ENVIRONMENT REPORT



Ebon air strip. Photo: Benedict Yamamura

## Charting our Journey

All journeys must begin with a starting point.

The Republic of the Marshall Islands (RMI) State of the Environment (SoE) Report provides our starting point, helping guide us as we journey towards our National Development Goals.

Our SoE examines the major drivers of change to our environment that emerge from global, regional and national factors. It evaluates the main environmental pressures created by these drivers, and examines their environmental impact. Our SoE also provides us with recommendations, or actions that we can take as a nation to improve our environment as we voyage towards progress.

At all parts of our journey, we should refer to our SoE Report to help us make informed decisions to better our country. The more we understand the contents within these pages and refer to them in decision making, the closer we are to achieving our goals together.



# RMI State of Environment Report

Our SoE provides us with the chart to:

- Make informed decisions to accurately report on key environmental issues.
- Develop and implement policies and programmes to improve environmental conditions in RMI.
- Understand financial implications for which the RMI Government and other agencies can identify areas that require financial input.
- Work together to update the SoE Report every five years.

## Wayfinding our Journey

Our SoE Report spans seven themes and 18 sub-topics. For example, the “Atmosphere and Climate” theme has the sub-topics of “Climate Adaptation,” “Ozone Depleting Substances and Greenhouse Gases” and “Physical Climate.” Each of these sub-topics is measured against five drivers and three pressures to provide us with the ‘state’ of each theme, the ‘impact’, and our ‘responses and recommendations’ in RMI.

Indicators then inform the sub-topics. Each indicator is given a status rating that lets us know if the indicator is in good, fair or poor condition. Another rating ranks the quantity and quality of the data that helped inform the indicator’s condition. If there are limited or low-quality data, then a low confidence rating is given.

THEMES	SUB-TOPICS
Atmosphere and Climate	Climate Adaptation ODS and GHGs Physical Climate
Land	Forests Agriculture Wetlands
Marine	Offshore Environment Inshore Environment Protected Areas Marine Mammals and Turtles
Biodiversity	Endemic and Native Species Invasive Species Protected Area
Culture and Heritage	Traditional Knowledge Traditional Sites
Built Environment	Water and Sanitation Solid Waste Energy
Nuclear Legacy	

DRIVERS
Population Demographics and Migration
Globalisation and Geography
Economic and Technological Development
Traditional and Contemporary Values, Attitudes, Lifestyles and Governance
Climate Change and Variability

PRESSURES
Land Development
Resource Extraction
Consumption and Waste

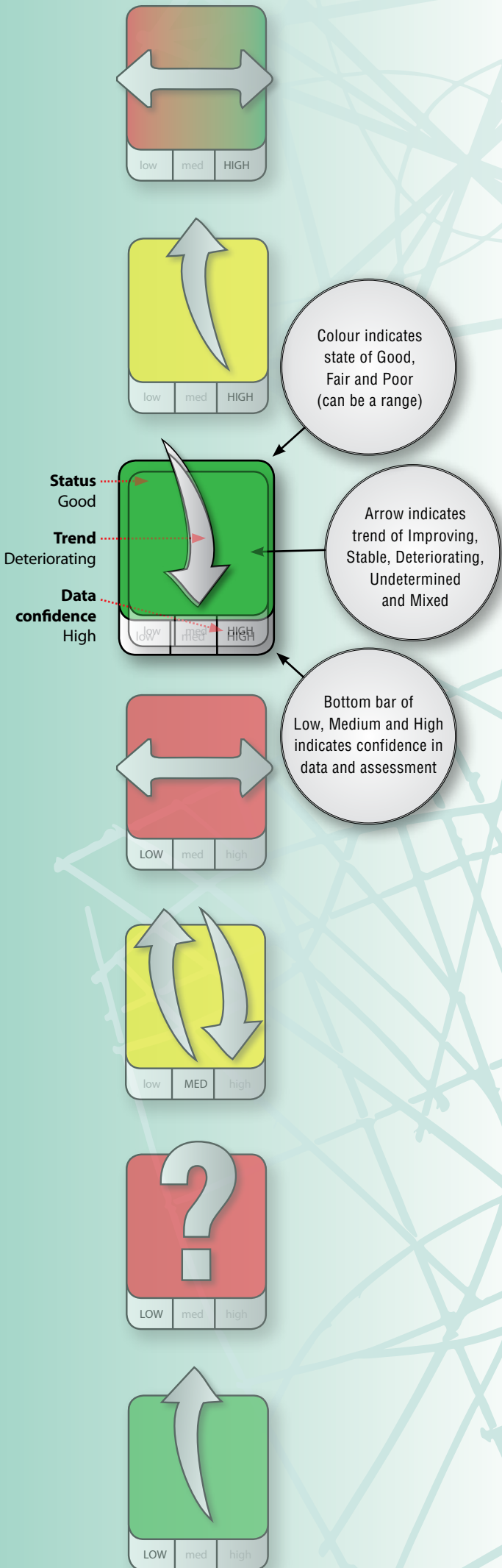
**Drivers** are what influence the changes in our environment, such as industries. These drivers can lead to **environmental pressures** occurring, or trends, such as population growth or pollution.

