



ADAPTATION FUND

## FULLY DEVELOPED PROPOSAL FOR SINGLE COUNTRY

### PART I: PROJECT/PROGRAMME INFORMATION

<b>Title of Project/Programme:</b>	Resilient Coastal Fisheries and Aquaculture in Nauru
<b>Country:</b>	Republic of Nauru
<b>Thematic Focal Area:</b>	Food Security
<b>Type of Implementing Entity:</b>	Regional Implementing Entity
<b>Implementing Entity:</b>	Pacific Community (SPC)
<b>Executing Entities:</b>	Government of Nauru, Pacific Community (SPC)
<b>Amount of Financing Requested:</b>	7,999,495 (in U.S Dollars Equivalent)
<b>Letter of Endorsement (LOE) signed:</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

*NOTE: The LOE should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: <https://www.adaptation-fund.org/apply-funding/designated-authorities>*

#### Stage of Submission:

- This proposal has been submitted before including at a different stage (concept, fully-developed proposal)
- This is the first submission ever of the proposal at any stage

In case of a resubmission, please indicate the last submission date: [Click or tap to enter a date.](#)

**Please note that fully-developed proposal documents should not exceed 100 pages for the main document, and 100 pages for the annexes.**

## Table of Contents

PART I: PROJECT/PROGRAMME INFORMATION .....	1
A. Project Background and Context:.....	5
Overview .....	5
Socioeconomic context.....	5
Nauru’s Climate Change Profile.....	9
B. Barriers to adaptation.....	20
C. Project/Programme Objectives:.....	24
D. Project/Programme Components and Financing: .....	25
E. Projected Calendar: .....	26
PART II: PROJECT/PROGRAMME JUSTIFICATION .....	27
A. Project Structure .....	27
Outcome 1: Strengthened institutional structures from national to community levels enable integrated climate resilience implementation in the coastal fisheries and aquaculture sectors.....	27
Outcome 2: Improved food security and nutrition through increased farmed fish supply, increased adaptive capacity and income of aquaculture operators and reduced pressure on climate-vulnerable coastal and reef ecosystems. ....	31
Outcome 3: Increased resilience of ecosystems and adaptive capacity of communities through availability of data and knowledge sharing mechanisms for adaptation planning and environmental protection .....	38
B. Economic, Social and Environmental Benefits .....	40
C. Cost Effectiveness .....	44
D. Alignment to National and Sub-National Strategies.....	45
E. Alignment with National Technical Standards .....	47
F. Complimentarily With Other Funding Sources.....	49
G. Learning and Knowledge Management.....	56
H. Consultation Process .....	57
I. Justification of Full Cost Adaptation Reasoning .....	57
Baseline Scenario (Without AF Additionality).....	57
Project Scenario (With AF Additionality) .....	58
J. Sustainability.....	60
K. Environmental and Social Impact and Risk .....	61
PART III: IMPLEMENTATION ARRANGEMENTS.....	62
A. Implementation Arrangements .....	62
Overview .....	62
Institutional Roles .....	62
Institutional advantage of SPC as Implementing Entity and Executing Entity .....	63
Project Management Structure .....	64
Project Governance Structure .....	64
Implementation and Governance of the Grant Facility .....	64
B. Project and Financial Risk.....	67
C. Environmental and Social Risk Management .....	68

D. Monitoring and Evaluation.....	71
Grievance mechanism .....	72
E. Results Framework .....	74
F. Alignment of the project against the AF Results Framework .....	78
G. Detailed Budget .....	80
Budget notes .....	86
H. Disbursement Schedule .....	87
<b>PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY .</b>	<b>88</b>
Annex 1. Stakeholder consultation report .....	89
Annex 2. Community workshop .....	95
Annex 3. Environmental and Social Management Plan.....	105
Annex 4. Gender Assessment and Action Plan .....	134
Annex 5. Letter of Endorsement from the Designated Authority.....	147

### List of Tables

Table 1- Main species captured by coastal fishing per type of fishing area .....	7
Table 2 - Estimates of annual catches (in tonnes and percentage of total catch) for the three main categories of coastal fisheries in Nauru.....	7
Table 3 - Description and status of fish and invertebrates' categories in the Pacific Island region and associated climate change impacts.....	15
Table 4 - Projected changes in production of the three categories of coastal fisheries, and total coastal fisheries production, in 2050 and 2100 under a high emission scenario in the West and East Pacific regions.....	17
Table 5 - Projected changes in catch potential (%) by 2050 and 2100 relative to 2000 under RCP2.6 and RCP8.5 based on outputs from the dynamic bioclimate envelope model and the dynamic size-based food web model. The table shows the average change for Nauru EEZ .....	18
Table 6 - Barrier analysis and project approach to overcome the barrier .....	21
Table 7 - description of Grant Facility eligible thematic areas and investment interventions .....	37
Table 8 - Summary of benefits generated by the proposed interventions compared to the baseline .....	41
Table 9 - List of relevant national policies and contribution of project activities to policy targets .....	45
Table 10 – Summary of technical standards and legislation relevant to project activities.....	47
Table 11 - Relevant project and programmes and associated project design considerations, synergies and complementarities.....	50
Table 12 - Project additionality in alignment with AF Results Framework .....	58
Table 13 - Checklist of project impacts and risks against the AF ESS principles. Further detail is provided in section III .....	61
Table 14 - summary of screening criteria for grant applications under the Grant Facility.....	65
Table 15 - Summary of identified project and financial risks as well as proposed mitigation measures .....	67
Table 16 - detailed description of identified ESS risks, evaluation of risk level and relevant mitigation measure implemented by the project. ....	69
Table 17 - Budgeted M&E Plan .....	72
Table 18 - Detailed results framework for the project.....	74
Table 19 - Alignment of project against AF Results Framework.....	78

### List of Figures

Figure 1 Average annual temperature of the Nauru relative to 1850-1900 in five global datasets .....	10
Figure 2 - Nauru temperature relative to 1961-1990 average through time presented as 'climate stripes' red = hotter than average, blue = cooler than average .....	10

Figure 3 - Observed time series of annual total rainfall for Nauru. Light blue, dark blue and grey bars indicate El Niño, La Niña and neutral years respectively. Solid black trend lines indicate least squares fit. ....	11
Figure 4 - Average annual temperature in the Nauru region relative to 1850-1900 (°C) derived from observations (Berkeley shown; grey solid line) and simulated in CMIP5 models, showing the range of all models for the past period (grey band), the future under a very high emissions pathway (pink band) and a very low emissions pathway (green band).....	12
Figure 5 - Average annual rainfall in the Nauru region relative to 1850-1900 simulated in CMIP5 models, showing the range of all models for the past period (grey), the future under a very high emissions pathway (pink band) and a very low emissions pathway (green band).....	13
Figure 6 - Sea level projections for Nauru.....	13
Figure 7 - Projected decreases in aragonite saturation state in Nauru from CMIP5 models under RCP2.6, 4.5 and 8.5. Shown are the median values (solid lines), the interquartile range (dashed lines), and 5% and 95% percentiles (light shading). The horizontal line represents the transition to marginal conditions for coral reef health. ....	14
Figure 8 - NFMRA Aquaculture Holding Facility bio-filters and overhead water tanks.....	33
Figure 9 - NFMRA Aquaculture Holding Facility – fish conditioning tanks for milkfish fry .....	33
Figure 10 -. NFMRA raceways for giant clams and corals still under construction and installation.....	33
Figure 11 - diagrammatic representation of implementation arrangements. Full details are described in the narrative below .....	62

## A. Project Background and Context:

### Overview

The Republic of Nauru is one of the smallest and most geographically isolated countries in the world. The single, coral-capped island (21 square kilometres) is home to approximately 10,800 residents as of 2021, over 90% of whom are indigenous Nauruan<sup>1</sup>. The island itself is located in the central Pacific Ocean approximately 40 kilometres south of the Equator and can be divided into two distinct topographical areas – the low-lying coastal area “Bottomside,” and the higher elevation interior (up to 65 meters above sea level) known as “Topside.”

Since gaining independence in 1968, the social and economic development of the Nauruan society was largely shaped by its phosphate mining industry which, during its peak in the early 1980s brought immense wealth and opportunities to the population. However, due to depleted phosphate reserves on the island, economic outputs for Nauru declined greatly over the late 1980’s and early 1990s, greatly restricting the economic output of the island<sup>2</sup>. As a result of the phosphate rush, much of Nauru’s arable land was devastated by strip mining, leaving only a narrow coastal strip of land untouched, totalling four square kilometres. This land is highly degraded, and in 2009 arable land was estimated at 60% of its former productivity, whilst silt and phosphate runoff are associated with contamination of crucial water sources on the island<sup>3</sup>. Further to this, climate events such as bleaching and acidification (see below), are negatively impacting Nauru’s reef ecosystems and productivity, reducing ecosystem services and threatening local food supplies as the population is heavily dependent on local fisheries as its primary food source.

As a consequence of the above, Nauru remains one of the most economically vulnerable countries in the world, with climate change increasingly becoming a major threat to local livelihoods and food security (further detail below)<sup>4,5</sup>. As a result of these threats, climate resilience of food production systems is a crucial aspect of national strategic planning. This is highlighted in the mainstreaming of climate resilience into “Nauru’s Food Systems Pathway 2021”<sup>6</sup>. With a very low level of arable land resources available on the island, climate-resilient aquaculture production (which is not dependent on fertile arable lands) and maintenance/protection of productive reef systems are key aspects of National strategies to ensure climate-resilient food security for the country’s population. This is highlighted through the integration of food security, and specifically the promotion of aquaculture production, into the Republic of Nauru Framework for Climate Change Adaptation and Disaster Risk Reduction (RONAdapt) and Nauru’s National Designated Contributions to the UNFCCC (NDC)<sup>7, 8</sup>.

### Socioeconomic context

In the early 1980s, Nauru was by some calculations the wealthiest nation on earth. In 2000, the economic crisis altered the living standards of the population. At the time, 95% of the workforce were public servants and mainly relied upon phosphate royalties as sources of income. During the peak years of phosphate mining, Nauruans enjoyed a high standard of living where household needs, including food and drinking water, were imported from overseas and distributed through local retail outlets. In 2000, when the large-scale commercial mining of phosphate ceased but residual mining continued, both government revenue and average household income were reduced dramatically. Those families who were once highly privileged in comparison with much of the world’s population found it difficult to provide for their day-to-day needs<sup>9</sup>. Compounding negative economic growth, the tax-to-GDP ratio is 48.2% and income taxes increased by 13.1 p.p. in 2019<sup>10</sup>. This increase was due to higher tax rates for employees and service providers of the Regional Processing Centre (RPC) and higher than-expected revenue from the RPC<sup>11</sup>. The government of Nauru is committed to a positive fiscal budget but

<sup>1</sup> [https://datacommons.org/place/country/NRU?utm\\_medium=explore&mprop=count&popt=Person&hl=en](https://datacommons.org/place/country/NRU?utm_medium=explore&mprop=count&popt=Person&hl=en)

<sup>2</sup> <https://www.adb.org/sites/default/files/linked-documents/45032-001-ea.pdf>

<sup>3</sup> R. Curtain and M. Dorman (2019) A pressure release valve? Migration and climate change in Kiribati, Nauru and Tuvalu, Development Policy Centre.

<sup>4</sup> [https://www.preventionweb.net/files/11844\\_ClimateChangeandFoodSecurity.pdf](https://www.preventionweb.net/files/11844_ClimateChangeandFoodSecurity.pdf)

<sup>5</sup> [https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap29\\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap29_FINAL.pdf)

<sup>6</sup> [https://summitdialogues.org/wp-content/uploads/2021/09/FSS-National-Pathway-Nauru\\_2021\\_September\\_2021\\_FinalDraft\\_Approved.pdf](https://summitdialogues.org/wp-content/uploads/2021/09/FSS-National-Pathway-Nauru_2021_September_2021_FinalDraft_Approved.pdf)

<sup>7</sup> <https://www.refworld.org/pdfid/5b3f74384.pdf>

<sup>8</sup> <https://unfccc.int/sites/default/files/NDC/2022-06/Nauru%20Updated%20NDC%20pdf.pdf>

<sup>9</sup> FAO (2017) Fishery and Aquaculture Country Profile. The Republic of Nauru.

<sup>10</sup> Asian Development Bank (2020) Revenue statistics in Asia and the Pacific 2021.

<sup>11</sup> Government of Nauru (2020), GON 2019-20 Final Budget Outcome.

there is uncertainty about revenues from the RPC after the contract with the Australian government expired in 2021<sup>12</sup>. The end of this contract coupled with the projected impacts of climate change represent significant threats to revenue stability in the medium and longer-term that will negatively impact the government's ability to invest in national food production systems.

The latest Household Income and Expenditure Survey in 2013<sup>13</sup> demonstrated that 24% of the population and 6.8% of households were living below the basic needs' poverty line. The survey ranked 7.9% of the country's population and 6.2% of households as "extremely vulnerable." Two particularly vulnerable groups are households headed by women (which experience comparatively high levels of extreme poverty) and widows (60% of whom are classified as poor or vulnerable to varying degrees). Nauru has some of the lowest human development indicators in the region and the highest incidence of food poverty, with one in four people living below the basic needs poverty line. Infant, child, and adult mortality rates remain high and Nauru has the shortest life expectancy of any country in the Pacific<sup>14</sup>. Due to the unavailability of data, the Human Development Index (HDI) is not available for the Republic of Nauru<sup>15</sup>.

A socio-economic assessment report by Australia highlighted the significant deterioration in the humanitarian situation in Nauru since the beginning of 2004. Food security has emerged as a serious issue as a consequence of policy failure and chronic economic decline. This resulted in a total regression of development with people resorting to basic subsistence fishing and farming for survival. Men, women and children forage daily on reefs, there is daily hunting of birds for food, and families resort to extended family systems to barter food for imported food items. The diet of Nauru's people has deteriorated in recent years, which has led to an epidemic in Non-Communicable Diseases (NCDs). An estimated 25% of daily intake consists of rice and raw sugar, and only 30 food items comprise around 85% of daily calories consumed.

The dependency of Nauru's population on food imports is high, reaching 90% of the country's food needs, with extremely low agricultural and livestock production levels (only about 4 square km of arable land are available on Nauru, much of which is occupied by residential dwellings, and only about 5% of households were engaged in livestock production in 2019). The high cost of imported food products, limited capacity for food production and constrained economic situation will be compounded by predicted negative impacts of climate change and constitutes the main threats to food security.

As a result, for the country to adapt to climate change and be more resilient to external shocks, the coastal fisheries and aquaculture sectors are in dire need of improved practices and management as well as financial and technical assistance, to enable a sustainable supply of fresh, nutritious food to communities. Nauru's unique characteristics and extreme climate vulnerability call for a nationwide, integrated approaches to safeguard its food security and livelihoods in the face of climate change through the conservation of coastal and reef resources and the uptake of aquaculture operations.

### ***Socio-economic context of Nauru's fisheries sector***

Nauru's fisheries sector can be divided in two distinct categories of activities; the commercial oceanic fisheries sector, where the majority of government revenues is derived from fishing licenses; and the coastal fisheries sector, characterised by subsistence, small-scale artisanal fishing. The text below focuses on the small-scale coastal fisheries sector which is impacted by climatic pressures that degrade reef habitat and reduce abundance of edible fish species impacting food security. As such, it is the target sector of the proposed project.

Coastal fishing is carried out for subsistence purposes and is sold in local markets<sup>16</sup>. There is no consistent statistical system to cover all of Nauru's coastal fisheries (encompassing commercial and subsistence fishing),

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<sup>12</sup> Ibid.

<sup>13</sup> Republic of Nauru (2014) Household Income and Expenditure Survey (HIES) 2012/2013. Main analytical report.

<sup>14</sup> UNSDG Data website. Accessed 20/12/2021.

<sup>15</sup> UNDP. Human Development Index. Country webpage Nauru. Accessed 14/01/2022. Available [here](#).

<sup>16</sup> Ibid.

catch estimates therefore vary depending on survey methods and year. The latest attempt<sup>17</sup> recorded coastal commercial fisheries production at 163 tonnes, and coastal subsistence fisheries production at 210 tonnes, for a total of 373 tonnes in 2016, worth 2,036,713 USD (1,071,275 USD and 965,438 USD respectively)<sup>18</sup>. Nauru's artisanal fleet comprises small (less than 6 m) powered skiffs or canoes operated by local fishers. The catch obtained from fishing in shallow inshore waters is landed all around Nauru wherever fishers can swim, wade, or walk ashore. Most of the catch from fishing further offshore from canoes and skiffs is landed at a few artificial channels through the fringing reef. The powered boats are mostly used for trolling and often target pelagic species. Table 1 below presents the main species caught in coastal fisheries activities.

*Table 1- Main species captured by coastal fishing per type of fishing area*

Fishing area	Species
Reef flat, reef crest and surf zone	Molluscs, crustaceans, bêche-de-mer, eels, octopus, mullet, surgeonfish, scarids and other species netted in surf zone;
Reef front and nearshore slope (25-30m)	Wide range of smaller demersal and epibenthic species such as scarids, acanthurids, carangids, shallow-water serranids, lutjanids and lethinids and ranging reef-associated pelagic species
Reef slope and deep water (up to 400m)	Deep-water snappers, lutjanids, carangids and some scombrids, deeper-water serranids, balistids, some sharks
Nearshore pelagic waters within sight of the island, and adjacent to anchored FADS and mooring buoys	Rainbow runners, some tunas, wahoo, mid-water balistids, barracuda, some sharks

The production from coastal and inshore fisheries and aquaculture is almost entirely for domestic consumption. Some commercial fishing activities are practiced but mostly on a part-time scale, meaning that fish catches are sold only when there is surplus after meeting subsistence needs. The reliance on marine products for basic food needs, and the lack of transportation and outlets for marketing contribute to this aspect. For the whole of Nauru, the annual per capita fish consumption (whole weight equivalent) was estimated to be 55.8 kg in 2016, of which 96% was fresh fish. FAO data indicates that annual per capita consumption of fish and fishery products was 52.3 kg in 2013. Almost all finfish catch is consumed or given to relatives, and only a small proportion of catches is reported to be sold. Most of the sales are from informal roadside markets.

Table 2 below provides estimates of the annual catch for the three main categories of coastal fisheries in Nauru.

*Table 2 - Estimates of annual catches (in tonnes and percentage of total catch) for the three main categories of coastal fisheries in Nauru*

Demersal fish		Nearshore pelagic		Invertebrates		Total catch (t)
Tonnes	%	Tonnes	%	Tonnes	%	
115	30.8	252	67.6	6	1.6	373

Nauru's traditional open access tenure ship means that everyone is free to fish anywhere on the island. Because of the lack of traditional authority, the protocols seen in other PICT countries are not practised in Nauru. There are no customary regulations, district laws or written understandings on fishing activities, such as size limits, quotas, gear restrictions, use of scuba, or imports. However, the Coastal Fisheries and Aquaculture Act in 2020 acknowledges the need for the introduction of coastal fisheries regulations and calls for the sustainable use of marine resources and upscale of aquaculture production.

The Nauru Fisheries and Marine Resources Authority (NFMRA), the lead national institution for fisheries and aquaculture in Nauru, with SPC's support, carried out a survey of the reef invertebrate resources of the island,

<sup>17</sup> R. Gillet (2016) Fisheries in the Economies of Pacific Island Countries and Territories.

<sup>18</sup> FAO (2017) Fishery and Aquaculture Country Profile. The Republic of Nauru.

assessing stock of sea cucumbers, bivalves, crustaceans, gastropods, starfish and urchins<sup>19</sup>. The conclusion of the survey was that coastal fisheries in Nauru have operated for many years with inadequate management, and that the impacts of climate change are worsening the depletion of coastal fisheries resources. The results of this survey and previous surveys on Nauru provide evidence of significant over-exploitation of Nauru's coastal invertebrate resources, especially in light of increasing threats posed by climate change.

