



STRAIGHT TO THE POINT

- » The Marshall Islands is committed to taking mitigation action to move its energy sector toward 100 percent renewables and achieve net zero emissions by 2050, despite that its global emissions contributions are extremely low, through the 2050 Strategy that determines sectoral strategies.
- » The country is highly vulnerable to the effects of climate change, including extreme weather events, due to its low-lying geography and shock-sensitive economic conditions.
- » The greatest challenges center around the country's dependency on financing and fuel from other countries, as well as the limited ability to adapt due to its topography.
- » A national NDC Committee, called the Til E Til Eo Committee, has been established to implement the country's NDC, with targets extending to 2050. The Committee engages people across government and is ensuring that near-term action is consistent with a longer-term strategy.
- » Focusing support in the energy, domestic transport (land and sea), and waste sectors would benefit the Marshall Islands, as efforts could be designed to produce co-benefits for mitigation, adaptation, and economic development.

BACKGROUND

WORKING TOWARD SELF-RELIANCE

The Republic of the Marshall Islands contributes less than 0.00001 percent of global emissions (1.94 tons per capita in 2016¹), with emissions having peaked in 2009 and trending downward.² The country is heavily dependent on external support for financing, fuel, and other imported goods. The services sector dominates the Marshallese economy, contributing 85.7 percent to national GDP (which includes remittances, among others), followed by industry (9.9 percent) and agriculture (4.4 percent) (2013).³

The fiscal balance resulted in a surplus of approximately three percent for fiscal year 2014-2015, with a slightly smaller surplus for fiscal year 2016. GDP is expected to grow at a rate of one to 1.5 percent over the medium term without any structural reforms. These figures serve as evidence of improved economic activity over the past couple of years, but the country is still hindered by climate change impacts and limited activity in the private sector. Longer-term fiscal sustainability could be secured through comprehensive macroeconomic policies and by building buffers to existing fiscal vulnerabilities. As the International Monetary Fund (IMF) envisions, part of this would include reform of public financial management by establishing a household debt service ratio and stricter criteria on classifying non-performing loans. These structural reforms would facilitate private sector growth, improve access to credit, and increase competitiveness.⁴

¹ <http://data.worldbank.org/country/marshall-islands>

² RMI Second National Communication.

³ <http://www.nationsencyclopedia.com/economies/Asia-and-the-Pacific/Marshall-Islands-ECONOMIC-SECTORS.html>

⁴ <http://www.imf.org/en/News/Articles/2016/07/28/19/07/PR16369-Marshall-Islands-IMF-Executive-Board-Concludes-2016-Article-IV-Consultation>



The sectors that contribute the highest emissions are electricity generation (roughly 54 percent), waste (roughly 23 percent), and land and sea transport (roughly 12 percent).⁵ In the electricity generation and transport sectors, carbon dioxide emissions are a result of the combustion of imported fossil fuels, ranging from diesel for electricity generation to diesel and gasoline for transport. In addition, kerosene is used for lighting on the outer islands, and LPG, butane, and kerosene are widely used for cooking.

The Marshall Islands faces several major challenges that will impede progress on climate mitigation and adaptation goals if not properly addressed. These challenges include:

- » **External dependence** – The Marshall Islands is dependent on external sources of financing and resources for most of its economic activity.
- » **Investment hurdles** – As one of the Small Island Developing States (SIDS), its ability to attract external investment is constrained by its market context (small size and relatively expensive infrastructure) and its domestic options are limited due to these same factors.
- » **Aid and Grants** – International grant support contributes to 60 percent of GDP on average. The country receives significant support from the United States under the Compact of Free Association, the financial aspects of which may expire in 2023 when current funding runs out.
- » **Fuel** – The primary area of concern is the country's dependence on imported petroleum products, which satisfy 90 percent of energy needs. This makes the economy vulnerable to high and volatile fuel prices, and constantly dependent on unavoidable external financial circumstances, posing a financial risk. Energy security is thus a major concern for the Marshall Islands.
- » **Banking** – Another area of vulnerability is weak and limited access to financial services. Currently, the Marshall Islands' only domestic commercial bank has an uncertain Corresponding Banking Relation (CBR) with a bank in the United States—its only financial pipeline to the international community.⁶ The loss of this single financial tie could greatly affect the country's ability to access external financing options, private sector growth, outside investment opportunities, and would eliminate a major channel for remittances, which contribute significantly to the national GDP.
- » **Undeveloped infrastructure** – The lack of infrastructure has prevented any growth in a potential tourism industry and stifles opportunities for the Marshallese to expand trade and commerce within the country.
- » **Capacity** – While key administrative positions are staffed by very capable people, resources are limited and the workforce is stretched. For example, the Government's National Energy Planning Division is only staffed by two people, each of whom has constant demands to travel and attend international meetings to represent the Marshall Islands. Other areas in urgent need of capacity building are the public finance sector, as well as monitoring and reporting of climate data—again due to limited resources. This lack of capacity is a significant barrier to climate-friendly development that could be addressed relatively easily.