These **pressures** then influence factors in the **current environmental state**, or conditions, such as water and air quality.

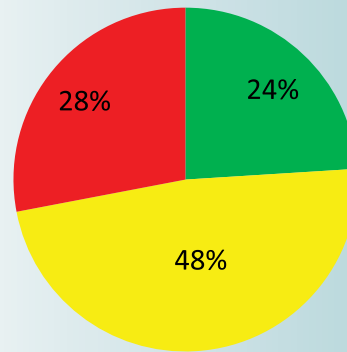
The **current environmental state** then has impacts for animals, humans and the overall environment, such as biodiversity changes or health problems.

# Weaving our Legacy

We can use the assessment of these indicators to make informed decisions on development issues, or when creating national policy and legislation. Given the range of themes, their sub-topics and related indicators, our SoE Report can also assist with assessing and creating responses to cross-cutting issues outside of the environment.



■ Good ■ Fair ■ Poor



Percentage of indicators that are Good, Fair and Poor in the 2016 RMI SoE Report.

## THE REPUBLIC OF THE MARSHALL ISLANDS STATE OF ENVIRONMENT REPORT 2016



# Embracing our Resilience

Two indicators in our SoE Report highlight current environmental conditions and potential responses in RMI.

## THEME: ATMOSPHERE AND CLIMATE – SUBTHEME: CLIMATE ADAPTATION

Status: Poor Trend: Mixed Data Confidence: Medium

### IMPACT: CLIMATE ADAPTATION

1. Climate change adaptation activities safeguard infrastructure, people and resources against rising sea levels, floods, droughts, storms and other climatic events.
2. Climate adaptation issues are cross-cutting as they often overlap with other development activities related to energy, water, land and other infrastructure at community and national levels.
3. RMI focuses on five areas to assess the country's ability to adapt to climate change:
  1. water security, 2. food security, 3. health, 4. land use and 5. flood risk.

### STATUS: CLIMATE ADAPTATION

1. To improve water security, a Pacific Adaption to Climate Change project conducted an assessment of Majuro island's water sector, which resulted in repairing a reservoir that can hold 36.5 million gallons, which is 5 million more than before the reservoir was repaired.
2. To ensure food security, the Ministry of Resources and Development created a programme that restocks livestock and crops. For the programme, 628 piglets and over 2,800 types of plants were distributed on Majuro and most of the outer islands.
3. Climate change can result in contaminated water and increased atmosphere and sea temperatures, which can increase incidences of diarrhoea, dengue and other waterborne and vector-related diseases.
4. RMI currently has no formal housing codes, land-use planning is done on an ad-hoc basis, and agricultural resources are being lost due to unplanned development.
5. RMI's President declared that all government buildings need to be climate proofed, buildings are being retrofitted to be more energy efficient, and recommendations have been made to flood proof structures.

### RESPONSE: CLIMATE ADAPTATION

1. The Government adopted the National Climate Change Policy Framework in 2011 that outlines commitments to addressing climate change, including improved coordination of disaster risk management.
2. The Micronesia Challenge regional partnership has been translated into local action through RMI's community-based conservation area management framework, Reimaanlok.