The increased exploitation of the coastal fisheries resources that occurred during the economic downturn caused by the COVID-19 pandemic is suspected to have had a significant impact especially without any management measures in place, which could contribute to the rapid deterioration of Nauru's coastal fisheries resources. Additionally, many of the inshore fishery resources are fully or partially overexploited, creating problems for an expanding population that is reliant on marine resources for subsistence

As detailed below in the climate analysis, tuna species are expected to move northward due to the impacts of ocean warming temperatures and acidification. As a result, a significant portion of government revenues may be lost in the medium or long-term, representing at least a quarter of annual revenues generated from the sale of offshore fishing licenses. Further, as the total catch of coastal fisheries remains marginal and of subsistence nature, considering that climate change will also impact fish and invertebrates' stocks in coastal areas, opportunities to counterbalance future revenue losses are scarce. Attempts to promote the access of small-scale fishers to the large tuna resources have not been successful, mainly due to the preference of local communities for milkfish and reef species, and to the difficulties in providing adequate infrastructure for the development of a domestic tuna market. Lastly, the NFMRA has difficulties carrying out its fisheries development functions at a time of financial stringency and lack of financial autonomy.

In terms of contribution to livelihoods and food security, the sectors of importance for Nauruan communities are the coastal fisheries and aquaculture sectors; indeed, although the industrial oceanic fisheries sector accounts for a quarter of government revenue, oceanic fisheries activities do not generate any direct benefits or co-benefits for communities, in the form of livelihoods or food security as the catch is mainly exported. This is primarily due to the overwhelming majority of tuna fishing vessels belonging to foreign nations, which do not transit by Nauru to process their catch. Additionally, the consumption of larger pelagic fish species such as tuna is very limited on the island, due to a cultural preference for reef fish, milkfish, and seafood, and the limited tuna catch by Nauruan commercial vessels.

### ***Socio-economic context of Nauru's aquaculture sector***

Aquaculture has been identified by the GoN as a sector with strong potential to innovate, reap productivity gains, generate employment and contribute to national food and nutrition security and livelihood diversification. Although possessing only a very shallow lagoon (much of which dries at low tide) and a narrow fringing reef, the food produced by fishing in these inshore areas is very important in the Nauru diet.

NFMRA (2005) states there are four depressions on the Nauru plateau, the most significant one forming Buada Lagoon, with a surface area of 30,000 m<sup>2</sup>. The other water bodies, known as ponds, are on the fringing coast, or just a few meters from the base of the escarpment. They range from about 40 m<sup>2</sup> to about 10,000 m<sup>2</sup> in area, either manufactured or naturally occurring. Anabar pond is the most significant, at 10,000 m<sup>2</sup>. The ponds have become infested with tilapia, which is not popular as a food item<sup>20</sup>. Traditionally, juvenile milkfish were collected on the intertidal reef and reared in brackish water ponds. However, local stock of milkfish fry / juveniles is now heavily depleted. The most important areas for farming were Buada Lagoon and, to a lesser extent, the Anabar pond. Farming was divided among families, with walls and fences, and the people had an intricate social fabric intertwined with milkfish culture. The Mozambique tilapia (*Oreochromis mossambicus*) was introduced around 1961, and eventually infested all the milkfish ponds and competed for food. Many farmers abandoned their traditional practice of raising milkfish and grow-out ponds still in operation are greatly depleted. These are family-owned backyard/subsistence operations. Aquaculture production was estimated below 1 tonne in 2016<sup>21</sup>.

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<sup>19</sup> Harris et al. (2016)

<sup>20</sup> R. Gillet (2016) Fisheries in the Economies of Pacific Island Countries and Territories.

<sup>21</sup> FAO (2017) Fishery and Aquaculture Country Profile. The Republic of Nauru.



As of January 2016, there were 35 registered pond owners with the NFMRA. In 2019, 63 people (about a dozen households) reported aquaculture to be their main occupation and income source<sup>22</sup>. Operations are primarily located in Aiwo, Buada, Anabar and Meneng. Out of these households, two-thirds were engaged in aquaculture for self-consumption purposes, while one-third was for consumption and some for sale. None were run for sale only.<sup>23</sup> The ponds are family-owned backyard milkfish ponds, and some are old swimming pools, in addition to the one-hectare Buada Lagoon. These findings demonstrate that the subsector does not display growth in the number of operators or production. Conversely, 826 people reported to be looking for work in 2019, demonstrating the opportunity to revive the aquaculture sector to climate-proof community revenues, provide new income opportunities, and enhance food security and nutrition.

## **Nauru's Climate Change Profile**

Nauru lies in the dry belt of the equatorial oceanic zone, with diurnal temperatures ranging from 26°C to 35°C, and nocturnal temperatures between 22°C and 28°C<sup>24</sup>. Typical of the Pacific region, Nauru has an invariable annual climate, with temperatures averaging 28°C all year round which are strongly tied to the surrounding ocean temperature, with humidity averages around 80%<sup>25</sup> <sup>26</sup>. The wet season usually starts in November and continues to April, while drier conditions occur from May to October. However, the interannual variability is greater as the climate of Nauru which is strongly characterised by the seasonal trade winds<sup>27</sup>, influenced by the El Niño-Southern Oscillation (ENSO). The sections below focus on climate change projections and associated impacts on fisheries and aquaculture production.

### ***Historical Trends***

The analysis of temperature and precipitation records for Nauru proves difficult due to the unavailability of data. Meteorological observations have been taken by two automatic weather stations since July 2003 and a manual rain gauge near Yaren, the capital. There is also a sub-daily rain gauge near the centre of the island which has been operational since October 2009. Nauru data are available from 1893 to present for rainfall and 1951 to present for air temperature; however, there are significant gaps in both records. Consequently, to provide an assessment of trends over meaningful time periods, global datasets are used to fill the data restrictions and validated against observational data where available.

### ***Temperature***

Nauru's Second National Communication to the UNFCCC<sup>28</sup> suggests temperatures have been rising in the region at around 0.12°C per decade since the 1970s. However, the Berkeley Earth Dataset suggests a slightly more complex picture. Up to the 1990s there was limited warming in the region, but from 1995 that warming accelerated, and temperatures between 2014 and 2018 were averaging around 0.5°C –0.6°C above the long-term average. Nauru regularly experiences high maximum temperatures, with an average monthly maximum of around 31°C<sup>29</sup>. Figure 1 provides a graphical representation of the historical temperature changes in Nauru from five global datasets.

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<sup>22</sup> SPC (2020) Nauru mini-survey. Population in Nauru.

<sup>23</sup> R. Gillet (2016) Fisheries in the Economies of Pacific Island Countries and Territories.

<sup>24</sup> Global Climate Change Alliance: Pacific Small Island States Project (2013) Climate Change Profile: Republic of Nauru.

<sup>25</sup> World Bank (2021) Climate change Country Profile Nauru.

<sup>26</sup> Pacific-Australia Climate Change Science and Adaptation Planning Program (PACC-SAP) (2014) Current and future climate of Nauru.

<sup>27</sup> Pacific-Australia Climate Change Science and Adaptation Planning Program (2014) Climate Variability, Extremes and Change in the Western Tropical Pacific: New Science and Updated Country Reports.

<sup>28</sup> Republic of Nauru (2014) Second National Communication to UNFCCC.

<sup>29</sup> World Bank (2021) Climate change Country Profile Nauru.

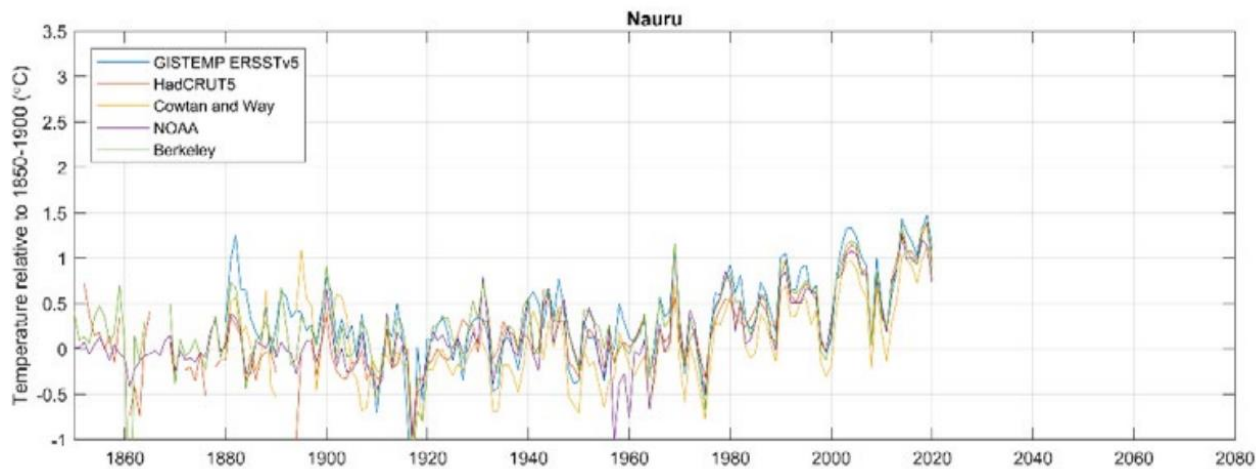


Figure 1 - Average annual temperature of the Nauru relative to 1850-1900 in five global datasets

Not only is there is an annual increasing trend in average temperatures, but it is also observed that there is an upward trend in natural interannual variation of temperatures. Over the last 30 years there has been an increasing tendency for warmer than average years, indicating that conditions in the Pacific, impacted by El Niño Southern Oscillation (ENSO) phases, is likely leading to warmer than average years in more regular intervals<sup>30</sup>.

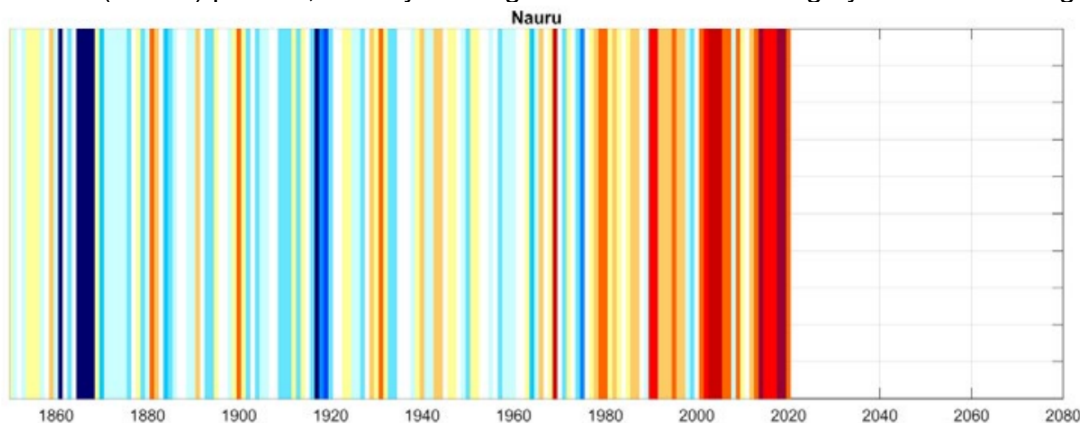


Figure 2 - Nauru temperature relative to 1961-1990 average through time presented as 'climate stripes' red = hotter than average, blue = cooler than average

### Precipitation

Notable interannual variability associated with the ENSO has been observed in the South Pacific Convergence Zone (Nauru is situated at the Northwestern edge) since 1927. Observing records over 400 years, it shows abrupt changes of ~1800 mm can occur between wet seasons. Historical rainfall has been very strongly correlated with ENSO, peaking in El Niño years and reducing significantly during La Niña. Rainfall peaks between December and April, averaging 200 mm per month, then falls to around 100 mm per month between June and November. However, no changes in rainfall patterns significantly outside the range of normal inter-annual variation have been documented and linked to human-induced climate changes. In other words, annual and half-yearly rainfall trends show little change for Nauru once averaged out over years<sup>31</sup>. However, the impacts of ENSO event highlight extreme variation in precipitation levels between years. As highlighted by Figure 3 ENSO events are predicted to increase in frequency over the next two decades and are likely to impact temperature and precipitation levels more frequently<sup>32</sup>. This is highlighted by the exceedingly rare triple La Niña ongoing at the time of writing this proposal.

<sup>30</sup> [https://www.rccap.org/uploads/files/e16a271d-0da5-4013-9fe5-49ee491b4fb7/Nauru%20Country%20Report\\_Updated.pdf](https://www.rccap.org/uploads/files/e16a271d-0da5-4013-9fe5-49ee491b4fb7/Nauru%20Country%20Report_Updated.pdf)

<sup>31</sup> Pacific-Australia Climate Change Science and Adaptation Planning Program (2014) Climate Variability, Extremes and Change in the Western Tropical Pacific: New Science and Updated Country Reports.

<sup>32</sup> <https://www.nature.com/articles/s41558-022-01301-z>

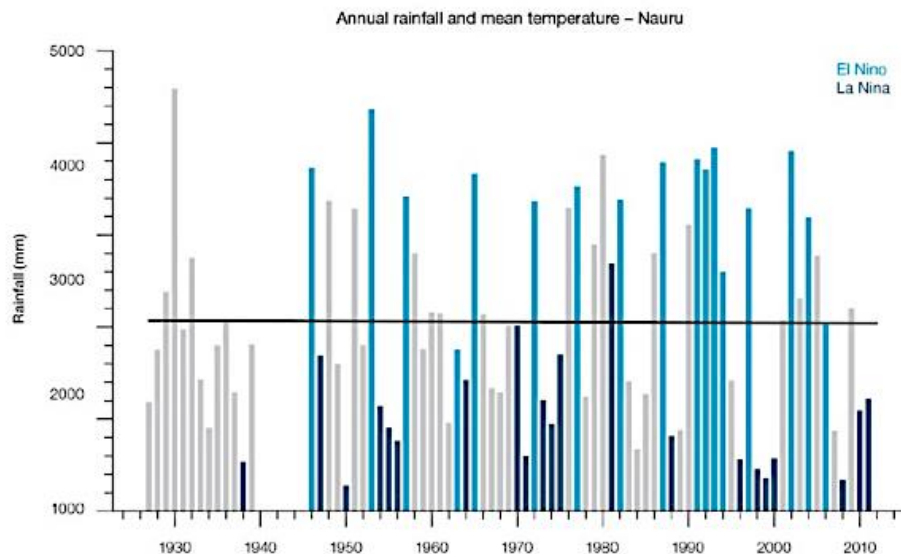


Figure 3 - Observed time series of annual total rainfall for Nauru. Light blue, dark blue and grey bars indicate El Niño, La Niña and neutral years respectively. Solid black trend lines indicate least squares fit.

### Extreme events

The main climate extremity experienced by Nauru is drought, which can last as long as three years<sup>33,34</sup>. Droughts usually occur during La Niña events when the surrounding sea temperature is lower, resulting in less cloud and rainfall. Tropical cyclone formation within the Nauru EEZ is unlikely due to the island's proximity to the equator. There are no events on record, based on tropical cyclone data available from 1969/70 for the Southern Hemisphere and from 1977 for the Northern Hemisphere.

### Sea-level rise

The sea-level rise near Nauru measured by satellite altimeters since 1993 is about 5 mm per year, slightly higher than the global average of  $3.2 \pm 0.4$  mm per year<sup>35</sup>.

## Projected climate change

### Temperature

Projections for all emissions scenarios show that temperatures will continue to rise in Nauru. Under the high emissions scenario the increase in temperature is projected to be in the range of between 0.3°C -1.3°C by 2030. The increase in temperature will result in an increase in the number of hot days and warm nights and an increase in the average annual and seasonal rainfall over the entire course of the 21st century. Projections are expected to push temperatures above 33°C on a regular basis. When combined with the high levels of humidity experienced in Nauru this suggests an increased risk of temperatures which are dangerous for the human body<sup>36</sup>. Projected rises in maximum and minimum temperatures are of a similar magnitude. While relatively warm and cool years and decades will still occur due to natural variability, there is projected to be more warm years and decades on average in a warmer climate.

<sup>33</sup> Republic of Nauru (2014) Second National Communication to UNFCCC.

<sup>34</sup> Republic of Nauru (2015) Framework for Climate Change Adaptation and Disaster Risk Reduction (RONAdapt)

<sup>35</sup> Pacific-Australia Climate Change Science and Adaptation Planning Program (2014) Climate Variability, Extremes and Change in the Western Tropical Pacific: New Science and Updated Country Reports.

<sup>36</sup> World Bank (2021) Climate Risk Country Profile Nauru.

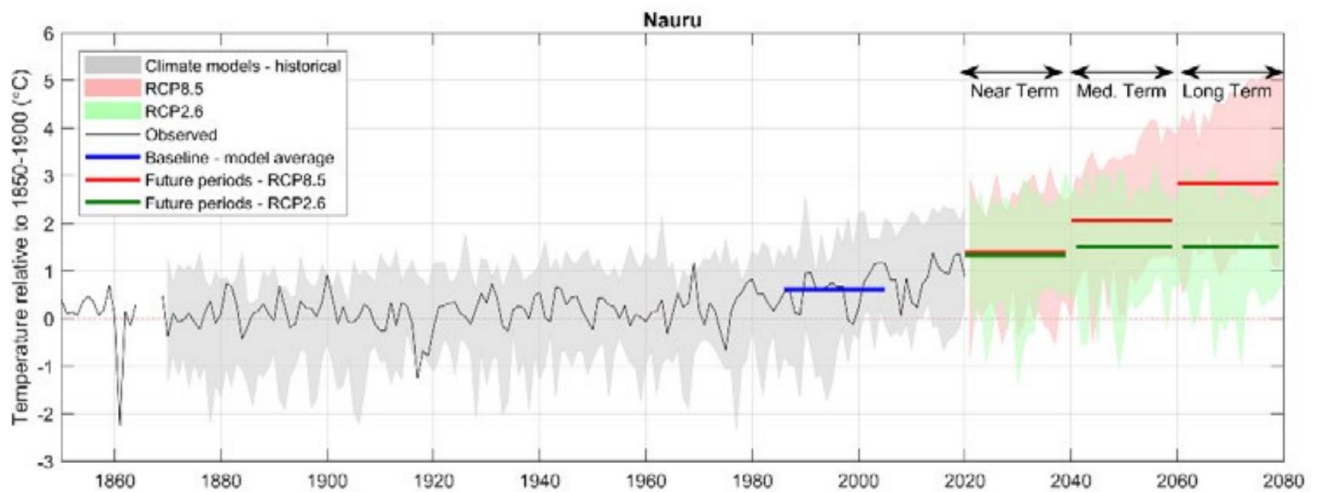


Figure 4 - Average annual temperature in the Nauru region relative to 1850-1900 (°C) derived from observations (Berkeley shown; grey solid line) and simulated in CMIP5 models, showing the range of all models for the past period (grey band), the future under a very high emissions pathway (pink band) and a very low emissions pathway (green band).

An additional factor for consideration is the potential for marine heat waves. Research has identified the Western Tropical Pacific as a global hotspot for climate change impacts on marine heat waves. Marine heat waves are projected to extend their spatial footprint and to grow in duration and intensity. The consequences of this trend may be serious for marine ecosystems in the region (and the livelihoods dependent on them), which are adapted to survive under very stable temperature regimes<sup>37</sup>. In a 2°C warmer world relative to the pre-industrial baseline, Nauru is projected to be similar to or a little less than the global average: 1.4 to 2.2°C warmer compared to the pre-industrial baseline (or 0.8 to 1.5°C from the 1986-2005 baseline).

### Precipitation

Wet season (November-April), dry season (May-October) and annual average rainfall are projected to increase over the course of the 21st century. Projected increases in rainfall are consistent with the expected intensification of the South Pacific Convergence Zone, Inter tropical Convergence Zone and the West Pacific Monsoon. Interannual variability in rainfall over Nauru is strongly influenced by ENSO in the current climate. As highlighted above there is likely to be an increase in ENSO events, causing increased variability in interannual precipitation levels. This can result in significant drought periods for the country in the case that La Nina events persist for a

<sup>37</sup> Frölicher, T. L., Fischer, E. M., & Gruber, N. (2018). Marine heatwaves under global warming. *Nature*, 560 (7718), 360–364.

prolonged period.