The Marshall Islands is extremely vulnerable to the impacts of climate change given that it has no major points of elevation above two meters. As a low-lying nation, the country already experiences frequent and serious extreme weather and natural hazard events that include sea-level rise, sea surges causing inundation (king tides), typhoons, cyclones, floods, and droughts.⁷ These events threaten public health, water, coastal zones, and marine resources.

⁵ INDC 2015. <http://www4.unfccc.int/ndcregistry/PublishedDocuments/Marshall%20Islands%20First/150721%20RM1%20INDC%20JULY%202015%20FINAL%20SUBMITTED.pdf>

⁶ IMF Working Paper 2017. <https://www.imf.org/en/Publications/WP/Issues/2017/04/07/Challenges-in-Correspondent-Banking-in-the-Small-States-of-the-Pacific-44809>

⁷ http://sdwebx.worldbank.org/climateportal/doc/GFDRRCountryProfiles/wb_gfdr climate_change_country_profile_for_MHL.pdf



COUNTRY AMBITION

VISION-DRIVEN TO MAKE SIGNIFICANT STRIDES IN MITIGATION AND ADAPTATION

The Republic of the Marshall Islands is the founder of the High Ambition Coalition—a group of progressive countries advocating for and pursuing aggressive climate action—and it is determined to continue to lead by example. Although the Marshall Islands contributes negligible amounts of global emissions, the country is staying true to its national motto—“Accomplishment through joint effort”—by committing to ambitious targets and exploring all options to reduce emissions. Leadership of the High Ambition Coalition—and, beginning in September 2018, also of the Climate Vulnerable Forum (CVF)—provides the Marshall Islands with an excellent opportunity to amplify global successes with implementation of climate action domestically.

The Marshall Islands was the first developing country with an economy-wide absolute emissions reduction target. The Marshall Islands’ NDC declares an economy-wide (excluding land use, land use change, and forestry) target to reduce greenhouse gas (GHG) emissions by 32 percent below 2010 levels by 2025, and provides an indicative target to reduce GHG emissions by 45 percent below 2010 levels by 2030. The targets put the Marshall Islands on a trajectory to nearly halve GHG emissions between 2010 and 2030, with a longer-term view to achieving net zero GHG emissions by 2050, or earlier if possible.

The country’s NDC was created through a collaborative process that engaged all relevant local stakeholders, including through a National Climate Change Dialogue held in September 2014. Identified priority sectors for action include energy (such as electricity generation), transport (land and shipping), waste, and other (cooking and lighting). Although it largely identified mitigation actions, it also stressed its focus on adaptation, specifically to safeguard security and human rights while advancing its development aspirations.

Based on the commitments in its NDC, the Marshall Islands would need to reduce emissions from the electricity generation sector by 55 percent by 2025 and 66 percent by 2030; transportation (including domestic shipping) by 16 percent by 2025 and 27 percent by 2030; waste by 20 percent by 2030; and other sectors (cooking and lighting) by 15 percent by 2030.⁸

Current development targets are outlined in the National Strategic Plan (NSP), the country’s roadmap for development and progress focused on the medium term (2015-2017). It was developed in collaboration with government ministries, the private sector, and NGOs, and is designed to sync with the country’s national planning and budgeting cycle. The NSP’s objective is to improve the quality of life of the Marshallese through five priority areas, which are:

- » Social development
- » Environment, climate change, and resiliency
- » Infrastructure development
- » Sustainable economic development
- » Good governance

⁸ <http://www4.unfccc.int/ndcregistry/PublishedDocuments/Marshall%20Islands%20First/150721%20RMI%201NDC%20JULY%202015%20FINAL%20SUBMITTED.pdf>



Priority areas overlap with several of the country's ten National Development Themes, which—as related to climate and sustainable development ambitions—include:

- » Empowering communities to reduce access-related constraints to social, economic, environment, governance, and infrastructure improvements;
- » Building sound energy and environmental infrastructure and transportation security for the atolls of the Marshall Islands;
- » Ensuring broad growth of food security;
- » Mitigating the impacts of climate change and building awareness of the value of environmental assets; and
- » Addressing globalization and regional cooperation challenges through legislation, international agreements, and regional and national policies.