### RECOMMENDATIONS: CLIMATE ADAPTATION

1. RMI should align the SoE Report with the resilience language already in place in the National Strategic Plan.
2. RMI could conduct public education and awareness activities, enhance emergency preparedness for outer islands to respond to extreme events, enhance local livelihoods and community resilience, and integrate approaches to development planning that consider climate change and disaster risks.
3. The Government could develop its spatial analysis capacity to support coastal protection planning.
4. RMI could develop regulations and guidelines for proper housing codes and land-use planning, as it currently has none.



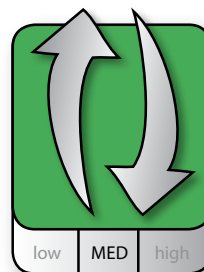
**Status**  
Poor

**Trend**  
Mixed

**Data confidence**  
Medium

## THEME: MARINE – SUBTHEME: INSHORE ENVIRONMENT, REEF FISHERIES BIOMASS

Status: Good Trend: Mixed Data Confidence: Medium



**Status**  
Good

**Trend**  
Mixed

**Data confidence**  
Medium

### IMPACT: INSHORE ENVIRONMENT, REEF FISHERIES BIOMASS

1. Reef fisheries include both reef fish and invertebrates (e.g. crustaceans, clams, sea cucumbers and trochus), and RMI's population relies on these creatures for subsistence.
2. Reefs and inshore species are mutually supportive, where reefs support fish and invertebrates with food and shelter, and fish and invertebrates help maintain and establish reef systems.

### STATUS: INSHORE ENVIRONMENT, REEF FISHERIES BIOMASS

1. Inshore fish biomass is healthy overall, with trends mixed based on unique characteristics of the islands – some are pristine, some have low fishing pressure due to population density and some have high fishing pressure.
2. While the reef fish stock in RMI is currently in good condition, the outer islands' stocks will suffer if the trend of importing fish from the outer islands to the centres continues.
3. A recent U.S. army report indicated that all reef fish in Kwajalein have a high toxicity and advised an immediate ban on their consumption.

### RESPONSE: INSHORE ENVIRONMENT, REEF FISHERIES BIOMASS

1. In 2013 and 2014, two surveys were undertaken in three atolls with different population densities and lagoon sizes – Rongelap (large lagoon), Majuro (moderate lagoon) and Namdrik (small lagoon) – to examine the effects of human populations on fish biomass. Among the findings were that Rongelap has a high biomass while Majuro and Namdrik have low biomass.

### RECOMMENDATIONS: INSHORE ENVIRONMENT, REEF FISHERIES BIOMASS

1. Two large atolls, such as Kwajalein and Maloelap, and two smaller atolls could be included in future surveys to show how low and high human populations affect fish biomass. The surveys also should include more data from different years to understand the trend of fish market imports.
2. Due to the overfishing of certain grouper species listed as "Near Threatened" on the International Union for Conservation of Nature Red List, spawning aggregations need to be identified. Management measures, such as seasonal closures, also should be imposed.
3. Other species of commercial interest – sea cucumbers and trochus – need to be monitored and protected to achieve minimum harvest densities.
4. Better quality data need to be gathered and improved data management coordinated for future reference and information sharing.

# Navigating our Future

Our voyage does not end here, it is only beginning.

Our SoE can assist Government, individuals, civil society and the private sector to make better informed decisions regarding their relationship to and use of our environment.

Building on our SoE Report, RMI's Office of Environmental Planning and Policy Coordination is establishing a data portal and additional reporting tool to integrate our SoE Report indicators with Sustainable Development Goals, Multilateral Environmental Agreements and other reporting requirements. Our SoE also guides the creation of National Environmental Management Strategies, which are currently linking to the Reimaanlok framework.

Through these tools, we will have information available for our people to make informed decisions. We will also be able to provide timely reports on the SoE while meeting our reporting obligations as Parties to many environmental conventions.

As we begin, so we end: The more we all open our SoE Report pages and make use of its contents in all aspects of decision making, the closer we become to achieving positive environmental outcomes.

<https://rmi-data.sprep.org/>



Republic of Marshall Islands Environment Data Portal  
Environmental Information for Decision Making

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Atmosphere and Climate



Land



Biodiversity



Built Environment



Coastal and Marine



Culture and Heritage



Inland Waters



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*A resilient Pacific environment sustaining our livelihoods and natural heritage in harmony with our cultures.*

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