## Sea level rise

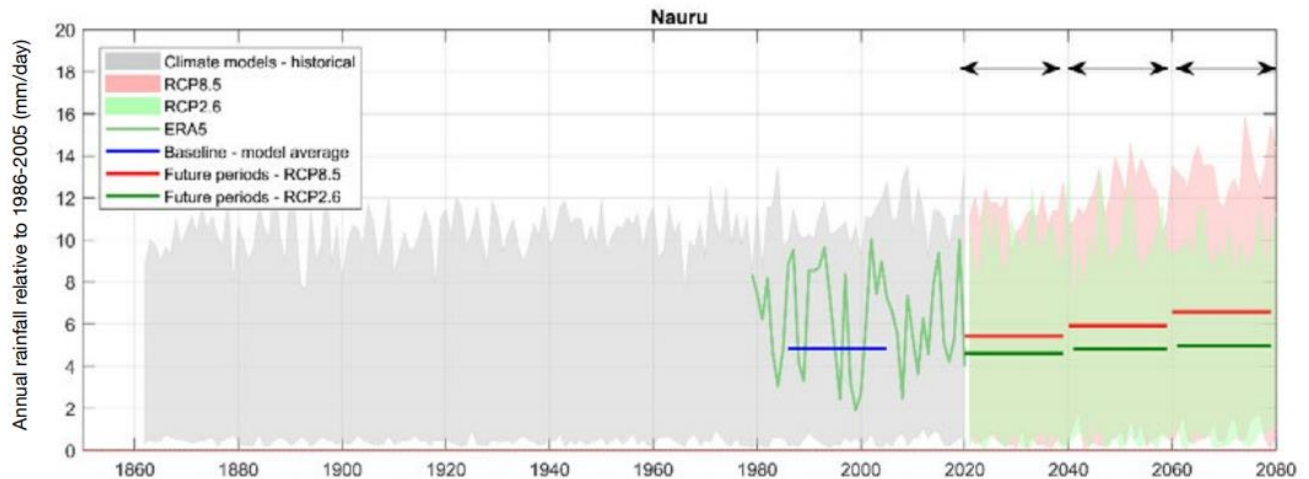


Figure 5 - Average annual rainfall in the Nauru region relative to 1850-1900 simulated in CMIP5 models, showing the range of all models for the past period (grey), the future under a very high emissions pathway (pink band) and a very low emissions pathway (green band)

Research<sup>38</sup> conducted since 2014 suggested that Antarctic ice sheets may contribute to greater Sea Level Rise (SLR) this century than previously thought. Sea level projections that incorporate the higher Antarctic contribution have been evaluated for Nauru and show a rise of between approximately 0.09-0.18 m by 2030, and an increase of 0.66 to 1.22 m by 2100 under RCP8.5. Interannual variability of sea level will lead to periods of lower and higher regional sea levels. In the past, this interannual variability (after removal of the seasonal signal) has been about 0.23 m, and it is likely that a similar range will continue through the 21<sup>st</sup> century<sup>39</sup>.

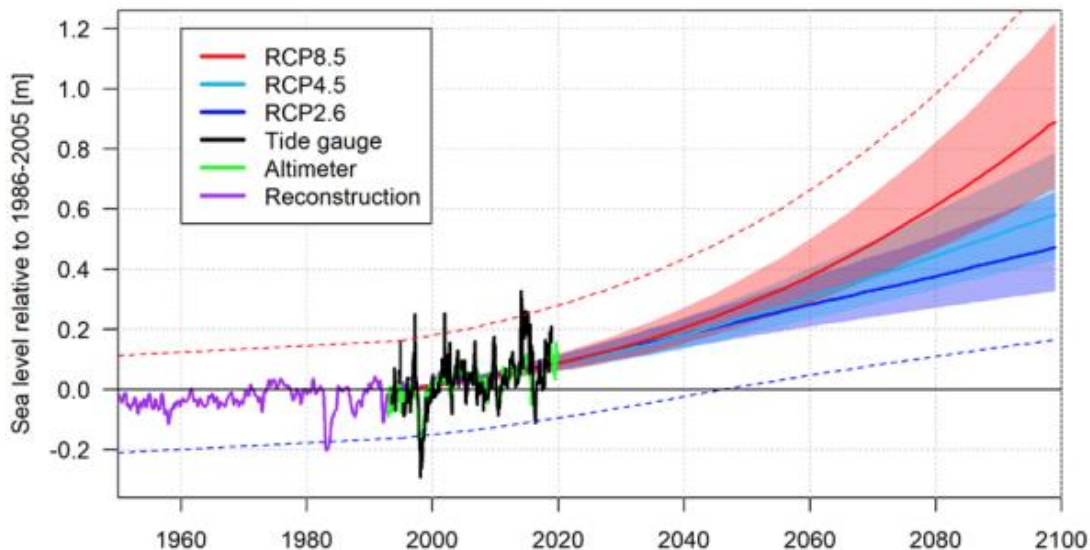


Figure 6 - Sea level projections for Nauru.

<sup>38</sup> IPCC (2019) Special Report on Oceans and Cryosphere in a Changing Climate (SROCC)

<sup>39</sup> CSIRO and SPREP (2021) 'NextGen' Projections for the Western Tropical Pacific: Current and Future Climate for Nauru. Final report to the Australia-Pacific Climate Partnership for the Next Generation Climate Projections for the Western Tropical Pacific project.

## Aragonite Saturation

Future changes in ocean pH and aragonite saturation will largely depend on the atmospheric concentration of CO<sub>2</sub>. These values are also affected, to a smaller extent, by changes in water temperature and salinity. Based on the RCP8.5 scenario, tropical Pacific pH is projected to decrease by a further 0.15 units from the historical 1986–2005 period into the 2040–2060 period (averaged between 15°S to 15°N and 120°E to 280°E). Moreover, dramatic changes in aragonite saturation are also projected to occur. Saturation levels greater than 4 are considered optimal for coral calcification, while levels less than 3.5 are considered very low for a healthy reef system to continue reef-building<sup>40</sup>. Saturation levels less than 3 are considered extremely marginal for growth of corals, with no major reef systems currently found at locations with these levels. Model projections suggest that by mid-century, the entire tropical Pacific region will have shifted to sub-optimal conditions, with aragonite saturation levels between 3 and 3.5. This represents a drop of approximately 0.6 in the tropical region, corresponding to a decline in coral calcification rate of about 10%<sup>41</sup>.

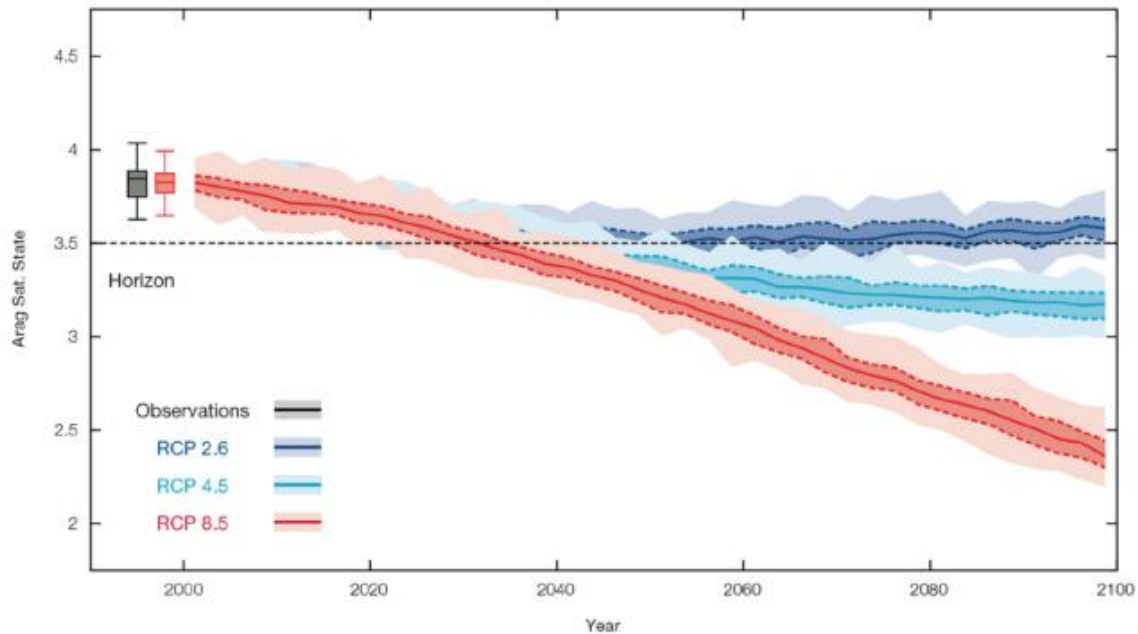


Figure 7 - Projected decreases in aragonite saturation state in Nauru from CMIP5 models under RCP2.6, 4.5 and 8.5. Shown are the median values (solid lines), the interquartile range (dashed lines), and 5% and 95% percentiles (light shading). The horizontal line represents the transition to marginal conditions for coral reef health<sup>42</sup>.

## Summary of Nauru's Climate Change Profile

In light of the analysis provided above, the conclusion of climate change trends can be summarised as follows.

- Annual mean temperatures and extremely high daily temperatures will continue to rise (very high confidence);
- Interannual temperature variation is likely to continue to be higher than baseline averages (high confidence);
- Sea level will continue to rise (very high confidence);
- Ocean acidification is expected to continue (very high confidence); as a result, the risk of coral bleaching will increase in the future (very high confidence);
- Mean rainfall is projected to increase (medium confidence), along with more extreme rain events (high confidence);

<sup>40</sup> Langdon and Atkinson 2005

<sup>41</sup> Chan and Connolly (2013)

<sup>42</sup> Pacific-Australia Climate Change Science and Adaptation Planning Program (2014) Climate Variability, Extremes and Change in the Western Tropical Pacific: New Science and Updated Country Reports.

- El Niño and La Niña events will be likely to increase in frequency over the next 20 years, inducing greater interannual temperature and precipitation variability in Nauru (high confidence). **Climate change impacts on target sectors**

### **Impacts on offshore and coastal fisheries**

In the Pacific Islands region, fish and invertebrates (specifically shellfish) fulfil important ecological roles in coastal and oceanic habitats, and provide a source of food, nutrition and income for communities.

Four prominent categories of fish and invertebrates can be identified in the Pacific Islands region:

- Demersal, or bottom-dwelling fish (including shallow- and deep-water species)
- Shellfish (crustaceans, molluscs and echinoderms (in shallow subtidal and intertidal habitats)
- Pelagic species (often dominated by tuna and tuna-like species)
- Sharks and rays.

Table 3 below provides an overview of the four main fish and invertebrates categories in the Pacific region as well as a description of their current status and impacts climate change will have on them.

*Table 3 - Description and status of fish and invertebrates' categories in the Pacific Island region and associated climate change impacts*

<b>Fish category</b>	<b>Description and status</b>	<b>Climate change impacts</b>
<b>Demersal fish</b>	<p>There are approximately 7,000 species of fish in the Pacific islands region, and demersal fish are a key component of coastal ecosystems. They have specialised roles in reef ecosystems that include corallivores that eat corals (e.g. butterflyfish), herbivores that eat algae (e.g. rabbitfish), generalist species (e.g. damselfish), and predators (e.g. groupers). A range of families of demersal fish are harvested for subsistence and for local sale in the Pacific Islands region, the most common being parrotfish (Scaridae), surgeonfish (Acanthuridae), trevallies and scads (Carangidae), soldierfish and squirrelfish (Holocentridae), wrasse (Labridae), emperors (Lethrinidae), snappers (Lutjanidae), mullet and goatfish (Mullidae), groupers (Serranidae), and rabbitfish (Siganidae).</p> <p>The status of demersal fish stocks is not well known in many PICTs due to lack of regular fisheries data collection. In-water assessments at 63 sites across 17 PICTs conducted in the early to mid-2000s found that demersal fish populations at 54% of sites were in 'average-to-low' or 'poor' condition. In addition, fishing impacts are evidenced by small average sizes of key species, targeting of juveniles, and fishing down the food web (i.e. disproportionately fewer higher-order species; predators) in many PICTs.</p>	<p><b>Increasing thermal stress</b> has been observed to have both indirect and direct impacts on demersal fish and invertebrates in the Pacific Islands region. Many coral reef fishes appear to be living very close to their upper thermal optimum, such that any significant increases in ocean temperature will constrain metabolic performance, with effects on movement, prey capture, reproduction and growth. Demersal fish and invertebrate species dependent on reef habitats are unlikely to occur on reefs where their thermal optima no longer overlap. Conversely, tuna and other mobile pelagic fish are expected to be able to move more easily to areas with optimal thermal conditions.</p> <p>Indirect impacts include <b>habitat declines due to coral bleaching</b> that have been shown to impact reef fish and invertebrate populations over time). Extensive coral bleaching was reported across much of the Pacific in 2015–2016. As live coral cover declines, abundances of coral-dependent demersal fish and invertebrate species are expected to decrease. Generalist demersal fish species, such as emperors, snappers and goatfish, are not likely to be affected significantly, at least in the short-term, because they use a range of habitats. In contrast, the proportions of herbivorous demersal fish species, including surgeonfish, parrotfish and rabbitfish, are likely to increase as the cover of live coral declines and macroalgae increases. Declines in diversity and abundance of coral reef fishes due to coral bleaching have been observed elsewhere, and it is likely that these events had significant effects on local fish communities in the region. At the same time, mass fish kills were observed on the Coral Coast of Fiji and in Vanuatu. In both locations, water temperatures on reef flats were reported to be consistently over 30°C and in Fiji as high as 35°C. The influence of higher water temperatures on oxygen concentrations are thought to be responsible for this mass fish mortality. Data abundance in Nauru is not as strong as these countries, but it is likely similar impacts have occurred considering the historical trends.</p>
<b>Invertebrates (shellfish)</b>	<p>Many invertebrate species are harvested in the Pacific islands for subsistence, sale at local markets and/or export. For the purpose of the analysis we consider only those that are important for coastal fisheries and aquaculture – crustaceans, molluscs and Echinoderms. Harvesting of sea cucumbers to supply the bêche-de-mer (dried sea cucumber) export trade supports livelihoods across the region. However, the ease with which sea cucumbers can be collected and their high value has led to</p>	<p><b>Ocean acidification</b> is expected to increase with increased levels of atmospheric CO<sub>2</sub> and increased sea surface temperature. This will negatively affect calcifying invertebrates, including molluscs, crustaceans and</p>

Fish category	Description and status	Climate change impacts
	<p>widespread overfishing, with fisheries in many PICTs now closed. Bivalve molluscs, in particular giant clams and ark shells, are among the most commonly harvested invertebrates in PICTs. The largest of the giant clams, <i>Tridacna gigas</i>, is now considered rare as a result of heavy fishing pressure in the past.</p> <p>A variety of crustaceans, e.g. mangrove crabs (<i>Scylla</i> spp.), spiny lobsters (<i>Panulirus</i> spp.), slipper lobsters (<i>Parribacus</i> spp.) and coconut crabs (<i>Birgus latro</i>) are also harvested in the region, largely for subsistence and sale at local markets. Coconut crabs, which are long-lived and slow-growing, are particularly vulnerable to over-harvesting and are locally depleted on numerous Pacific islands. Some commercially important molluscs and crustaceans, such as pearl oysters, shrimp and marine ornamentals (e.g. giant clams), are vulnerable to climate change and ocean acidification. For these organisms, reductions in growth, poor shell production and quality will occur under increasing SST and lower pH conditions.</p>	<p>echinoderms because, like corals, their shells, exoskeletons or skeletal elements are composed of aragonite (or high-magnesium calcite in some species). Calcifying molluscs reared under lower pH form thinner shells, and have reduced growth and lower survival rates, than those reared under normal pH conditions. Lower rates of calcification are expected to result in declines in the size and growth of molluscs for export (e.g. trochus, green snail and pearl oysters), and in the abundance of bivalves and gastropods gleaned for local consumption. Shellfish important for aquaculture in the tropical Pacific that are expected to be most vulnerable to climate change and ocean acidification are pearl oysters, shrimp and marine ornamentals, while seaweed may benefit in some locations depending on the influences of increasing SST and rainfall. Further to this, calcifying invertebrates play a critical ecological role in tropical reefs and are consumed by many fin fish species. Increase acidification and decreases in the abundance of invertebrates will therefore result in reduced abundance of edible fish species from the reef. Therefore, climate change under predicted scenarios is expected to negatively impact reef ecosystem health and reduce food security.</p>
Pelagic fish	<p>A range of large and small pelagic fish species are found in Pacific waters. Although there are few data quantifying biomass or the catches of these species, it is estimated that ~30% (around 43,000 t) of the total coastal fisheries catch in the region is comprised of nearshore pelagic species, while four species of tuna are targeted by oceanic fisheries. The most common larger species are skipjack tuna <i>Katsuwonus pelamis</i>, South Pacific albacore <i>Thunnus alalunga</i>, bigeye tuna <i>Thunnus obesus</i>, yellowfin tuna <i>Thunnus albacares</i>, wahoo <i>Acanthocybium solandri</i>, mahi mahi <i>Coryphaena hippurus</i>, rainbow runner <i>Elegatis bipinnulata</i>, Spanish mackerel <i>Scomberomorus commerson</i>, billfish (Istiophoridae) and sharks (SPC 2013). The smaller pelagic species mainly comprise mackerels (Scombridae), scads (Carangidae), flying fish (Exocoetidae), pilchards and sardines (Clupeidae) and anchovies (Engraulidae).</p>	<p>Observations of climate change impacts on pelagic fish species have been more elusive than for demersal fish<sup>43</sup>. In the Pacific Islands region, this is due to the strong influence of climate variability on the distribution of tuna and billfish. For example, the locations where skipjack tuna biomass is predicted to be highest are strongly influenced by the El Niño Southern Oscillation (ENSO), varying up to 4,000 km of longitude between El Niño and La Niña events</p> <p>Under a high emissions scenario, catches of skipjack tuna for the western Pacific are estimated to decline by an average of more than 20%. Across the entire region, total catch is projected to decrease by 7.5% under the same scenario by 2100. For bigeye tuna, small decreases in catch (usually less than 5%) are projected by 2035. Catches are projected to decrease by 10% to 30% for many Pacific countries under the high emissions scenario in 2100<sup>44</sup>.</p>
Sharks and rays	<p>Sharks and rays are mainly taken in two distinct fisheries: (i) pelagic species caught in association with tuna fisheries; and (ii) coastal species taken as target or incidental catch by small-scale coastal fishers. However, there are reports of some illegal, unreported and unregulated (IUU) fishing activity targeting sharks (oceanic and coastal) in the Pacific, primarily for their fins.</p> <p>The main pelagic sharks captured include silky sharks (<i>Carcharhinus falciformis</i>), blue sharks (<i>Prionace glauca</i>), ocean whitetip sharks (<i>C. longimanus</i>), as well as hammerheads (<i>Sphyrna</i> spp.), thresher sharks (<i>Alopias</i> spp.) and mako sharks (<i>Isurus</i> spp.) (SPC Oceanic Fisheries Program 2010). Significant numbers</p>	<p>Predicting the effects of climate change on Pacific sharks and rays is challenging due to: (i) the lack of knowledge about the status and ecology of these species; (ii) the diversity of these species (e.g. they have six different modes of reproduction); and (iii) their position as higher order predators, which means that indirect impacts may depend on the impacts to – and responses of – lower trophic level species to climate change. There is limited information about the effects of climate change on sharks and rays in the Pacific, apart from a systematic risk assessment in the Great Barrier Reef. No observed changes have been reported and the lack of data on existing patterns of diversity and occurrence make it difficult to identify climate related changes in range and movements. However, experimental evidence suggests that some species may be adversely affected by rising sea temperatures and ocean acidification, especially reef</p>

<sup>43</sup> Pecl et al. (2017)

<sup>44</sup> Asian Development Bank (2013) The Economic of Climate Change in the Pacific.