The NSP is encompassed by a two-tiered monitoring and evaluation (M&E) framework, which will evaluate progress against the plan.

STATE OF PLAY

FORWARD-LOOKING STRATEGIES AND ROADMAPS FOR CLIMATE AND SUSTAINABLE DEVELOPMENT

There are several ongoing and forward-looking documents, agreements, and policies; the implementation of which will contribute to the Marshall Islands' NDC and climate and sustainable development goals.

Key initiatives include:

- » Nationally Appropriate Mitigation Actions (NAMAs).
- » National Energy Policy (NEP) (2014): aims to improve the quality of life through clean, reliable, affordable, and accessible sustainable energy services.
- » National Climate Change Roadmap (2010).
- » National Climate Change Policy Framework (NCCPF): priority areas for urgent response include infrastructure to protect from sea-level rise, sea surges, typhoons and rainfall intensity; water and food security issues from changing rainfall patterns and ocean acidification; health issues from rising temperatures and prolonged drought periods; potential increasing peak wind speeds; and changes to ocean circulation patterns.
- » Joint National Action Plan (JNAP) for Climate Change Adaptation: sets goals to establish and support an enabling environment for the improved coordination of disaster risk management and climate change adaptation; enhancing emergency preparedness and response; improving energy security and working toward a low-carbon emissions future; enhancing local livelihoods and resilience for the Marshallese people; and considering climate change and disaster risk in development planning.
- » Disaster Risk Management National Action Plan (DRM NAP): outlines actions to adapt to the effects of natural disasters.



The 2050 Strategy is an initiative driven by the Government of the Republic of the Marshall Islands to outline the sectoral strategies to achieve the ambitious targets of 100 percent renewables and net zero GHGs by 2050. It will assess the potential for contributions from each sector over time and evaluate key strategies for achieving those contributions, as well as seek to harmonize the various national policies (above) that will underpin this effort. The Marshall Islands aims to finalize its 2050 Strategy in the first half of 2018, after a comprehensive consultation process as part of the 2nd National Climate Change Dialogue.

With support from New Zealand, the Marshall Islands Government is also developing an Energy Roadmap that connects the country's short-term energy sector investment plans with its high-level 2050 Strategy. This Roadmap will focus on the electricity sector and potential electrification of the transport sector to map a pathway to the 2030 NDC target. It will include a view beyond that, understanding that plans may change based on technological developments past 2030. The Energy Roadmap is intended to provide a coordination framework for development partners to ensure their investment is effective and avoids duplication, while also developing strategies for capacity building and long-term financing for the sector. The European Union is providing additional support regarding energy policy.

The Marshall Islands' broader adaptation strategy is to further enhance and develop its existing adaptation frameworks for disaster risk management strategies, considering legal and regulatory measures to support these approaches.

Currently, the Government is also supported by international development partners to mitigate the economic effects of high petroleum prices by focusing on increasing energy efficiency and minimizing the effects of imported fuel by investing in renewable energies such as solar, biofuel, and ocean energy.

Regional neighbors, such as New Zealand and Australia, support the Government in its aim to provide robust economic development and improve the wellbeing of the Marshallese. New Zealand provides funds through the North Pacific Development Fund for a) projects focused on education and building resilience; b) investing in activities that support income and job generation; c) disaster management; and d) community development. Additionally, Australia provides support for programs related to fisheries management via the Forum Fisheries Agency for climate mitigation with the objectives of increasing access to clean water and sanitation. Previous successes in the Marshall Islands achieved with support from Australia include delivering essential water storage, desalination units, and hygiene kits in drought-affected areas; developing the National Water and Sanitation Policy; and procuring 380 water tanks for households on Ebeye.⁹ Other development partners include Japan, Taiwan, the European Union, World Bank, and the Asian Development Bank.