Fish category	Description and status	Climate change impacts
	<p>of sharks have been caught in association with tuna fisheries that historically retained fins for the shark fin trade. However, long-term, accurate data on the catch of sharks in these fisheries are limited and there is great uncertainty about species-specific catch rates, catch fate and trade.</p> <p>However, there are several indications that sharks are under significant pressure in the Pacific. As a result, several species of pelagic sharks have been listed on Appendix II of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), and the WCPFC has a no-retention requirement on some of these species. Some other species of conservation interest, such as whale sharks (<i>Rhincodon typus</i>) and mobulid rays (<i>Mobula</i> spp.), are also sometimes caught as bycatch by purse-seine vessels (SPC Oceanic Fisheries program 2010).</p>	<p>species that are dependent on sustainable fish populations for prey.</p> <p>Pelagic sharks are highly dependent on food resources, and their occurrence is closely linked to that of their prey species, which in turn, respond to oceanographic factors. As such, changes in the distribution of pelagic fishes will likely result in changing distribution patterns of pelagic sharks. These changes in movement and distribution could also affect reproduction, as pelagic shark stocks are structured by sex and size, and increased unpredictability in phenology such as location and timing of upwellings could affect provisioning and survival.</p>

Current projections anticipate declines in reef fisheries productivity of as much as 10-20% in the Western Pacific under climate change due primarily to habitat degradation<sup>45</sup> caused by coral bleaching and ocean acidification. Other estimates predict a decline of up to 50% of the production of coastal fisheries from coral reefs by the end of the century<sup>46</sup>. Within the coastal fisheries sector, the effort of small-scale fishers will need to be increasingly transferred from demersal fish associated with coastal habitats, to currently under-utilised species such as large and small pelagic species, including skipjack, yellowfin tuna and squid. Table 4 below shows the projected changes in the production of the three categories of coastal fisheries and total coastal fisheries production by 2050 and 2100 under a high emission scenario.

Table 4 - Projected changes in production of the three categories of coastal fisheries, and total coastal fisheries production, in 2050 and 2100 under a high emission scenario in the West and East Pacific regions

Variable		Coastal fisheries category				Total coastal fisheries	
		Demersal fish	Nearshore pelagic fish		Invertebrates	West	East
Contribution to coastal fisheries production		56%	28%		16%	West	East
Change in production due to climate change	2050	-20%	-10%	+20%	-5%	-10 to -20%	-5 to -10%
	2100	-20 to -50%	-15 to -20%	+10%	-10%	-20 to -35%	-10 to -30%
Main direct and indirect effects of climate change		Habitat loss, and reduced recruitment (due to increasing temperature and reduced water movement)	Reduced production of zooplankton in food webs for non-tuna species and changes in distribution of tuna		Habitat degradation, declines in aragonite saturation due to ocean acidification		

The projected changes in maximum catch potential varied substantially across Exclusive Economic Zones (EEZs) in different regions. Averaged across the two climate-Last Millennium Reanalysis models, EEZs that

<sup>45</sup> (Pratchett et al. 2011, Bell et al. 2016)

<sup>46</sup> Bell et al (2016) Climate change and Pacific Island food systems. CCAFS and CTA.

show the largest decrease (more than -40%) by the end of the century are in tropical countries, mostly in the South Pacific regions. These tropical countries include Nauru, in addition to Kiribati, Tuvalu, Ecuador, Palau, FSM and Tokelau<sup>47</sup>, as detailed in Table 5 below.

*Table 5 - Projected changes in catch potential (%) by 2050 and 2100 relative to 2000 under RCP2.6 and RCP8.5 based on outputs from the dynamic bioclimate envelope model and the dynamic size-based food web model. The table shows the average change for Nauru EEZ*

DBEM model: Mid Century RCP2.6		DBEM model: Mid Century RCP8.5		DBEM model: End of Century RCP2.6		DBEM model: End of Century RCP8.5	
Average	Range	Average	Range	Average	Range	Average	Range
-45.16	78.51	-98.86	1.85	-42.48	29.01	-99.81	0.13
Dynamic size-based food web model: Mid Century RCP2.6		Dynamic size-based food web model: Mid Century RCP8.5		Dynamic size-based food web model: End of Century RCP2.6		Dynamic size-based food web model: End of Century RCP 8.5	
Average	Range	Average	Range	Average	Range	Average	Range
-26.44	35.97	-36.53	28.98	-11.63	31.24	-55.32	41.10

### **Impacts on coastal and reef ecosystems**

The increase in ocean acidification is expected to impact on coral physiology (calcification rates, ability to repair tissues and growth), behaviour (feeding rate), reproduction (early life-stage survival, timing of spawning) as well as weaken calcified structures, and alter coral stress-response mechanisms<sup>48</sup>, with impacts on population dynamics of individual species from phytoplankton to animals (medium to high confidence)<sup>49</sup>. As shown in Figure 7 above, for the Pacific region and Nauru projections show that under low emissions (RCP2.6) in terms of aragonite saturation state, the conditions for coral remain favourable for corals within this century. Under medium emissions (RCP4.5) and high emissions (RCP8.5) the projections for all Pacific Islands transition from good to marginal conditions in the 2030s period. However, under high emissions (RCP8.5), ocean acidification continues to increase and conditions transition from marginal to very marginal conditions by 2060s, to levels at which corals are not present by the end of this century<sup>50</sup>.

The disappearance of coral reefs is likely to have profound impacts on marine ecosystems and the economies and livelihoods they support. Such changes combined with ocean warming and other stressors are likely to be catastrophic. As the dominant coastal habitat in the tropical Pacific, corals are the fundamental structures supporting coastal and marine species of fish, invertebrates, algae and plants. Their decline or worse, their disappearance, would result in an unprecedented decline of coastal fisheries activities, which would jeopardize the food and income security of the communities who depend on small-scale coastal fishing. Additionally, coral reefs form a mosaic of habitats along with mangroves and seagrasses, which sustains a diversity of organisms, greater fish productivity, and protect the coastline against erosion. Coral reefs and adjacent ecosystems are intrinsically linked through sediment capture, localised pH buffering and linked life cycles of some fish species<sup>51</sup>. Together, these habitats substantially improve coastline protection than any one habitat alone<sup>52</sup>. Therefore, any declines in any of the three ecosystems will most likely affect the other two.

Mangrove areas in some locations are projected to decline due to sea-level rise<sup>53</sup>, more intense cyclones, and changes in rainfall patterns<sup>54</sup>. Rising sea level would allow minimum shore zone for mangrove development or shore stability; with an early period of increased coastal erosion and destabilizing sedimentation as catchment streams and shorelines adjusted to new and changing base levels, thus negatively affecting corals<sup>55</sup>. Therefore,

<sup>47</sup> FAO (2018) Impacts of climate change on fisheries and aquaculture. Synthesis of current knowledge, adaptation and mitigation options. Technical paper no. 627.

<sup>48</sup> Fabricius et al. (2015) In situ changes of tropical crustose coralline algae along carbon dioxide gradients, *Sci-Rep*.

<sup>49</sup> Fabricius et al. (2011) Losers and winners in coral reefs acclimatized to elevated carbon dioxide concentrations, in *Nature Climate Change*, 1: 165-169.

<sup>50</sup> Lenton et al. (2018) Effects of Climate Change on Ocean Acidification Relevant to the Pacific Islands, in *Science Review* pp. 31-42.

<sup>51</sup> (Albert et al., 2017; Atkinson et al., 2016)

<sup>52</sup> (Guannel et al., 2016)

<sup>53</sup> (Veitayaki et al., 2017)

<sup>54</sup> (Waycott, 2011)

<sup>55</sup> Leo et al. (2018) Effects of Climate Change on Corals Relevant to the Pacific Islands, in *Science Review*, 132-158.

widespread degradation of corals is expected due to coastal erosion associated with SLR. Seagrasses have already shown sensitivity to the effects of increased turbidity due to flooding and their area is expected to decrease by 5–35% by 2050 due to increased runoff from more extreme rainfall. Although the land area covered by mangroves is only 0.17% in Nauru (representing 0.036 km<sup>2</sup> covering two species)<sup>56</sup>, the ecosystem services and functions they provide are essential for health stocks of fish and invertebrates. This is particularly important for mangrove dependent species which are limited to the small coverage of mangrove area in the country. The protection of healthy ecosystems in this setting is therefore crucial in the face of climate change, whose impacts on mangrove and seagrasses can contribute to the degradation of crucial and limited fish and invertebrates' habitats, which in turn impact fish catch and productivity of the coastal fisheries sector. Ultimately, this could have a negative impact of food security under predicted climate scenarios.

### **Impacts on aquaculture**

Climate change impacts on aquaculture production are expected to be both direct and indirect. The direct effects include influencing the physical and physiology of finfish and shellfish stocks in marine production systems (open systems), while indirect effects may occur through altering the primary and secondary productivity, and structure of the ecosystems, input supplies or by affecting product prices, fishmeal, and fish oil costs, and other goods and services needed by fishers and aquaculture producers<sup>57</sup>. The main climate change drivers that threaten the production and sustainability of the aquaculture sector include rising temperature, ocean acidification, diseases and harmful algal blooms changes due to changes in rainfall and precipitation patterns, SLT, changes in sea surface salinity and extreme climate events. The impacts of these drivers primarily relate to aquaculture production carried out in open settings, such as Buada lagoon. However, these impacts are reduced and mitigated in controlled aquaculture environments (closed systems) such as tanks and ponds equipped with appropriate recirculation, filtration and temperature and lighting control systems.

From a social perspective, a positive impact of ocean acidification impacting lagoon based aquaculture is that this provides an opportunity for aquaculture producers to expand operations or for job diversification from fishers to aquaculture systems. Ultimately, this may provide more employment opportunities to local communities as labour needs will rise in response to the growing demand, thereby favouring the social and economic sustainability of aquaculture production. Success in the sector and profitable incomes, coupled with increased fish availability, will result in reduced subsistence fishing and lead to reduced pressure on local reefs allowing greater recovery and ecosystem health in the face of predicted climate change.

Effects of climate change on milkfish (*Chanos chanos*) production in Nauru include a) flooding off lagoon based farms during heavy rains, b) increased fish mortality and disease incidence and outbreaks lagoon or open farms, and c) higher temperatures adversely affecting the migration of wild milkfish to coastal areas for spawning purposes, reducing availability milkfish fry. In the past Milkfish production was much more dependent on wild fisheries for the collection of wild brood stock and collection of wild fry. However, brood stock can now be grown in closed systems until they reach the desired age or size for breeding. Controlled systems can then induce spawning and result in greater fry production for aquaculture sectors that are impacted by loss of wild fry capture as a result of climate change induced shifts in wild population dynamics.

### **Socioeconomic impacts of climate change**

The socio-economic risks from climate change impacts in Nauru largely relate to the negative impacts on coastal fisheries and aquaculture sectors induced by climate change. Impacts fall under three main areas: (i) food security, (ii) livelihoods, and (iii) economic development and government revenue (from oceanic commercial fisheries, described in the section below). These all relate to the primary goods and services and cultural significance that fish and shellfish provide to Pacific communities. In addition, given the finite amount of coastal marine resources and increasing population pressure, there is growing “competition” between subsistence fishers for food, and commercial fishers for income, leading to poaching and the undermining of coastal management arrangements.

<sup>56</sup> Ellison et al. (2018) Effects of Climate Change on Mangroves Relevant to the Pacific Islands, in Science Review pp. 99-111.

<sup>57</sup> Maulu S, Hasimuna OJ, Haambiya LH, Monde C, Musuka CG, Makorwa TH, Munganga BP, Phiri KJ and Nsekanabo JD (2021) *Climate Change Effects on Aquaculture Production: Sustainability Implications, Mitigation, and Adaptations*, in *Frontiers in Sustainable Food Systems*.

Population growth and high demand for fish combined with the inadequate management of coastal fish habitats and stocks have resulted in a widening gap between the amount of fish recommended for good nutrition and sustainable catches from coastal fisheries<sup>58</sup>. The effects of ocean warming and acidification on coral reefs, and the effects of climate change on mangrove and seagrass habitats, are expected to widen this gap. The capacity of PICTs as a whole and Nauru in particular to provide the recommended 35kg of fish per person per year for good nutrition and food security is jeopardized due to direct and indirect climate change impacts on coastal fish stocks, and on their habitats (coral reefs, mangroves and sea grasses). According to an assessment conducted by Bell et al. (2017), Nauru fits into the third category of PICT where coastal fisheries **cannot** meet the increased demand for fish for adequate food security of their growing populations over the long-term.

### ***Climate Impacts on health***

Many countries of the Pacific region currently experience poor health status that may be further exacerbated by climate change. Nauru, like other Pacific islands, faces a triple public health burden of communicable diseases, noncommunicable diseases (NCDs) and the health impacts of climate change<sup>59</sup>. In Nauru, life expectancy at birth is one of the lowest in the region at 55 years, and in 2011, diabetes prevalence (as % of the total population aged 20 to 79) was 20.4%<sup>60</sup>, a number thought to have increased in recent years due to the increased dependency on nutritionally poor food imports for domestic food security.

Climate change would have both direct and indirect effects on health. Direct impacts include declines in nutrition due to lack of abundance of coral reef fishes due to coral bleaching due to rising ocean temperatures. Ocean acidification is projected to have the greatest range of direct and indirect impacts on the distribution and abundance of demersal fish and invertebrates. Indirect impacts include changes in coastal fish habitats, which in turn result in lower reproduction and survival rates, and changes in metabolic growth rates, and therefore reduced fish stocks. The projected rise in sea-level would reduce the growth of protective mangroves along the coast. As many coral reef and coastal fish species depend on mangroves and seagrasses as nursery areas; if the mangroves and seagrass decline, so will fish populations.

These combined effects of climate change are expected to significantly reduce the productivity of coastal fisheries, especially for small-scale fishers. The repercussions of these impacts on food security and nutrition are significant for Nauru. There is growing concern over the *quality and nutritional value* of available food on the island. As explained previously, Nauru is fully dependent on imports for its food security, although a significant share of the population engages in small-scale fisheries for subsistence purposes. The reduced availability of reef fish species will directly and negatively impact the nutrition of local communities in Nauru, as coastal fish resources will not be sufficient to meet the required quantity of fish for adequate nutrition. Unbalanced diets will, over the long-term, result in higher rates of NCDs. This is shown above with the very high level of diabetes occurrence in the country.

## **B. Barriers to adaptation**

For the development of the RONAdapt, a comprehensive analysis of identified vulnerability factors was provided in the study<sup>61</sup>. In addition to the vulnerability factors described in RONAdapt and the projected climate change impacts described above, the following barriers to adaptation specifically relating to the coastal fisheries and aquaculture sectors can be identified. For each barrier, a description details how these considerations have been included in the project design, and how the project will address these barriers.

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<sup>58</sup> Bell et. Al (2018) Adaptations to maintain the contributions of small-scale fisheries to food security in the Pacific Islands, in Marine Policy, vol. 88, pp. 303-314.

<sup>59</sup> World Health Organization (2017) Nauru-WHO Country Cooperation Strategy 2018-2022.

<sup>60</sup> World Bank (2021) World Development Indicators. Diabetes prevalence (% of population ages 20-79) in 2011. Accessed 29/12/2021.

<sup>61</sup> <https://www.refworld.org/pdfid/5b3f74384.pdf>

Table 6 - Barrier analysis and project approach to overcome the barrier

Barrier to adaptation	How the project will address the barrier(s)
<b>Information barriers</b>	
<p><b>Inadequate information on coastal ecosystems and fisheries and impacts of climate change to inform marine planning and management.</b> While several coastal ecosystems and fisheries surveys have been initiated or partially conducted, the NFMRA's capacity to collect, analyse and disseminate relevant data on a regular basis is limited – thus no solid baselines exist. The lack of information collection and knowledge management systems impedes the NFMRA's ability to base strategic and major projects planning based on robust and localised evidence and therefore to ensure interventions are fit for purpose and proportionate. It also impedes their ability to disseminate and communicate empirically collected, localised and up to date information to communities and stakeholders that are the evidence base for ecosystem protection and fisheries management measures. For example, it is noted that “[I] little data is available on the status of near shore fisheries habitats ... coastal habitats, [or] links between land-based contaminants and coastal water degradation and coastal habitat status”.</p>	<p>Under Output 1.1, the proposed project will provide technical support in the form of “hands-on” training to new and existing NFMRA officers on a number of topics related to coastal fisheries, marine ecosystems and aquaculture. Topics will include bio-oceanographic monitoring, ecological modelling and ecological risk assessments which will ensure there is sufficient national capacity to predict resource availability, to inform and adjust conservation measures in coastal and reef areas, and to enhance sectoral planification. Additionally, Output 3.1 will be dedicated to the establishment of a Knowledge Management Strategy (KMS) to enhance government-community collaboration for improved ecosystem health and productivity. The project will support the provision of marine monitoring stations to support the NFMRA's existing data collection efforts and the establishment of an environmental surveillance group between NFMRA officers and community fisheries management committees, to monitor among others reef catch, compliance with quotas and coral reef health in alignment with objectives and provisions under the CFA Act.</p>
<p><b>Inadequate institutional and technical capacity of GoN stakeholders and NFMRA to assess and implement climate change adaptation solutions and planning processes in a socially inclusive manner.</b> It is noted that overall Government capacity to manage its climate change program is limited. The Government's ability to robustly link identified climate vulnerabilities to adaptation options appraisal and project feasibility testing and detailed design is limited. As a small Pacific Island Country, with a small pool of generalist technical staff there are significant gaps in national technical expertise to develop viable interventions with a strong climate nexus, that are proportional to the changing scale of the issues and national budget capacities. National capacity to assess positive and negative project impacts in line with national environmental policy or multi-lateral safeguards policies is limited, and will be a continuing barrier to accessing external funding. While mandated to execute national coastal fisheries and aquaculture policy and legislation, the NFMRA has limited technical capacity to manage major strategic environmental and natural resource management planning processes.</p>	<p>The proposed project will address this barrier by providing technical support and recommendations to the GoN to develop an implementation plan for the Coastal Fisheries and Aquaculture Act of 2020 and the Environment and Climate Change to ensure the frameworks fully account for projected climate change impacts and achieve greater resilience. The CFA Act, which was supported by UNDP as part of the R2R project is delayed in its implementation due to capacity constraints, and does not include a list of potential adaptation solutions or options to increase the resilience of coastal fisheries and marine ecosystems. The support provided will enable the development of a climate change-aware roadmap for implementation, with clear resource allocation, timelines, milestones, and monitoring arrangements. Further, the national awareness campaign will include the organisation of government-community workshops to discuss the CFA and CC Acts implementation plan, roles, responsibilities and accountability channels to ensure the successful and timely roll out of its provisions.</p>
<b>Technical barriers</b>	
<p><b>Limited natural resource base and potential of reef fisheries:</b> Nauru's reef area is too small to support commercial development of reef fisheries, with perhaps one or two exceptions: aquarium fish for export, and invertebrate export fisheries<sup>62</sup>. For the latter, it is doubtful that the resource base would withstand more than a few sacks per year (for sea cucumber and surf redfish). In both cases, the economic value of these activities is unlikely to provide a sustainable income for local populations over the long-term<sup>63</sup>.</p>	<p>One of the project's key objectives is to provide support and incentives to enable the sustained uptake of aquaculture production in Nauru, as a means to adapt to climate change, create income diversification opportunities, enhance food supply and quality, and relieve human pressure on climate vulnerable coastal and reef ecosystems. To do so, in addition of the capacity building support to be provided under Output 1.1. and Output 2.2 to both NFMRA officers and coastal communities respectively, the project will establish a mini-grant facility to finance small-scale aquaculture production ponds and equipment as well as community-led coastal conservation projects, in order to divert pressure away from vulnerable coastal fisheries and to generate higher income opportunities</p>

<sup>62</sup> Ibid., pp. 5-6

<sup>63</sup> Ibid.

Barrier to adaptation	How the project will address the barrier(s)
	<p>through milkfish production. Under Output 2.1, the project will support the establishment of sea cucumber raceways at NFMRA's site to enable re-stocking efforts of this species with both commercial and ecological conservation potential. Lastly, under Output 3.1 the proposed project will finance the provision of marine monitoring systems and support the establishment and sustainability of a government-community collaborative environmental surveillance group which will enable the long-term monitoring of coastal resources and ensure the success of ecosystem restoration activities.</p>
<p><b>Long history of maladaptation in the fisheries and aquaculture sector:</b> In 1961, the Mozambique tilapia was introduced to Buada lagoon as a biological control for mosquitoes. As a result, tilapia infested the lagoon to the detriment of milkfish, as it drains out the available natural food source for milkfish in the lagoon. This resulted in the slow growth of milkfish, taking them longer to grow to edible size, which led many milkfish farmers to abandon their traditional practice of raising milkfish. More recently, the FAO in 1981 launched an eradication programme but was unsuccessful, as were several other attempts. In 1991, the FAO SPADP project demonstrated that it was possible to raise milkfish in coexistence with tilapia; simultaneously a Taiwanese project achieved faster growth using more intensive methods but the capital costs were considered prohibitive, due to the import of all necessary supplies for production (fry, feed, tools, equipment etc.). Semi-intensive farming methods were introduced in Anabar pond by Taiwan in early 2001, using imported formulated feeds, nets, water pumps and aerators to enhance water quality and fish growth rates. Fish from the farm were accepted by the local communities and considered to be of high quality, however the dependence of this method on imported goods poses issues with regards to its sustainability over the long-term.</p>	<p>Although Buada Lagoon has been the epicentre of aquaculture production in Nauru for decades, the proposed project will aim to incentivise communities to establish aquaculture production ponds elsewhere on the island. This choice is informed by the geographical nature of Buada Lagoon, which has a limited surface area, and land ownership constraints which do not allow for further expansion of aquaculture activities at this site. Further, the costs associated with the elimination of tilapia in the lagoon and with its rehabilitation far exceed the potential adaptation benefits that would be generated. This essentially removes the risk of maladaptation or inadequate use of project resources with regard to the tilapia infestation issue at Buada Lagoon.</p> <p>In addition, the project will utilize a small-scale, low-cost approach to pond aquaculture production by supporting the development of a domestic supply chain for milkfish feed and fry, which will greatly reduce the reliance on imported goods, as well as the investment and operational costs to produce milkfish. Coupled with the provision of training for NFMRA extension officers, this will demonstrate the economic viability of milkfish farming which is a strong argument for long-term sustainability of this initiative, with little to no potential impact on existing environmental systems, and very limited risk of maladaptation. Sustaining these results will be made possible through the provision of technical support to all stakeholders involved in aquaculture production and planning, from NFMRA officers to local communities.</p>
<p><b>Disrupted value chain for aquaculture production:</b> The majority of milkfish fry has been imported from Kiribati since the 1980s, a practice which continues to this day. A number of ponds in Buada lagoon are now used to rear fry until it is ready to be farmed. The Buada Lagoon Owners Association (BLOA) introduced 10,000 milkfish fry from Kiribati, but the uptake of milkfish fry farming has not followed due to both a lack of capital, and a lack of technical capacity. Additionally, climate change and environmental degradation impact the distribution and quantity of wild milkfish fry, reducing its availability for small and commercial scale aquaculture production. Lastly, the COVID-19 pandemic disrupted freight for the import of goods, including milkfish fry and feed, which has brought a halt to the supply which continues to this day, further hampering the development of the aquaculture sector.</p>	<p>To address this barrier, the project will support the development of a domestic supply chain for milkfish fry by financing the construction of a hatchery, a brood stock tank, and fry tanks at NFMRA's aquaculture facilities site. Jointly, the project will provide training to NFMRA officers in production methods of milkfish fry and milkfish hatchery management to secure the sustainability of the initiative. Additionally, the project will aim to develop a supply chain for domestic feed production, by experimenting with different milkfish feed options in ponds with a view to reduce by-catch waste, and providing equipment to farm rotifers. This will directly increase the resilience of the aquaculture sector by removing the reliance on depleting and climate-vulnerable wild milkfish fry, and by improving the livelihoods of local aquaculture operators in the long-term by reducing costs relating to milkfish production and therefore increasing income.</p>
<p><b>Financial barriers</b></p>	
<p><b>Lack of finance for infrastructure and project management for resilient livelihoods development.</b> Despite the central importance of the sector for the livelihoods of Nauruan communities, there is a lack of equipment and infrastructure for promoting and valuing fishing products and by-products. This explains the subsistence nature of fishing activities. The RoN have limited national finance to fund CAPEX construction of</p>	<p>The proposed project specifically aims to remove barriers relating to the access of finance for the development of small-scale aquaculture. Through the establishment of a mini-grant facility, the project will unlock access to finance for existing and new aquaculture operators, who so far have been unable to invest in infrastructure due to the risk-averse behaviour of national banks and the inability of the GoN to finance CAPEX</p>

Barrier to adaptation	How the project will address the barrier(s)
<p>infrastructure and technical studies associated with aquaculture and major coastal protection measures. While operational expenditures associated with ongoing management of aquaculture and other potential infrastructure are able to be funded through enterprise revenue and national budgets, substantial capital inputs are required to establish viable aquaculture operations and value chain infrastructure. The lack of investment in aquaculture specifically, results in lower national food and income security nationally and a major lost opportunity for alternative fisheries.</p>	<p>construction of facilities. By offering a holistic approach to sectoral development through the provision of capacity building and financing, the proposed project will strengthen the resilience of livelihoods and vulnerable coastal and reef ecosystems by enabling the upscale of aquaculture operations. The sustainability of this approach will be ensured through enhanced accountability mechanisms between government, NFMRA and community stakeholders and the establishment of domestic supply chains for aquaculture production inputs.</p>
<p><b>Difficult access to climate and development finance:</b> Small projects appropriate for Nauru are not eligible for many international and bilateral funds, as Nauru is not classified as a Least Developed Country; coupled with low credit worthiness due to existing levels of public debt and unreliable revenue streams to service debt; and high per capita cost of projects. The future of Nauru's regional processing centre is expected to determine Nauru's future economic position<sup>64</sup>. Adaptation and disaster risk reduction efforts are hampered by Nauru's lack of economic independence and its inaccessible location. Without support, and innovative approaches, climate change threatens to drive poverty and inequality<sup>65</sup>.</p>	<p>Nauru's economic prospects are dire considering identified climate change impacts which will result in changes in the distribution and quantity of tuna resources, as fishing licenses account for more than a quarter of annual government revenue. Additionally, the extreme dependency on imports for 90% of all food consumed on the island has directly contributed to an unprecedented drop in national food availability and quality, resulting in nutritionally poor diets and a rise in non-communicable diseases.</p> <p>Nauru's journey to climate change resilience as a whole must start with the creation of income diversification and generating opportunities, with a view to divert pressure away from climate-impacted coastal and oceanic fisheries resources, towards greater food security, nutrition and sustained income. To this end, the project will utilize an integrated approach for the uptake of formerly central aquaculture sector, in particular for the production of milkfish. Injection of CAPEX for development as well as securing a local supply of feed and fry will kickstart local business in the aquaculture sector. After, this kickstart the project beneficiaries will lead to increased revenues and livelihoods. This will allow for greater investment from a local level leading to improved systems in the sector and contextual learning from operations. Ultimately, this enhanced revenue and invest in the local system will result in reduces dependence on climate finance from international sources, supporting Nauru in becoming more self sufficient and sustainable in the face of climate change.</p>
<b>Policy / Institutional barriers</b>	
<p><b>Failure to implement an aquaculture development plan:</b> The GoN is willing to invest annually in aquaculture systems to support an ongoing process and ensure sustainability and maintenance of an established system. However, upfront investment costs for the development of Nauru's aquaculture sector are more expensive than what can be financed, particularly the construction for new facilities that are needed under the 2005 National Aquaculture Development Plan. In this line AF resources are targeted to support the GoN meet the upfront costs whilst national resources will ensure sustainability in the long term of the NFMRA infrastructure. Additionally, there has been a drop in the number of people engaging in aquaculture operations in recent years, due to barriers such as lack of access to financing instruments, lack of technical capacity and inconducive policy frameworks. Provisions to develop an updated National Aquaculture Plan under the CFA Act of 2020 constitute the first ever successful policy framework to be enacted, but stakeholder consultations conducted as part of this project design revealed that the implementation of provisions related to aquaculture have</p>	<p>Output 1.1, will provide recommendations and support to the GoN and NFMRA to develop a roadmap for the implementation of aquaculture provisions, using lessons learned and best practices for the uptake of small-scale aquaculture production in Nauru. This will support the implementation of the updated National Aquaculture Development Plan. Overall, the proposed project will aim to provide the necessary tools and knowledge to GoN and NFMRA officers to enable the effective implementation of aquaculture activities under the Act. Further, under Output 2.1, the project will address barriers relating to the access of finance from communities and to support GoN current annual investments to cover extensive upfront cost for aquaculture infrastructure development through the establishment of a community-managed mini-grant facility to finance the construction of small-scale aquaculture infrastructure (ponds, production equipment, grow-out ponds etc.). Taken together, these activities will directly contribute to incentivise local communities to re-engage in aquaculture production, and in doing so will increase their adaptive capacity</p>

<sup>64</sup> R. Curtain and M. Dornan (2019) A pressure release valve? Migration and climate change in Kiribati, Nauru and Tuvalu, Development Policy Centre.

<sup>65</sup> World Bank (2021) Nauru Climate Change Risk profile.

Barrier to adaptation	How the project will address the barrier(s)
<p>not started more than 1 and ½ years after the Act, made worse under the COVID-19 pandemic that restricted the importation of milkfish fry from Kiribati. This highlights the need to move away from dependence on international fry sources.</p>	<p>through increased income opportunities and increase the resilience of vulnerable coastal and reef ecosystems by alleviating fishing pressure in these areas.</p>
<p><b>Repeated failure to establish community-based management structures for coastal fisheries:</b> “Community consultations were held, and legislation to enable the management of coastal fisheries was drafted in 2006 and 2007 with the assistance of SPC, but some of the concepts proposed in that draft, particularly the concept of giving communities rights to manage nearby reef-areas, apparently proved contentious due to land disputes and the draft legislation has not yet been laid before government”<sup>66</sup>. Over the past two decades, there have been an important number of attempts to establish community-based management structures for the management of coastal resources as well as for sustainable land management. Stakeholder consultations conducted as part of the project design shed light on the barriers hampering CBFM to take place in Nauru, which include the lack of government-community collaboration and communication channels, a lack of awareness on the part of communities of climate change impacts on coastal and reef resources and their implications on livelihoods, and insufficient technical capacity to implement adaptation solutions for more resilient fisheries management.</p> <p>Since those failed attempts, and with the support of UNDP through the R2R project, provisions for community-based fisheries management were included in the 2020 CFA Act, but implementation was reported to be slow<sup>67</sup>.</p>	<p>Output 1.2 will organize a nationwide awareness campaign to promote the provisions enacted under the CFA Act of 2020, which includes the formation of community-based fisheries management committees and supports community-led marine resource planning and management. Simultaneously, the project will provide technical support to the NFMRA to implement workshops and field trips to coastal communities on the utilization of sustainable fishing gear and FADs in addition to sharing knowledge and best practices relating to the implementation of community-based fisheries management plans. Further, under the activity the project will support this mainstreaming of climate resilience into the workshops and activities conducted by the NFMRA. As part of Output 1.2 and onwards, the project will support frequent consultations between communities, community fisheries management committees and The Coastal Fisheries Advisory Council (incl. GoN stakeholders and NFMRA) as laid out in the CFA Act. Notably, under Output 3.1 the project will support knowledge and data generation and dissemination by establishing a government-community environmental surveillance working group to collect key data on marine resources, ecosystem health, and fisheries.</p>
<p><b>Social and gender barriers</b></p>	
<p><b>Open access tenureship results in a lack of regulations and framework for fishing in coastal and reef areas:</b> The economic downturn following the collapse of the nation’s phosphate mining has driven the majority of households on the island to glean and fish anywhere, including outside of residential districts. Nauru’s open-access tenureship means that everyone is free to fish anywhere on the island. This is very different from other Pacific Island countries. Because of the lack of traditional authority, the protocols seen in other Pacific countries are not practised in Nauru. There are no customary regulations, district laws or unwritten understandings on fishing activities, such as size limits, quotas, gear restrictions, use of scuba, or imports (for coastal species).</p>	<p>The project will provide continued support to the NFRMA to promote collaboration and dialogue between government and community stakeholders to establish regulations on coastal fisheries activities, including size limits and quotas in designated fisheries management areas under Output 1.1. Additionally, under Output 2.2, by enabling the financing of small-scale projects in coastal restoration, the project will support the community-based management of fisheries resources, and under Output 3.1 provide community fisheries management committees with adequate technical knowledge and capacity, the project will raise awareness of communities to comply with new fishing regulations to allow for the restoration of climate-impacted coastal and reef resources.</p>

### C. Project/Programme Objectives:

The proposed project aims to utilize an integrated approach to natural resource management and utilization to address a number of long-standing barriers that have hampered the implementation of climate adaptation solutions with regards to Nauru’s coastal fisheries and aquaculture sectors. Further, historical obstacles to the sustainability of these sectors have been exacerbated by the COVID-19 pandemic which shed light on the country’s extreme reliance on exports for its food supply and aquaculture supply chain, which resulted in increased human-induced pressure on climate-vulnerable coastal and reef ecosystems. These ecosystems are increasingly vulnerable to climate change impacts such as warming ocean temperatures, resulting in extensive damage caused by coral bleaching, which in turn causes depleting fish stocks and biodiversity. The overall aim of the project is to provide the necessary tools and human capacity to accelerate the implementation of

<sup>66</sup> NFMRA (2012) Corporate Plan.

<sup>67</sup> Insight gained in stakeholder consultations conducted as part of the project design.



sustainable national coastal fisheries plans and conservation measures to protect vulnerable coastal ecosystems, and to enable the scale up of aquaculture operations to increase the climate resilience of livelihoods and health of local communities.

In light of the above, the project objectives can be summarized as follows:

- The climate resilience of Nauru's domestic fisheries and aquaculture sectors is enhanced to result in greater food security, nutrition and ecosystem health under predicted climate change scenarios
- The adaptive capacity of fisheries-dependent communities is increased as a result of enhanced practices and knowledge of sustainable, climate-aware practices
- The adaptive capacity of national institutions is enhanced through the mainstreaming of climate change resilient approaches in key climate vulnerable sectors

## D. Project/Programme Components and Financing:

Outcome	Expected Concrete Outputs	Amount (US\$)
Outcome 1: Strengthened policy and planning strategies together with increased technical ability of civil servants and communities enable an integrated approach to climate change and development challenges	Output 1.1. Capacity enhancement of national institutions to mainstream climate change resilience across the coastal fisheries and aquaculture sectors.	\$1,054,020
	Output 1.2. Awareness raising campaigns conducted to enhance understanding of the CFA Act and NFMRA roadmap and promote grant facility	\$280,547
Outcome 2: Improved food security and nutrition through increased farmed fish supply, increased adaptive capacity and income of aquaculture operators and reduced pressure on climate-vulnerable coastal and reef ecosystems.	Output 2.1. Provision of infrastructure to national aquaculture institutions to enhance their ability to provide training, extension services and supplies to existing and new aquaculture operators, increasing the resilience of the sector	\$749,676
	Output 2.2. Increased adaptive capacity of artisanal fishers and resilience of marine ecosystems in the face of climate variability and change	\$500,276
	Output 2.3. Grant Facility – Provision of infrastructure and equipment to enable the sustained production of milkfish for increased domestic food supply and income	\$3,342,176
Outcome 3: Increased resilience of ecosystems and adaptive capacity of communities through availability of data and knowledge sharing mechanisms for adaptation planning and environmental protection	Output 3.1. Establishment of a knowledge management strategy (KMS) to sustain climate-resilient practices in environmental and natural resource management	\$411,650
	Output 3.2. Learning and dissemination of project results	\$461,150
Project/Programme Execution cost		\$575,500
Total Project/Programme Cost		\$6,799,495
Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)		\$624,500
<b>Amount of Financing Requested</b>		<b>\$7,999,495</b>

## E. Projected Calendar:

<b>Milestones</b>	<b>Expected Dates</b>
Start of Project/Programme Implementation	01/2024
Mid-term Review	Q3 2026
Project/Programme Closing	12/2029
Terminal Evaluation	2030

### A. Project Structure

*Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.*

**Outcome 1: Strengthened institutional structures from national to community levels enable integrated climate resilience implementation in the coastal fisheries and aquaculture sectors.**

***Output 1.1. Capacity enhancement of national institutions to mainstream climate change resilience across the coastal fisheries and aquaculture sectors.***

The Government of Nauru has only recently enacted its first Environmental Management and Climate Change Act, the same year as the Coastal Fisheries and Aquaculture Act (2020). Although both Acts constitute a promising first step towards the greater consideration of environmental and climate change considerations, the CFA Act fails to address climate change as a key risk to the sustainability of the fisheries sector as illustrated by the absence of the term and associated key impacts and vulnerabilities in the Act. Further, stakeholder consultations carried out as part of the project design process evidenced that the technical capacity of staff at NFMRA, the key Authority responsible for the implementation of the Act, is insufficient to implement its provisions according to best practices and recommendations. The delayed effective implementation of provisions under the CFA Act due to reduced organisational and technical capacity as well as interinstitutional and government-community collaboration continue to prevent the translation of climate change considerations into effective adaptation interventions<sup>68</sup>. Lastly, due to the limited number and technical capacity of staff at NFMRA, data collection, monitoring and reporting efforts fall short of the needs in marine monitoring to protect coastal and reef resources, while overstretched staff are unable to provide adequate extension services to existing and prospective aquaculture operators. In light of Nauru's uncertain economic and climate change future, light needs to be shed on the economic, social and environmental potential of upscaling domestic aquaculture production and protecting coastal resources. This output aims to address the critical barriers summarised above to streamline climate change considerations pertaining to the coastal fisheries and aquaculture sectors through the following activities:

#### *Activity 1.1.1. Recommendations report and roadmap for CFA Act and CC Act*

To break with this long history of unsuccessful attempts to effectively allocate sufficient technical, financial and operational resources to implement national strategies and plans, the project will therefore support the development of a policy recommendations report and a roadmap to translate the provisions of the Coastal Fisheries and Aquaculture Act and the Environmental Management and Climate Change Act into tangible actions aiming to increase the resilience of ecosystems and communities. To this end, the project will procure an international consultant who will, in close collaboration with SPC and relevant GoN Departments (DEMA, NFMRA), formulate a recommendations report and roadmap. This report will effectively build on past work from other development partners, such as the FAO Aquaculture Business Development Strategy and the RONAdapt Framework to formulate policy recommendations. Additionally, the report's recommendations will be enhanced with updated climate change projections (the last available projections date back to 2014), and results of a vulnerability and risk assessments to be conducted by SPREP in partnership with CSIRO starting in early 2023.

The objective of this activity is to incentivise GoN to invest in sustainable coastal fisheries and aquaculture as a long-term climate change and development strategy, by demonstrating their relevance and potential for both the domestic food supply and export markets in the face of climate change impacts on tuna populations and expected disruptions in supply chains.

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<sup>68</sup> The latter aspect was identified as a key limitation to the development of spatial planning and management in Nauru by local stakeholders in the [Nauru Training Workshop on Marine Spatial Planning](#) conducted by SPREP in 2019.

The roadmap will include:

- Clear milestones and deliverables;
- Accountability mechanisms and channels; communication channels between government and community stakeholders;
- A list of potential partners (public and private) and channels to engage with to enable a multisectoral, integrated approach to resilience
- A detailed budget for the implementation of the roadmap.
- Inclusion of climate change drivers, risks and impacts threatening the sustainability of the sectors in the implementation plan (utilising CSIRO's updated climate change projections);
- A list of potential adaptation options to mitigate the impacts of identified climate change risks on aquaculture and coastal fisheries
- A list of potential interventions and investments to be implemented by Community Fisheries Management Committees (following the provisions of the CFA Act)
- Recommendations and a budget planning strategy for the incorporation of newly trained NFMRA staff on government payroll after the project ends.