A little further away, the German Agency for International Cooperation (GIZ) provides support in the form of several projects. One, entitled "Coping with climate change in the Pacific island region (2008-2018)," encompasses the Marshall Islands in its larger regional effort to increase the skills and capacities of the local population, national governmental authorities, and regional organizations to cope with the effects of climate change.¹⁰

The Marshall Energy Company (MEC) has introduced supply-side efficiency measures and demand-side load reductions, which have led to a decline in diesel usage for electricity generation. Since 2008, the Marshall Islands is taking a stepwise approach to the expansion of solar investment by adding

⁹ <http://dfat.gov.au/geo/republic-of-marshall-islands/development-assistance/Pages/development-assistance-in-the-republic-of-the-marshall-islands.aspx>

¹⁰ <https://www.giz.de/en/worldwide/14200.html>



renewable-generated electricity to existing diesel-powered grids in Majuro, Ebeye, and several other islands, which is done by increasing solar generation while simultaneously addressing grid losses and inefficiencies. However, the ongoing instability of the grids (especially in Majuro) has limited the penetration of renewables, as has the lack of available storage. There is a need to upgrade diesel generators and add other enabling technologies at the same time as adding solar to enable greater overall renewable generation due to the variable nature of solar electricity. Storage in the form of batteries should then be added when needed. In general, there is a need to reinforce the benefits of a least-cost pathway to move the Marshall Islands as far down its NDC pathway as possible using the available financing.

The Government has previously explored the potential for Ocean Thermal Energy Conversion (OTEC)—which could be a transformational technology for the country—but OTEC is an emerging technology and prohibitively expensive, with only a few small-scale demonstration plants in operation globally to date. The presence of the energy-intensive, United States military base on Kwajalein Atoll could help make this project commercially viable if, and when, a Power Purchase Agreement can be agreed upon. Both Lockheed Martin and DCNS have explored the possibility of OTEC in the Marshall Islands in recent years.

While the most immediate and cost-effective emissions reduction potential is likely to be found in the energy sector, if the Marshall Islands is to make progress toward net zero emissions, the domestic transport and waste sectors must be addressed in due course as well. Domestic, land-based transport has significant potential for electrification in urban areas. In the waste sector, waste-to-energy options will need to be considered. In both these sectors, considerable co-benefits such as health and reduced environmental impact will bring added social value to action.

Looking toward the future, the Marshall Islands is committed to pursuing future efforts with continued consultation of local stakeholders¹¹, and is looking to initiate a 2nd National Climate Dialogue toward the end of 2017. A key aim will be to deliver tangible benefits to the Marshallese people as the fruits of its consistent international leadership on climate action. Another area of focus for future programming includes programs with mitigation and adaptation co-benefits, such as mangrove and agriculture rehabilitation programs that would enhance carbon sinks and protect water resources. It will become increasingly important for the Marshall Islands to focus domestic efforts on adaptation planning and climate resilience.

NDC PARTNERSHIP ENGAGEMENT

The Marshall Islands is an active participant in the NDC Partnership, serving as one of the Steering Committee Members. The country has done sufficient preparatory work within its capacity to integrate its climate change goals into its national agenda and identify opportunities for external support for pertinent sectors. It has recently established a national NDC committee, called the Til E Til Eo Committee—which can be translated to lighting the way, a Marshallese “call to action”—to implement its NDC and develop a longer-term strategy with a view toward 2050. This Committee is comprised of people across the Government and ensures that near-term action is consistent with a longer-term strategy. In the process of finalizing the 2050 Strategy, the NDC Partnership is providing possible support for a development partner roundtable in early 2018. Moreover, the NDC Partnership is providing support that aims to secure additional in-theatre technical assistance for the Marshall Islands.

¹¹ INDC 2015 <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Marshall%20Islands/1/150721%20RMI%20INDC%20JULY%202015%20FINAL%20SUBMITTED.pdf>



OPPORTUNITIES FOR PARTNERSHIP

FOSTERING THE CAPACITY TO ATTRACT INVESTMENT IN CLEAN ENERGY SOLUTIONS

The Marshall Islands has established strong internal political support for its climate plans, but faces two specific key challenges. First, the Government's human capacity and technical resources are extremely limited. The country, therefore, needs support to procure technical expertise and supplementary capacity, while taking a long-term approach to capacity building within the Marshallese Government sectors that are responsible for leading implementation on areas with more complex technical dimensions. Second, the Government will need to develop more detailed implementation plans as well as a long-term strategy for the Marshall Islands, including for adaptation.

Aside from institutional issues, the Marshall Islands also faces challenges associated with its small size as a country, which limits its attractiveness as an investment destination and constrains its ability to influence its transport-related emissions. The country has identified a specific set of investment needs in relation to its electricity generation that are key to realizing emissions reductions.