Specific attention and focus will be given to the inclusion of a systematic approach to data collection on gender-disaggregated indicators, specifically with regards to women's perception of climate change risks, and women's roles and needs in the coastal fisheries and aquaculture sectors. This will address the barrier identified as part of the project design process that no gender-related or gender-disaggregated data is collected by NFMRA and contribute to increasing the adaptive capacity of women fishers and aquaculture operators in the longer term by providing a strong baseline to inform policy actions.

To carry out this activity, biannual workshops will be conducted gathering representatives of relevant ministries and national institutions (DEMA, NFMRA, MoF, Women's Affairs Department), community leaders and representatives of community organisations (including Community Fisheries Management Committees), as well as representatives of the private sector (identified as part of the formulation of the policy report).

#### *Activity 1.1.2. Surveys and inventories*

This activity aims to address data and information barriers that have been identified during the consultation process carried out as part of the project design, and to collect the necessary data and information required for the implementation of later project activities. For each of the data collection and scoping exercises, an international consultant will be hired to work in collaboration with SPC and national stakeholders. The following exercises will be carried out:

- Inventory and ecological assessments of natural banks, reef and marine species (building on last SPC survey) to determine re-stocking and conservation needs (to support Community Fisheries Management Areas plans in preparation of activity 2.2.1 and 2.3.1)
- Site surveys for FADs deployment (location, type, number) and marine monitoring stations (in preparation of activity 2.2.1. and activity 3.1.1. respectively)
- Site surveys to determine detailed technical specifications for upgrades and installations to be carried out at NFMRA facilities (in preparation for activity 2.1.1.)
- Site survey and community-government consultation for the upgrade of Fish Market at Anibare Community Boat Harbour for post-harvest, storage and processing facility for aquaculture and fisheries products (in preparation of activity 2.2.2.)
- Gender report and assessment on the role and needs of women involved in the coastal fisheries and aquaculture sectors (relevant to all project activities and particularly to activity 2.3.1)
  - With regards to the coastal fisheries and aquaculture sectors, identification of areas where support to women could be enhanced to increase participation, obtain greater higher economic returns, and how to ensure general safety at all points along the fisheries value chain. This can include but is not limited to various post-harvesting and value adding processes, packaging and

retailing.

- How best to structure cooperative or associative efforts based around women and men's different needs, households needs, social and cultural obligations and labour requirements
- How best to design technical assistance to women to support basic administrative and financial literacy to enhance access to the mini-grant facility
- Explore possibilities for women's perspectives to be fully integrated into national fisheries management, marine conservation, aquaculture development plans and climate change policy.

### *Activity 1.1.3. Recruitment and training of NFMRA staff*

As of October 2022, the NFMRA had 70 staff comprising the CEO, 12 oceanic fisheries staff, 18 coastal fisheries staff (including 6 for aquaculture), and the remainder as support and administrative staff<sup>69</sup>. While mandated to execute national coastal fisheries and aquaculture policy and legislation, the NFMRA has limited technical capacity to manage major strategic environmental and natural resource management planning processes. The NFMRA have limited systems or skills for financial and project management, and procurement to execute the key projects envisaged by the national policy and legislative framework, despite these projects being critical to achieving national coastal marine ecosystem health and food security in the face of climate change impacts. In addition, the NFMRA has low capacity for gender responsive and socially inclusive community engagement. This is primarily due to staff shortages caused by budget constraints, which result in staff being overstretched and multi-tasking on several work areas. If not addressed, this will remain an ongoing barrier to ensuring strategic climate adaptation actions and projects benefit the most vulnerable groups in Nauruan society.

To remedy this, the project will support the recruitment and training of 5 staff (3 for aquaculture and 1 for coastal fisheries, and 1 gender focal point covering both sectors), with special attention to the recruitment of women (constituting at least 1/2 of staff recruited). SPC will lead the recruitment process in collaboration with NFMRA according to pre-defined qualification criteria. It is anticipated that the salaries will be fully subsidised by the project during the project implementation to give enough time for training the new staff, and measure the benefits associated with their recruitment and training. As mentioned above, recommendations and a budget planning strategy will be formulated and included in the policy recommendations reports to be developed under Activity 1.1.1, to enable the endorsement of new NFMRA staff and the transfer on government payroll after the AF exit.

It is anticipated that the staff to be recruited will have the following roles:

- Extension agents (3 for aquaculture and 1 for coastal fisheries)<sup>70</sup>
  - Data collection, compiling, reporting (incl. modelling, assessments)
  - Monitoring, evaluation and learning (incl. environmental surveillance, FADs)
  - Outreach to fishers and aquaculture operators as appropriate
  - Technical advice and support
  - Enforcement of fisheries and aquaculture operations and legislation
  - Operation of aquaculture facilities
  - Maintenance of new and existing aquaculture and coastal fisheries facilities
  - Gender mainstreaming
- Gender focal point (1 covering both coastal fisheries and aquaculture)
  - Data collection, compiling, reporting and dissemination
  - Monitoring, evaluation and learning
  - Outreach to women fishers, gleaners, and aquaculture operators
  - Technical advice and support

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<sup>69</sup> Information gathered as part of stakeholder consultations conducted in January 2022.

<sup>70</sup> Note: existing staff composition at NFMRA currently: 12 staff for coastal fisheries and 6 for aquaculture. No gender focal point.

New and existing NFMRA staff (18 existing staff combining coastal fisheries and aquaculture, in addition to the 5 new positions, for a total of 23) will undergo “hands-on”<sup>71</sup> training at Nauru’s Vocational Training Centre, which is an appropriate location thanks to its proximity with Nauru’s high school campus, in the following themes:

- Bio-oceanographic monitoring and ecological modelling linked to climate and meteorological data to predict changes in resource availability and inform conservation measures in fisheries management and fisheries designated areas
- Monitoring Control Surveillance Enforcement (MCSE)
- Safety at sea, sustainable fishing methods, fish handling, marketing and sales etc. to prevent unselective fishing of climate-vulnerable reef species
- Aquaculture production plans and operating procedures, including protocols for managing seasons of increased temperatures.
- Biosecurity and best practices in small-scale aquaculture production (primarily for milkfish) i.e. pond design, stocking densities, water quality monitoring etc.<sup>72</sup>
- Ecological risk assessments for integrated, informed management of coastal and reef resources in the context of predicted climate change scenarios.
- Milkfish feed production in ponds (algae, diatoms) to reduce dependence on other countries that may also be suffering from impacts of climate change.
- Milkfish fry production techniques and requirements (pH influence on water quality parameters, biomass and feed input calculations, pond fertilization, test kits monitoring etc.)
- Reporting, data compilation, monitoring for environmental surveillance to link to climate data and provide insights into impact on stocks in the case of climate events such as El Nino seasons.
- Gender-sensitive and socially inclusive aquaculture and coastal fisheries management

Some of the training aspects, such as Health and Safety requirements, small fishing operations including safety at sea, fish handling, marketing and sustainable fishing techniques will be based on SPC’s manuals and guides developed by the Fisheries, Aquaculture and Marine Ecosystems (FAME) division.

### ***Output 1.2. Awareness raising campaigns conducted to enhance understanding of the CFA Act and NFMRA roadmap and promote grant facility***

This output will be realized through the following activities:

#### ***Activity 1.2.1. Outreach campaign and dissemination***

One of the key lessons learned from past projects in Nauru has shown that meaningful, extensive, and early engagement with local communities was of paramount importance to the overall success of project interventions. Additionally, stakeholder consultations have revealed a limited knowledge of projected climate change impacts on food security and livelihoods among members of the community. Therefore, to maximise knowledge of the project scope and objectives, as well as to raise awareness of the mini-grant facility to be established under Component 2, this activity will foresee the roll-out of a national outreach campaign which will aim to gain momentum in anticipation of the establishment of the mini-grant facility. The campaign will be deployed using preferred communication channels, which include local radio stations, newspapers, public boards, and on social media channels. Communication pieces will be drafted that reflect the roadmap for greater climate mainstreaming across the fisheries and aquaculture sectors (output 1.1) and to ensure awareness of national planning across extension levels. The PMU and international consultant to be hired will draft communications for dissemination via the above channels and the national coordinator will engage with media outlets as required.

On an annual basis, communication pieces will be updated to account for progress of the roadmap and to highlight key learnings and topics for consideration of the next year of implementation. This will ensure that

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<sup>71</sup> The technical support will be provided in the form of in-person workshops, focus groups, training sessions and meetings as much as possible, as one of the lessons learned from past projects and stakeholder consultations revealed that virtual and/or theory-based workshops had mitigated results in terms of the capacity of training recipients to apply the knowledge gained.

<sup>72</sup> Leveraging best practices and lessons learned from other SPC-supported small-scale aquaculture facilities in other PICTs.

stakeholders and community members are up to date with progress and can see results of the initiative. Ultimately, increased awareness and information flows will result in better integration of climate mainstreaming in the sectors and result in better buy-in at the community level.

#### *Activity 1.2.2. Grant facility awareness raising*

In support of Output 2.3 this activity will focus on a specific awareness raising campaign to promote the operation of the grant facility. Campaigns will be structured to target communities, fisheries and aquaculture associations, and relevant community-based groups (such as the Community Fisheries Management Committees) eligible for the grant facility. Attention will be paid to ensure women and women's groups are targeted to promote engagement in the grant facility.

The activity will be carried out prior to each expression of interest (in years 3, 4 and 5). Engagements will be carried out at community level to increase understanding of the opportunities and provide initial guidance on what the funding is for and how it can be accessed. Increased exposure and knowledge of the facility will facilitate greater buy in from eligible stakeholders leading to more abundant and stronger applications. This activity will be coordinated at the national level by the Country Coordinator.

### **Outcome 2: Improved food security and nutrition through increased farmed fish supply, increased adaptive capacity and income of aquaculture operators and reduced pressure on climate-vulnerable coastal and reef ecosystems.**

#### ***Output 2.1. Provision of infrastructure to national aquaculture institutions to enhance their ability to provide training, extension services and supplies to existing and new aquaculture operators, increasing the resilience of the sector***

This output aims to address identified financial and structural barriers which have prevented the NFRMA from establishing a self-sufficient milkfish fry supply to reduce dependence on limited overseas sources. The current facility is solely dependent on imported fry from Kiribati and highly susceptible to having the supply cut off in the case of climate events (cyclone damage to ports and facilities). Due to budgetary constraints (as described above under Component 1), NFMRA holding, and nursery facilities have not been operationalised sufficiently and there is no facility for the retention of brood stock or a working hatchery. Consequently, Nauru is unable to produce sufficient fry to maximise milkfish production and reduce pressure on climate sensitive reefs through provision of a sustainable food source.

The output also aims to enhance Nauru's capacity to farm new marine species with high climate resilient, food security and economic potential. Several marine species with climate resilient traits and importance in coastal and reef ecosystem health are targeted. Giant clams, corals and sea cucumbers will be targeted for aquaculture production. Species selection was carried out through collaboration with GoN stakeholders, NFMRA staff, and development partners including SPC and FAO (through the Aquaculture Business Development Strategy). These species not only provide alternative food sources (Giant clams are currently heavily imported despite being endemic to Nauru) that increase food security under climate threats but can also be reintroduced to degraded reefs, increasing reef health and ultimately increasing ecosystem resilience to climate impacts in the long-term<sup>73</sup>.

Further, one of the key obstacles to the economic viability and technical feasibility of milkfish farming in recent years has been the high costs and climate vulnerability of imported feed. The supply chain has been further disrupted by the COVID-19 pandemic due to freight suspensions and is expected to be further disrupted by climate change with increased variable weather predicted and impact on shipping routes. In collaboration with GoN stakeholders and NFMRA, the culture of rotifers as a complement to the animal-based protein fish feed to

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<sup>73</sup> Only species native or endemic to Nauru will be selected for reproduction and reintroduction to the reefs. As such no invasive or alien species will be released through this project. Please see annex 3.

be produced under Output 2.1. has been chosen as a viable and sustainable option to decrease the resilience on climate-vulnerable imports for milkfish farming as well as to reduce bi-catch waste generated by industrial and small-scale coastal fisheries.

Activities under Output 2.1 will relate to the following:

*Activity 2.1.1. Rehabilitation and upgrade of existing NFMRA infrastructure*



Pictures of existing facilities	Proposed interventions and investments
 <p><i>Figure 8 - NFMRA Aquaculture Holding Facility bio-filters and overhead water tanks</i></p>	<p>Currently the system is a flow through system with stock tankage to perform both holding of fry for dispersal to individual producers. There is currently no holding tanks for brood stock or facilities for spawning and hatching.</p> <p>The project will provide resources for the construction of a brood stock holding facility and provision of equipment needed to induce spawning (temperature and lighting-control). Hatchery facilities will also be developed to allow for successful hatching of Milkfish fry. Fry will then be transferred to the current NFMRA fry holding facility for rearing/conditioning and disbursement to aquaculture producers.</p> <p>Complemented by protein-based fish feed to be produced locally, ultimately, this will create a self-sufficient Milkfish production system that reduces Nauru's dependence on imported fry from Kiribati. As imports can be heavily impacted by climate impacts (e.g. cyclones in Kiribati that can impact ports or even damage the production facility), the self-sufficiency of Nauru will allow for greater resilience to climate shocks in the future and generate a more reliable food supplies and income opportunities in the face of projected climate impacts. Further, it will reduce pressure on reef fishing allowing reef health to increase and enhance resilience to climate shocks (such as bleaching caused by ocean acidification and aragonite saturation) in the longer term through more resilient and productive reefs.</p>
 <p><i>Figure 9 - NFMRA Aquaculture Holding Facility – fish conditioning tanks for milkfish fry</i></p>	<p>The project will support NFMRA in the completion of the giant clams and corals raceways that have not yet been completed due to a lack of funding for relevant construction. Further, the project will support the addition of raceways for sea cucumbers, which fulfill important ecological roles with their use of biomass associated with sediments and are one of the most commercially important groups in the Pacific. These target species have been selected for their relevance in enhancing food security and increasing reef health to support healthier reefs to improve climate resilience in the future.</p> <p>Giant clams (native) are nearly extinct in Nauru with the last surveys only reporting 10 sightings across the country. The raceway outputs will be used to stock designated community fisheries managed areas in alignment with the CFA Act of 2020. Stocking will be done with community members through a participatory process, transferring management of the clams for long-term survival and management. Restocking of clams to maturity in community fisheries managed areas will lead to natural spawning and reinstatement of healthy populations that can be sustainably harvested in the future. Similarly, large native sea cucumbers (that have been decimated on local reefs) will be grown and introduced to community managed fisheries areas. These species provide crucial nitrogen cycling services that facilitate coral reef growth. This is essential as nitrogen is a crucial limiting nutrient in coral reefs and high nutrient levels are required to support recovery from climate induced events such as bleaching 74.</p> <p>Coral raceways will be used to grow local coral species that have proven greater resilience to climate impacts. These will then be transferred to degraded reef areas as designated in Community Fisheries Management Areas and conservation plans. This will improve live coral cover which would improve reef fish populations on those coral poor areas. At the same time, with more live corals around the island to counter coral mortality due to climate change impacts such as ocean acidification and aragonite saturation, there would also be some increased dissipation of wave action/strength on the coastal areas and therefore protection of shorelines from erosion.</p>
 <p><i>Figure 10 -. NFMRA raceways for giant clams and corals still under construction and installation.</i></p>	

### *Activity 2.1.2. Development of sustainable feed production supply and piloting of innovative solutions*

This activity will pertain to the purchase and installation of a grinding mill to produce fish feed for aquaculture production. The feed mill will be installed within the community-managed facility to be established under Output 2.2 at the existing Fish Market at Anibare Community Boat Harbor to maximise cost effectiveness by avoiding the construction of an additional building, particularly given Nauru's limited land area. Detailed design and technical specifications will be assessed under Activity 1.1.2 as part of the community-government consultation for the upgrade of the community-managed facility.

In addition to enabling the sustained production of a domestic fish feed supply chain, the feed mill will be used to pilot innovative solutions to utilize bi-catch (which is currently wasted) and Mozambique tilapia, an invasive species in Nauru's brackish water ponds, to produce feed for the milkfish to ensure optimal growth in the grow out ponds. In addition, the project will also provide tanks for the culture of rotifers and brine shrimp as live feed which are essential for the rearing of milkfish post larvae and fry life stages. The provision of this fish feed mill and multiplication tanks will significantly reduce Nauru's reliance on climate-vulnerable international imports and increase the adaptive capacity of aquaculture-dependent communities, by creating a domestic supply chain for aquaculture production that is more resilient to projected climate change impacts.

### ***Output 2.2. Increased adaptive capacity of artisanal fishers and resilience of marine ecosystems in the face of climate variability and change***

To break the cycle of resource degradation on reef resource (expected to worsen with predicted climate change impacts), the project will provide a combination of technical and financial assistance designed to restore and conserve coastal and reef areas while supporting the adoption of sustainable fishing methods and gear to divert pressure from vulnerable reef fish toward larger pelagic species which display reduced climate vulnerability over the longer-term. Stakeholder consultations revealed that people engaging in fishing activities for subsistence purposes lacked knowledge on the sustainable utilization of coastal and marine resources, including sustainable fishing techniques and gear – people who glean on reef areas indiscriminately catch fish of all sizes, depleting resources of juvenile fish, further damaging fragile ecosystems. With expected climate change resulting in increased reef damage and coral mortality (acidification and aragonite saturations and increased sea surface temperature), it is essential to keep healthy coral populations and diversity of fish species in the long term. This diversity has important reef building functionality, such as exposing clean substrate to allow for enhanced coral polyp recruitment and grazing macroalgae's or sponges that have the potential to out compete coral systems.<sup>75,76</sup> It is therefore essential that reef health is maintained in the face of climate change to ensure continued resilience and health of the reef under predicted models.

Further, Fish Aggregating Devices (FADs) are being deployed by the NFMRA but these often get lost or damaged due to inadequate use by small-scale fishers (currently 3 out of 6 NFMRA-managed FADs are in operation; others have been lost). The downfalls have been merchant ships and tugboats interfering with the FAD longevity; accidental shark interaction with the mooring; aggregation of sharks and dolphins at FADs competing and interfering with the fishers catch; and some of the nearshore FADs having short longevity due to steep slopes at the deployment locations. The use of offshore and nearshore FADs enables economically viable offshore fishing for communities, as aggregation of fish enables successful fishing of pelagic species with lower fuel costs. Enabling access to pelagic species that do not have mutualistic relationships with coral reefs provides an alternative food source that doesn't damage essential ecosystems that provide vital protection and health to the island under predicted climate change scenarios.

<sup>74</sup> <https://link.springer.com/article/10.1007/s00338-021-02057-2>

<sup>75</sup> Hughes TP, Rodrigues MJ, Bellwood DR, Ceccarelli D, Hoegh-Guldberg O, McCook L, Moltschanivskyj N, Pratchett MS, Steneck RS, Willis B (2007) Phase Shifts, Herbivory, and the Resilience of Coral Reefs to Climate Change. *Current Biology* 17:360-365

<sup>76</sup> Loh, T.L., McMurray, S.E., Henkel, T.P., Vicente, J. and Pawlik, J.R., 2015. Indirect effects of overfishing on Caribbean reefs: sponges overgrow reef-building corals. *PeerJ*, 3, p.e901.

### *Activity 2.2.1. Training of small-scale fishers and communities in sustainable fishing methods and deployment of FADs*

Building on SPC's existing training and technical assistance work in Nauru, this activity will see the delivery of training modules to small-scale fishers as well as prospective and existing aquaculture operators. These trainings will take place every quarter in Year 2 and trainees will be awarded a certificate of completion and competency at the end of the training modules. The theoretical training modules will be assorted with on-site practical training for relevant topics such as safety at sea, sustainable fishing methods and marketing. Trainees will also receive an introductory course to the Tails and Kobo Toolbox apps and software which offer user-friendly data collection tools for fishers. This will enable fishers to input their own data and expand the knowledge base on fisheries production.