The country's NSP already includes several references to climate actions. Its vision statement—"in our own hands is our future,"—hints at its major weakness: without external financing and technical assistance, the country will face a nearly impossible challenge of achieving its climate and sustainable development goals. The Marshall Islands' Government will have to first overcome two main challenges—its current reliance on external aid and its long-term access to better lending and investment opportunities. Transitioning to renewables would yield returns in investments made, particularly in the energy sector, but securing the financing for initial infrastructure investment remains a challenge.

Supplementing capacity on the ground while efforts are made to build long-term Marshallese capacity is essential to advise and equip leaders in civil society, the private sector, and the Government to find innovative solutions to the challenges ahead.

The NDC Partnership can provide assistance to the limited number of staff focused on climate issues in the Marshall Islands, to build up its in-country capacity and training resources to carry out planning and implementation over time.

The broader themes, as identified by the Marshallese Government, could move the country forward to achieve and exceed its NDC. Connecting the appropriate resources with these country-driven initiatives would greatly benefit the Marshall Islands in achieving both environmental and economic transformation. Additional measures can be taken in the following four overarching sectors:

» **Energy** – This is the most promising area that would benefit greatly from support. Because most economic activities in the country are burdened by the high costs of imported petroleum products, replacing these with renewables would relieve this fundamental obstacle to improving living standards and business profitability. Similar Pacific countries could provide useful examples and insights regarding the renewables journey. Moreover, great gains could be made by implementing

energy efficiency and energy conservation practices and solutions. While the country recognizes this reality, most efforts and planning done in the energy sector are only focused up to 2020. In addition to immediate support to building out renewables sectors, the country would benefit from knowledge and expertise assistance to look beyond that to other milestone years, such as 2025, 2030, and 2050 to develop a robust, long-term strategy.



- » **Waste** – This is the second largest source of emissions due to the release of methane. Waste-to-energy solutions will need to be explored. Another possible option could be the more effective separation of waste, combined with anaerobic digestion. In cost-benefit terms of reducing GHG emissions, this could potentially be even more cost-effective than renewable energy. These options need to be explored further, as uncertainties around applicability depend on the local context.
- » **Domestic transport** – As the third largest source of emissions, this sector needs further analysis to better understand the potential social, economic, and environmental benefits of decarbonizing. Locally, domestic shipping sustainability work is ongoing. An important

study to carry out would be an analysis of electric vehicle suitability in the Marshall Islands, similar to research WRI Mexico is currently undertaking.

- » **Adaptation** – The Government has largely focused its NDC on mitigation actions, but could use support in helping flesh out its adaptation pursuits. This will be a key area of focus for a long-term strategy looking to 2050. However, technical assistance would be required in this area to gain a comprehensive picture of future environmental challenges and necessary resilience actions that should be pursued leading up to 2050. Financial assistance to implement existing climate resilience policies will also be needed.

In the long term, given that the country's current challenge is its dependence on external actors for most economic activity, creating an investment environment that could support and attract the private sector—while private sector growth is imperative¹²—and supports a stronger domestic economy could guide the country along a path toward increased self-sufficiency. This will include building a more robust and supportive institutional and policy environment. Opening investment opportunities specifically in the renewables sector would help the Marshall Islands think about its long-term energy strategy and draw in the necessary financing. The NDC Partnership could provide capacity-building workshops and trainings that would arm the Marshall Islands with the tools it needs to lead this effort.

While attracting investment and building a strong business environment will be key to both enabling the country to achieve its climate goals and keeping its development agenda on track, the Marshall Islands will also likely need to reform its internal public financial management processes. This is important for the reallocation of internal sources of funding, so it can deal with its pressing climate and development challenges. These structural reforms would align with efforts to design a more attractive investment climate. Capacity-building support in this area from the NDC Partnership would be valuable as well.

There are several promising opportunities for NDC Partnership involvement to help the Marshall Islands achieve its climate and sustainable development goals, which could serve as a strong success story and an example for other SIDS countries.

¹² <http://www4.unfccc.int/ndcregistry/PublishedDocuments/Marshall%20Islands%20First/150721%20RMI%20INDC%20JULY%202015%20FINAL%20SUBMITTED.pdf>

NDC Country Outlook
MARSHALL ISLANDS
NOVEMBER 2017



The NDC Partnership is guided by its partners and assisted by a Support Unit hosted by the World Resources Institute (WRI). The Partnership is co-chaired by the Governments of Germany and Morocco.

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