Further under this activity, based on the results of the site surveys conducted under Activity 1.1.2, and building on existing NFMRA-supported FADs schemes, the project will install a total of 6 additional FADs, which have been shown to yield important adaptation benefits<sup>77</sup>, in terms of relieving pressure away from reef resources towards oceanic resources (larger pelagic species such as yellowfin tuna), and contributing to the success of locally managed marine areas (LMMAs) and other similar schemes, such as the community fisheries management areas under the provisions of the CFA Act. Indicatively, six (6) offshore deeper FADs (3,000m – 3,500m range) as well as six (6) nearshore (500m range) will be deployed all around the island (to be confirmed with the site surveys to be conducted under activity 1.1.2).

The provision of FADs compensates for the establishment of the no-take community fisheries management areas as an alternative source of fish by increasing access to larger pelagic species outside of these fisheries management areas whilst reducing pressure on vulnerable reef species. This will also be supportive in triggering behavioural change from fishers to comply with the fisheries management areas and to increase compliance to management measures put in place, and thus ultimately making it easier for the appointed wardens and community fisheries management committees to manage and monitor their fisheries management areas.

### *Activity 2.2.2. Upgrade of Anibare Community Fish Market*

Insofar the limited volume of caught and farmed fish that is sold in Nauru is marketed directly from the boat or informally within households and the community. In order to provide an adequate storage, processing and market facility for the increased production volumes of farmed fish and sustainably caught fish, this activity will see the upgrade of the existing Fish Market at Anibare Community Boat Harbour. Financing these investments will contribute to the formalisation of nearshore fisheries and small-scale aquaculture operations which will in turn increase value addition and derived revenues for fishers and aquaculture operators. Combined with the technical assistance and training provided as part of Output 2.2, fishers will be incentivised to engage in sustainable fishing to target larger pelagic species and non-climate-vulnerable species to relieve pressure away from vulnerable reef ecosystems. In alignment with the project's integrated approach, addressing barriers in the value chain through the upgrade of the Anibare Fish Market will increase the resilience of the aquaculture and nearshore fisheries sectors as a whole, by supporting income diversification and value addition for the domestic market.

Based on consultations with communities conducted as part of the project design, the following factors were considered for choosing the existing fish market location:

- Existing storage areas
- Near offloading areas such as boat ramps for launching and re-launching.

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<sup>77</sup> From Bell et al. (2015): "There is recognition that regular use of nearshore FADs could have two other possible benefits. First, it provides communities with the opportunity to transfer some of their fishing effort from coral reefs to oceanic fisheries resources—an intervention expected to help prevent over-exploitation of coral reef fish and maintain the normal representation of important functional groups of fish (e.g. herbivores) associated with coral reefs required to assist these ecosystems to adapt to climate change. Preliminary analyses in the Federated States of Micronesia and Vanuatu indicate that 50% to 75% of fishing effort can be transferred from reefs to FADs. Second, nearshore FADs could enhance the success of coral reef management initiatives, e.g. those by the local marine managed area (LMMA) networks and Micronesia Challenge, by providing practical ways for people to continue to catch pelagic fish when regulations are introduced to help coral reefs recover from overfishing and other local stressors, e.g. through designation of temporal or spatial fishing closures".

- Near saltwater for fish processing (gill gutting and filleting)
- Close access to ice and freshwater
- Potential location for future fish exports as the fish could be processed there with accessibility of blast freezers.
- Fishers has easy access including reef gleaners, not limited to boat fishers only.
- Good location for collecting fish waste and waste bi-products to be processed into the feed mill
- The area is owned by Government it is built on high level water mark which legally means it belongs to state. There would be no landowner issues.

The technical details and design specifications of the upgrades will be assessed under Activity 1.1.2. At a minimum, the upgrades will include elevated storage for the fish feed to be produced in the mill installed under Activity 2.1.2. Further, to enhance storage conditions and improve shelf life, the facilities will be equipped with an aeration / ventilation system and air conditioning powered by solar panels. Additionally, the facility will include a conditioning and packaging line, such as vacuum sealing machines, which will extend the shelf life of fresh fish products. An assessment of Hazard Analysis & Critical Control Points (HACCP) will also be carried out to provide a baseline in terms of international standards in food safety and processing. The project will provide supplies for the conditioning and marketing of fish products to communities for the first three years of the project. After, it is envisaged that through the combination of training and financial assistance, fishers and aquaculture operators will generate sufficient revenues and have incentives to self-finance these consumables.

Taken together, these investments will increase the attractiveness and quality of fresh fish and fish products produced in Nauru, creating a unique location where fish farmers and fishers will be able to store, package, process, and sell their production. This investment will directly contribute to:

- Increasing the adaptive capacity of food systems by enabling the processing and sale of domestically and sustainably produced fish instead of imported, commercially produced frozen fish (this will in particular benefit women who have serve a primary role in the processing of fish)
- Increasing the income of fishers and aquaculture operators, by offering a single location to carry out all actions in the supply chain, also reducing transport costs for the consumer
- Enhancing access to fresh, healthy and nutritious fish products at costs accessible to all Nauruans, therefore decreasing food insecurity, malnutrition, and obesity
- Reducing dependence on international markets that may be heavily disrupted under predicted increased weather variability.

### ***Output 2.3. Grant Facility – Provision of infrastructure and equipment to enable the sustained production of milkfish for increased domestic food supply and income***

Nauru's aquaculture sector and particularly milkfish production was up until about a decade ago a central economic activity and source of food for local communities. Aquaculture production was progressively abandoned as phosphate pay-outs resumed, and due to further complications with the infestation of ponds with Mozambique tilapia. Since, communities resorted to coastal fishing and gleaning on reef areas as a means of subsistence and income generation, while remaining aquaculture operators since have faced a myriad of challenges, including outdated ponds (made of old swimming pools), inability to access finance to develop their production, a lack of technical capacity to sustain production, and the absence of storage and processing facilities to increase value addition and market access. The COVID-19 pandemic further weakened the aquaculture supply chain by preventing plane freight for imported fry, which exacerbated the dependency of the sector on external supplies and resulted in increased pressure on climate-vulnerable coastal and marine resources. Furthermore, the unavailability of fresh fish products on the domestic market aggravates the dietary and health situation of communities who primarily rely on imported over-processed foods.

Aquaculture has been identified by the GoN as a sector with strong potential to innovate, reap productivity gains, generate employment and contribute to national food and nutrition security and livelihood diversification in the face of climate change. Currently there is a wealth of documentation, studies and assessments on potential

opportunities for the aquaculture sector in Nauru (including that of the FAO Aquaculture Business Development Strategy, and virtual certainty around the projected climate change impacts on fisheries (nearshore and offshore), although no diversification efforts have amounted to behaviour change. That is due to a lack of incentives and awareness of local communities to adapt their livelihoods to future climate change impacts, and a lack of access to financial resources to invest in adaptation solutions in the aquaculture and coastal fisheries sectors. Promoting aquaculture as a way to adapt to climate change will also reduce non-climatic pressure on climate-vulnerable, overexploited coastal and marine ecosystems, by meeting the high demand for affordable aquaculture products (particularly milkfish) on the domestic market while providing diversified, stable income opportunities for vulnerable communities. Promoting small-scale, artisanal fisheries in combination with training in sustainable fishing methods (Activity 2.2.1) will tackle the issue of non-selective fishing to enable the regeneration of vulnerable ecosystems.

This output will be realized through the following activities:

- **Operationalization of the mini-grant facility:** establishment of grants funding mechanism and associated requirements, rules, regulations and institutional arrangements
- **Technical assistance to enable access to the mini-grant facility:** provision of technical assistance to prospective applicants (individuals and community-based organisations) to enhance access to the Grant Facility

*Activity 2.2.1. Establishment of a mini-grant facility*

To address the barrier of the unavailability of finance products, especially microfinance, to new and existing aquaculture operators in Nauru, and to support the implementation of adaptation measures in vulnerable communities and ecosystems, the project will establish a small-scale, demand-based mini-grant facility. The Facility will award an estimated 100 individual grants of up to 25,000 USD, and 10 community organisation grants of up to 50,000 USD. The Facility will support the technical assessment, design and costing of sub-grant investments (incl. environmental management plans, maintenance plans and engineering design) as well as their implementation in collaboration with NFMRA and in compliance with AF’s requirements and policies on Unidentified Sub-Projects (USPs) and the ESG Policy.

The Facility will support interventions and investments in the coastal fisheries and aquaculture sectors across two thematic areas, which have been defined as part of the stakeholder consultation process, climate change analysis and past prioritization exercises conducted with the GoN (such as the RONAdapt Framework and FAO’s Aquaculture Business Investment Strategy). It is worth noting that the thematic areas may be cross-cutting, particularly the Coastal Zone Management and Ecosystem-based Adaptation areas. The thematic areas supported are:

- **Food security:** Sub-grants that aim to increase the climate resilience of vulnerable livelihoods by investing in aquaculture and coastal fisheries operations
- **Coastal zone management and Ecosystem-based Adaptation:** Sub-grants falling under this category will contribute to improve livelihood opportunities of vulnerable communities while maintaining and enhancing surrounding ecosystems, through activities and investments pertaining to coastal restoration, natural and marine resources governance, and community fisheries management areas

The Facility will finance the following eligible investments and interventions:

*Table 7 - description of Grant Facility eligible thematic areas and investment interventions*

Thematic area	Eligible interventions or investments
<b>Food security</b>  <b>Climate impacts:</b> Reduced resource availability and ecosystem degradation due to rising ocean temperature and ocean acidification	<ul style="list-style-type: none"> <li>• Construction of small-scale aquaculture ponds</li> <li>• Construction of aquaculture raceways</li> <li>• Installation of recirculating aquaculture systems</li> <li>• Climate-proofing and/or rehabilitation of existing small-scale ponds</li> <li>• Purchase of production equipment (water filters, solar pumps) and start-up production supplies (fry, feed)</li> </ul>

Thematic area	Eligible interventions or investments
	<ul style="list-style-type: none"> <li>• Purchase of small boats, kayaks or other fishing vessels</li> <li>• Purchase of fishing gear for targeting pelagic species in offshore areas</li> <li>• Value chain improvements</li> </ul>
<p><b>Coastal zone management and Ecosystem-based Adaptation</b></p> <p><b>Climate impacts:</b> Degradation of marine habitats and ecosystems due to rising ocean temperature, ocean acidification and coral bleaching and increased rainfall variability and precipitation extremes</p>	<ul style="list-style-type: none"> <li>• Restoration, rehabilitation or substitution of ecosystems relevant for adaptation (e.g. mangrove restoration, re-vegetation, sea-grass beds) (leveraging the past R2R project nursery)</li> <li>• Development or enhancement of Community Fisheries Management Plans</li> <li>• Climate-proofing of natural banks, anti-erosion measures, anti-silting measures, anti-runoff</li> <li>• Restocking of marine species</li> <li>• Sub-projects defined in Community Fisheries Management Area plans</li> </ul>

A description of the governance and institutional arrangements and screening procedures of the mini-grant facility is provided in Part III Section A.

#### *Activity 2.3.2. Provision of technical assistance to access mini-grant facility*

To ensure the accessibility of the mini-grant facility, particularly for women and vulnerable groups, the project will roll out a national communication campaign aiming at gathering all members of the community and community groups interested in the offering of the mini-grant facility. The campaign will be rolled out using different modes of communication, such as social media, local newspapers, and radio, and will include tailored messages to women and women's groups to promote and encourage their inclusion. Interested parties – either members of the community or community groups (such as Community Fisheries Management Committees) will be able to register their interest in receiving technical assistance training to apply to the mini-grant facility during a one-day event.

Using the recommendations of the gender assessment and report conducted as part of Activity 1.1.2., the PMU will be supported by an international consultant to develop training modules to enable prospective applicants to identify their needs and translate them into concrete adaptation interventions (compliant with the thematic areas and eligibility criteria of the mini-grant facility, detailed above and in Part III Section A, as well as in the ESMF). Aspects of the training and technical assistance will relate to:

- Administrative support and financial literacy
- Support for pond design and technical specifications
- Estimating potential adaptation impact
- Support to develop maintenance plans and budgets
- Support for monitoring, reporting and evaluation requirements
- Alignment with Adaptation Fund's review criteria and Grant Facility eligibility criteria
- Application drafting support

If the sub-grant is deemed to be a medium risk project (Category B) SPC will deploy an independent contractor to conduct an Environmental Impact Assessment (EIA) and associated E&S Management Plan (ESMP) for the project based on the proposal received.

### **Outcome 3: Increased resilience of ecosystems and adaptive capacity of communities through availability of data and knowledge sharing mechanisms for adaptation planning and environmental protection**

#### ***Output 3.1. Establishment of a knowledge management strategy (KMS) to sustain climate-resilient practices in environmental and natural resource management***

Stakeholder consultations and secondary research revealed that Nauruan authorities currently do not monitor key indicators to determine ecosystem (coastal, reef, marine) health and productivity. Indeed, much of the data

collection effort is focused on industrial tuna fisheries and commercial domestic fisheries. Data and information pertaining to coastal subsistence fisheries and ecosystem health are not collected. This is primarily due to insufficient technical capacity in environmental monitoring (addressed under Output 1.1), and the absence of adequate marine monitoring stations around Nauru and collaborative environmental surveillance groups. Going forward, the data collected will help toward the development of a strong baseline and provide the science basis for the management of fisheries areas, coastal protection measures, and FADs management, among others<sup>78</sup>.

#### *Activity 3.1.1. Provision of marine monitoring stations*

Under this activity, the project will procure and install over- and under-water marine monitoring stations to collect data and information on coral reef health (e.g. diversity, percentage cover and structural complexity of corals, and percentage algal cover) and reef fish stock status (e.g. abundance, diversity, size structure and mean trophic level) and ecosystem health indicators in plankton, distribution of key species, and supportive chemical variables as pH and oxygen). This will support the training provided under Output 1.1. to NFMRA officers and address the identified information barrier which has hampered adaptation planning.

#### *Activity 3.1.2. Establishment of an environmental surveillance working group*

One of the key recommendations that has been made in order to enhance adaptation planning and marine conservation in Nauru was to establish community-government environmental and marine surveillance mechanisms. This activity will support the establishment of environmental and marine surveillance groups between NFMRA and community fisheries management committees and compliance officers<sup>79</sup>:

These environmental and marine surveillance groups will be managed by the ESS Coordinator and have the following objectives:

- Monitoring and compliance with community fisheries management areas regulations
- Monitoring of reef fish catch and compliance with quotas (as established under the CFA Act)
  - Value and volume of catches by species, fishing gear and fishing method
  - Catch per unit effort
  - Number of active fishing vessels
  - Maps with location of FADs
  - Catches over time (trends/comparisons over time)
- FADs surveillance and monitoring, maintenance
- Data collection (using marine monitoring stations provided under Activity 3.1.1)
- Evaluate CBFM progress using [SPC Framework For Action](#)

It is anticipated that these environmental and marine surveillance groups will meet quarterly for the duration of the project. After the project ends, these groups will be made an integral part of the regular monitoring and evaluation processes at NFMRA in accordance with provisions under the Coastal Fisheries and Aquaculture Act of 2020, and the Climate Change Act.

### ***Output 3.2. Learning and dissemination of project results***

One of the key barriers identified as part of the project design process was the limited effectiveness of remote and theoretical training for aquaculture and fisheries extension officers at NFMRA. Consultations carried out as part of the project design appraisal revealed that field trips for NFMRA officers were particularly useful in terms of increasing their capacity to apply the knowledge gained compared to theory-based workshops. Additionally, lessons learned from past projects indicate insufficient integration of project results, data and learnings in existing information portals.

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<sup>78</sup> Provisions under the CFA Act in relation to information and statistics are limited to "(a) catches; (b) bycatches; (c) fishing methods; (d) fishing effort; (e) production; (f) production methods and (g) any other relevant information".

<sup>79</sup> Based on recommendation by Harris, 2016.

### *Activity 3.2.1. Establishment of learning partnerships with other PICTs*

This activity will foresee knowledge exchanges between community-based organisations in the nearshore fisheries and aquaculture sectors and related organisations in Kiribati, Tuvalu and Palau. Kiribati has a long and successful history of producing milkfish in ponds, while Tuvalu and Palau have dedicated aquaculture facilities supported by SPC. This activity will directly contribute to sustaining the project results by supporting the exchange of gained knowledge and lessons learned between communities, based on recommendations from past projects. It is envisaged that as part of this activity a total of 15 people engaged in aquaculture production (combining individuals and members of aquaculture associations) will travel to Kiribati, Tuvalu and Palau (in years 3, 4 and 5 for 5 people).

### *Activity 3.2.2. Compilation and dissemination of lessons learned*

**Compilation of all project learnings, data and information** (community fisheries management area plans, workshop and training modules and reports, data collected with marine monitoring stations etc.) on the [Nauru Environmental Data Portal](#) and the [Pacific Islands Protected Area Portal](#). Access to these information portals will be ensured for both government focal points as well as researchers and communities, as the inability to access information has been mentioned in community consultations.

Under this activity, the compilation and dissemination of project learning will be carried out both at the national and regional levels. At the national level, two workshops will be called gathering representatives from GoN officials, academia, CSOs in partnership with Micronesian Association for Sustainable Aquaculture (MASA) countries. The MASA network aims to promote a strong and environmentally responsible aquaculture sector through the sharing and application of science-based and indigenous knowledge and technology.

## **B. Economic, Social and Environmental Benefits**

*Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.*

To maximize the economic, social and environmental benefits from project interventions, measures aimed at avoiding and/ or mitigating the negative impacts of interventions in compliance with Environmental and Social Policy and Gender policy of the Adaptation Fund will be undertaken. Mitigation measures will be undertaken for potential negative impacts likely to impede vulnerable groups from enjoying the economic, social and environmental benefits of the proposed project.

Under outcome 1, the E&S risk has been assessed as negligible to low. The main activities under the first outcome include the provision of surveys and inventories, policy recommendations, and trainings to ensure the development of GoN capacities. Activities also include trainings for small-scale fishers on more sustainable practices, and the provision of an outreach campaign to promote the mini-grant facility. As a result, there are limited risks pertaining to the AF's E&S principles. The risk of any E&S impact is therefore low with a low potential impact. The inclusion of gender considerations will be integrated to ensure appropriate gender-disaggregated data collection, gender assessments, and gender participation is robust.

Under outcome 2, the E&S risk has been assessed as low to medium. The activities under outcome 2 are the only activities within the project which include any physical works that utilize land and marine resources – these include the rehabilitation and construction of more sustainable and efficient NFMRA infrastructure, marine feed supply, a storage facility, and the mini-grant facility. These interventions present a slight risk of environmental degradation due to pollution, labour issues, and land tenure issues. The project aims to mitigate these risks through an Environmental and Social Assessment Plan (ESAP) for the overall project as well as an Environmental and Social Management Plan and Framework (ESMF) for the mini-grant facility (Activity 2.2.1) these are included as Annex 3. The procedures for screening, mitigating, and managing any potential risks for



the mini-grant facility are included in the ESMF.

Under outcome 3, the E&S risk has been assessed as negligible to low. The activities under this outcome pertain to project monitoring and evaluation, including the dissemination of project results. As a result, there are negligible risks pertaining to the AF's E&S principles.

Overall, to mitigate negative impacts of the interventions highlighted above in compliance with the ESP of the AF, an Environmental and Social Risk Assessment, Gender analysis supported by a gender action plan as well as the development of a grievance redress mechanism have been undertaken during the development of the full proposal document (see Annexes 3 and 4).

Table 8 below offers a summary of environmental, social and economic benefits and co-benefits generated from the project interventions, compared to a business-as-usual scenario.

*Table 8 - Summary of benefits generated by the proposed interventions compared to the baseline*

<b>Project activity</b>	<b>Baseline</b>	<b>Expected changes</b>	<b>Environmental, social and economic benefits</b>
Activity 1.1.1. Recommendations report and roadmap for Coastal Fisheries and Aquaculture Act and Climate Change Act	<ul style="list-style-type: none"> <li>Limited or no integration of climate change considerations and adaptation options in national coastal fisheries, aquaculture plans</li> <li>Insufficient budgetary allocation toward sustaining marine resource base</li> </ul>	<ul style="list-style-type: none"> <li>Cross-sectoral integration of climate change impacts into national policy plans and work plans</li> <li>Enhanced dialogue between communities and government institutions on climate change adaptation</li> <li>Provision of recommendations for integration of climate change adaptation planning into national sectoral plans</li> </ul>	<ul style="list-style-type: none"> <li>Access to science-based information and best international practice for adaptation planning</li> <li>Increased capacity of national government to adequately plan, budget, and monitor adaptation solutions in key target sectors</li> </ul>
Activity 1.1.2. Surveys and inventories	<ul style="list-style-type: none"> <li>Limited or lack of available data on ecosystem health and natural resource base status</li> <li>Limited or lack of available data and information on gender aspects and the role of women in aquaculture and coastal fisheries</li> <li>Limited financial capacity to finance site surveys and design studies for the construction or installation of aquaculture, fisheries and community facilities</li> </ul>	<ul style="list-style-type: none"> <li>Availability of data on ecosystem health and natural resource base status</li> <li>Availability of data and information on gender dynamics and formulation of recommendations for inclusion of women as actors in the aquaculture and coastal fisheries supply chains</li> <li>Unlocked funding for site surveys for the installation or construction of community facilities in the target sectors</li> </ul>	<ul style="list-style-type: none"> <li>Access to better, more reliable, science-based data and information</li> <li>Reduced environmental degradation of natural resource base</li> <li>Address gender inequality gaps, reduce women's vulnerability and increase their resilience to climate change</li> <li>Cost-effectiveness of reutilization of existing building</li> </ul>
Activity 1.1.3. Recruitment and training of NFMRA staff	<ul style="list-style-type: none"> <li>Insufficient number and capacity of NFMRA staff in aquaculture and coastal (nearshore) fisheries areas</li> </ul>	<ul style="list-style-type: none"> <li>Recruitment and training of 5 additional staff, incl. at least 2 women of which one gender focal point for the target sectors within NFMRA</li> </ul>	<ul style="list-style-type: none"> <li>Creation of additional stable income sources</li> <li>Access to training, capacity building and technical assistance for men and women</li> </ul>
Activity 1.2.1. Outreach campaign and dissemination	<ul style="list-style-type: none"> <li>Limited awareness of climate change impacts on target sectors</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced awareness of local communities of the impacts of climate change on their livelihoods and environment</li> </ul>	<ul style="list-style-type: none"> <li>Access to reliable, science-based information on climate change impacts from communities</li> </ul>

Project activity	Baseline	Expected changes	Environmental, social and economic benefits
Activity 1.2.2. Grant Facility awareness raising	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>Awareness of grant facility offering and criteria to access funding</li> </ul>	<ul style="list-style-type: none"> <li>Access to financing for climate-resilient aquaculture and nearshore fisheries operations, including from women and vulnerable groups</li> </ul>
Activity 2.1.1. Rehabilitation and upgrade of NFMRA infrastructure	<ul style="list-style-type: none"> <li>No hatchery at Anibare NFMRA site</li> <li>Milkfish fry is imported from neighbouring countries in small quantities, to fit in the existing quarantine pond</li> <li>Imported milkfish fry from neighbouring countries and/or Taiwan</li> <li>High costs of supply which hurt economic viability</li> <li>Vulnerability of wild milkfish fry to climate change impacts</li> <li>Vulnerability of imported milkfish fry to external shocks (COVID-19 prevented freight) and climate change</li> </ul>	<ul style="list-style-type: none"> <li>Upgrade, climate-proofing and construction of new facilities for aquaculture production (raceways, holding facilities, rotifer tanks)</li> <li>Access to new income generation opportunities (giant clams, corals, sea cucumbers)</li> <li>Sustainable, climate resilient domestic supply chain for milkfish production</li> </ul>	<ul style="list-style-type: none"> <li>Climate-proofing of milkfish fry supply</li> <li>Enhanced animal welfare</li> <li>Enhanced traceability of supply</li> <li>Creation of a climate-resilient, community-owned domestic supply chain</li> <li>Creation of income diversification opportunities (giant clams, corals and sea cucumbers)</li> <li>Reduced production costs for milkfish</li> <li>Year-round availability of domestic milkfish fry</li> <li>Reduced fishing pressure on reef ecosystems allowing greater biodiversity and sustainability of populations.</li> </ul>
Activity 2.1.2. Development of sustainable feed production supply and piloting of innovative solutions	<ul style="list-style-type: none"> <li>High carbon cost and emissions of imported milkfish feed from neighbouring countries or Asia</li> <li>High costs of supply which hurt economic viability</li> <li>Vulnerability of imported feed to external shocks (COVID-19 prevented freight resulting in complete halt of aquaculture production) and climate change</li> </ul>	<ul style="list-style-type: none"> <li>Installation of proven, small-scale fish feed mill</li> <li>Potential to utilize local invasive species (Mozambique Tilapia) and bi-catch waste to produce fish feed</li> <li>Increased technical capacity of national institutions for key sectoral supply chain</li> </ul>	<ul style="list-style-type: none"> <li>Creation of a climate-resilient, community-owned domestic supply chain</li> <li>Year-round availability of milkfish feed</li> <li>Decreased aquaculture production costs</li> <li>Increased revenue and margin for aquaculture operators</li> <li>Enhanced quality of fish feed</li> <li>Reduced pressure on lagoon ecosystems from invasive species</li> </ul>
Activity 2.2.1. Training for small-scale fishers and communities and deployment of FADs	<ul style="list-style-type: none"> <li>Limited technical capacity of fishing communities in sustainable fishing methods</li> <li>Utilization of resource-depleting fishing gear (fish catch of all sizes)</li> <li>Very limited number of nearshore floating FADs</li> <li>Recurring loss and/or damage of FADs</li> <li>Inadequate utilization of FADs by local fishing communities</li> </ul>	<ul style="list-style-type: none"> <li>Climate change-aware communities with increased capacity in sustainable fishing practices</li> <li>Increased availability of larger pelagic species (i.e. tuna species)</li> <li>Increased technical capacity of communities to adequately utilize FADs</li> </ul>	<ul style="list-style-type: none"> <li>Reduced damage to coral and reef ecosystems</li> <li>Enhanced availability of nutritious fresh food</li> <li>Increased income for Nauru-based coastal subsistence and commercial fishers</li> <li>Reduced pressure on nearshore and coastal marine resources</li> </ul>
Activity 2.2.2. Upgrade of Anibare Community Fish Market	<ul style="list-style-type: none"> <li>No dedicated facility for fish products and by-products storage and transformation</li> <li>Fish sales occur directly from boats or in individual homes</li> </ul>	<ul style="list-style-type: none"> <li>Improved domestic value chain for aquaculture products</li> <li>Increased year-round availability of fish products and by-products</li> </ul>	<ul style="list-style-type: none"> <li>Ability to transform aquaculture products into higher value-added products and by-products</li> <li>Ability to store fish and fish by-products off-season</li> </ul>

Project activity	Baseline	Expected changes	Environmental, social and economic benefits
			<ul style="list-style-type: none"> <li>Community-led organisation of domestic aquaculture market</li> <li>Higher incomes for aquaculture operators and fishers, and their households</li> <li>Formalization of key economic sector</li> </ul>
Activity 2.3.1. Establishment and operationalisation of mini-grant facility	<ul style="list-style-type: none"> <li>Limited number of extremely small ponds (some are old swimming pools)</li> <li>Animal welfare concerns (high density and insufficient space for fish development)</li> <li>Extremely limited production volume</li> <li>Low revenue and income for aquaculture operators</li> <li>No financial products for small-scale artisanal fisheries</li> <li>No financial products for aquaculture development</li> <li>Inability of GoN to allocate financial resources to aquaculture infrastructure development</li> </ul>	<ul style="list-style-type: none"> <li>High expected cost-effectiveness</li> <li>Availability of micro-finance for new and prospective aquaculture operators and small-scale fishers</li> <li>Construction of small-scale aquaculture infrastructure according to international best practice and standards</li> </ul>	<ul style="list-style-type: none"> <li>Demonstration of economic viability of aquaculture operations</li> <li>Community-managed fisheries and aquaculture infrastructure</li> <li>Operational and maintenance costs borne by communities (fishers and aquaculture operators)</li> <li>Increased revenue and income for aquaculture operators and artisanal fishers</li> <li>Access to nutritious, sustainable fresh food</li> <li>Enhanced animal welfare</li> </ul>
Activity 2.3.2. Provision of technical assistance to access mini-grant facility	<ul style="list-style-type: none"> <li>Limited access to administrative, engineering and design, financial literacy support from communities</li> </ul>	<ul style="list-style-type: none"> <li>Dedicated technical support for communities to access funds to increase their adaptive capacity and resilience</li> </ul>	<ul style="list-style-type: none"> <li>Access to training, capacity building and technical assistance from communities incl. women and vulnerable groups</li> </ul>
Activity 3.1.1. Provision of marine monitoring stations	<ul style="list-style-type: none"> <li>No monitoring stations to collect data on ecosystem health, reef status, chemical indicators etc.</li> </ul>	<ul style="list-style-type: none"> <li>Availability of data relating to reef health, marine resources, fish stocks etc.</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced ability of GoN, NFMRA and community stakeholders to effectively plan for and manage marine resources, fisheries and coastal restoration efforts based on scientific evidence</li> </ul>
Activity 3.1.2. Establishment of an environmental surveillance group	<ul style="list-style-type: none"> <li>No community-government collaboration for data collection on ecosystem health, resource availability, and fisheries</li> </ul>	<ul style="list-style-type: none"> <li>Dedicated surveillance group comprising staff from relevant national institutions and community leaders</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced adaptive capacity of the broader community to collect and use environmental data for adaptation planning</li> </ul>
Activity 3.2.1. Establishment of learning partnerships with other PICTs	<ul style="list-style-type: none"> <li>Limited learning exchanges between partner MASA countries</li> </ul>	<ul style="list-style-type: none"> <li>Regular interactions between fisheries and aquaculture organisations and leaders between MASA members countries</li> </ul>	<ul style="list-style-type: none"> <li>Increased knowledge and dissemination of best practices and lessons learned in sustainable nearshore fishing and aquaculture production</li> </ul>
Activity 3.2.2. Compilation and dissemination of lessons learned	<ul style="list-style-type: none"> <li>Restricted access of environmental, fisheries and ecosystem data to government focal points and agents</li> <li>Limited or no compiling of collected data and reports on existing national and regional portals</li> </ul>	<ul style="list-style-type: none"> <li>Open access to environmental, marine, fisheries and aquaculture, ecosystem health data to national institutions, researchers and communities</li> <li>Regular compiling and reporting of all project-derived data and information</li> </ul>	<ul style="list-style-type: none"> <li>Increased adaptive capacity of local communities and decision-makers through enhanced access to climate and sector data and information</li> </ul>

Project activity	Baseline	Expected changes	Environmental, social and economic benefits
		on one national portal and one regional portal	

## C. Cost Effectiveness

*Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.*

Cost effectiveness is one of the core considerations of the proposed project. First, one of the key objectives is to demonstrate the economic potential of aquaculture production as a tool to adapt livelihoods to climate change and support the restoration of vulnerable climate-impacted marine ecosystems. Past projects which have attempted to revive milkfish aquaculture production in Nauru display a long history of maladaptation due to both inadequate geographical focuses primarily on Buada Lagoon, which is constrained by its surface area by nature and also by land ownership rules in place, which prevent the introduction of new aquaculture operators on the site. Unlike past projects, the project aims to incentivise aquaculture production among the most vulnerable communities by lifting barriers of accessing finance to enable investment in small-scale aquaculture facilities without geographic restrictions or complex tenure issues.

Indeed, the NFMRA has previously supported a pilot project to demonstrate the technical and economic viability of milkfish production by subsidising a couple of private pond-owners to purchase milkfish fry and feed. Through stakeholder assessments after the project, it was identified that for a single pond 10,000 US\$ of gross revenue was generated within the first 6-month growing period. It was additionally reported that the demand for fresh milkfish was so high that some people placed pre-orders. The NFMRA is unable to upscale the pilot project to a larger audience due to important financial and budget constraints, however this example demonstrates the strong market potential for farmed milkfish in Nauru, in addition to be a climate-resilient income generating activity. Based on these lessons learned, with an maximum 25,000 US\$ per individual sub-grant to be awarded to individual beneficiaries, enabling pond rehabilitation and construction beyond subsidising feed and fry, the mini-grant facility would enable one of the most cost-effective adaptation measures to diversify livelihoods, secure a climate-resilient food supply and divert pressure away from Nauru's climate-impacted coastal and marine ecosystems.

Second, it is envisaged that the proposed project will leverage existing NFMRA aquaculture facilities to scale them up with a view to support the growing aquaculture production and the need for fisheries extension services. As such, the project builds on existing infrastructure to enhance cost effectiveness and preventing full cost investment. This upscaling results in the installation of a domestic supply of milkfish feed and fry that will further reduce import costs in the long-term, comparing to the baseline scenario where aquaculture operators and the NFMRA have to import milkfish fry and feed to sustain national aquaculture production, at high economic and environmental costs. This also enables retention of financing in Nauru and allowing reinvestment into the local markets, enhancing local economies in the long-term

Third, AF resources will be optimised by reutilising the existing Fish Market at Anibare Community Harbour, rather than supporting the construction of a new building to house the community-managed storage, processing and marketing facility to be established under Component 2. This approach saves on survey, building and potentially significant freight costs to ship several 40-foot containers for the construction, while strengthening national ownership of project outputs as this approach has been chosen by community groups as part of the stakeholder consultations carried out as part of the project design.

Lastly, although the estimated cost per beneficiary is high compared to traditional benchmarks (at about 1,111 US\$), Nauru's remote location and limited economic situation results in significant transport, freight and shipping costs which are essential to the project execution and delivery of expected results. As per the IPCC reports, operating in Island States is much more costly than operating in larger land-based territories<sup>80</sup>. This is particularly the case for the Pacific, which is highly dispersed and as small populations with a lack of large private sector

<sup>80</sup> [https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap29\\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap29_FINAL.pdf)

presence. Pacific Island Countries and Territories (PICTs) are some of the most expensive areas to deliver climate change adaptation benefits due to high transport costs and reduced shipping presence. Further, the size of Nauru as a country, the limited number of people and their acute vulnerability to climate change call for funding to be mobilized to secure the sustainable uptake of aquaculture operations and the preservation of vulnerable ecosystems. Overall, more resilient coastal fisheries and a productive aquaculture sector represent some of the last available options for the people of Nauru to adapt their livelihoods in the face of climate change. Considering changes in the quantity and distribution of fish stocks and particularly tuna species, the progressive interruption of phosphate mining activities, and the potential closure of the Australian Regional Processing Centre, national economic prospects for Nauru are dire unless the adaptation costs for the coastal fisheries and aquaculture sectors are met.

## D. Alignment to National and Sub-National Strategies

*Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.*

The proposed project is in full alignment with the Government of Nauru’s long-term development and climate change policies. Further, the project interventions directly support national institutions mandated to plan and execute the national adaptation planning strategy therefore strengthening national ownership of project results and outcomes. Table 9 below lists the relevant national policies and plans and details the project’s contribution to achieving associated targets and objectives.

*Table 9 - List of relevant national policies and contribution of project activities to policy targets*

Name of climate change and development policy	Contribution of the project to achieving the policy targets
Coastal Fisheries and Aquaculture Act 2020	<p>The proposed project specifically aims to support the effective implementation of the 2020 CFA Act, which is a central pillar to the development of Nauru’s sector and to the sustainable management of coastal and marine resources using community-based approaches.</p> <p>The project is therefore fully aligned with the CFA Act’s objectives, notably:</p> <ul style="list-style-type: none"> <li>• “preservation, protection and development of coastal fisheries</li> <li>• waters of the Republic;</li> <li>• ensuring the sustainability of coastal fisheries waters and</li> <li>• aquaculture management and development;</li> <li>• protection of livelihood and food security;</li> <li>• managing, developing and using fishery resources taking into</li> <li>• consideration traditional knowledge, best available scientific information and in accordance with best management practices;</li> <li>• ensuring community participation in coastal fisheries and aquaculture management; and</li> <li>• coordinating the role of Government agencies and the community to ensure compliance with conservation and management measures for coastal fisheries waters and aquaculture.”</li> </ul>
Nauru Fisheries and Marine Resources Authority Act 1997 <sup>81</sup>	<p>The proposed project will support the NFMRA in the fulfilment of its mandate through the provision of implementation support, capacity building and training activities in relation to its objects and functions. The project will work with the NFMRA to enhance its human resource capacity with regards to biosecurity, data collection for marine resources, aquaculture production indicators and fisheries production, ecological modelling and risk assessments. These activities will strengthen the NFMRA’s capacity to support coastal fishers, aquaculture operators and coastal communities to implement sustainable practices in resource management for increased resilience to climate change impacts. The project will particularly support the NFMRA in the fulfilment of the following objects and functions:</p> <ul style="list-style-type: none"> <li>• “To manage, develop, conserve and protect the fisheries and marine resources of Nauru in such a way as to conserve and replenish them as a sustainable asset for future generations; and</li> </ul>

<sup>81</sup> Republic of Nauru (1997) Nauru Fisheries and Marine Resources Authority Act 1997, as in force from 26 November 2004.

Name of climate change and development policy	Contribution of the project to achieving the policy targets
	<ul style="list-style-type: none"> <li>To promote the sustainable utilization of the fisheries and marine resources of Nauru to achieve economic growth, improved social standards, improved nutritional standards, human resource development, increased employment and a sound ecological balance; and</li> <li>To pursue effective strategies for managing the fisheries and marine resources of Nauru so as to maintain the integrity of marine ecosystems, to preserve biodiversity, to avoid adverse impacts on the marine environment, and to minimise the risk of long-term or irreversible effects of resource extraction operations;</li> <li>To enhance the administrative, legal, surveillance and enforcement capacities of the Republic for the management, development, conservation and protection of the fisheries and marine resources of Nauru.”</li> </ul>
Environmental Management and Climate Change Act 2020	<p>The project is in full alignment with Part 8 of the Environmental Management and Climate Change Act of 2020, which aims to address climate change, including:</p> <ul style="list-style-type: none"> <li>“facilitate and implement projects to protect water resources, coastal areas, land, biological diversity, fisheries and public infrastructure; put in place strategies and action plans to address a global warming, rising sea level and other effects of climate change;</li> <li>address the environmental impacts of climate change on water resources, coastal areas, lands and land usage, food security, biological diversity, fisheries, economic welfare, public infrastructure and its vulnerability to natural disasters; and</li> <li>participate in international and regional meetings and forums with a view to obtaining the fullest possible assistance to address the implications of climate change and undertake adaptation initiatives.”</li> </ul>
Intended Nationally Determined Contribution (iNDC) <sup>82</sup>	<p>The proposed project specifically aims to assist Nauru in the implementation of its iNDC objectives, which state that one of the “most pressing adaptation strategy is to improve the indigenous food supply”. By facilitating and providing incentives for the development of the small-scale aquaculture sector, the project will increase access to and availability of fresh, local and nutritious food.</p>
National Sustainable Development Strategy 2019-2030 (Revised 2019) <sup>83</sup>	<p>The project is in full alignment with the key priorities identified by community stakeholders as part of the development of the National Sustainable Development Strategy, including:</p> <ul style="list-style-type: none"> <li>“providing greater access to finance for small businesses and for homeowners</li> <li>Increasing domestic food production to improve nutritional standards</li> <li>Strengthening social inclusion through greater participatory processes in policy design</li> <li>Providing greater recognition of the role of women in the community through better designed community programmes”.</li> </ul> <p>In terms of key national development priorities, the project will support the implementation of the following:</p> <ul style="list-style-type: none"> <li>“Employment and sustainable income-generating activities</li> <li>Business environment “and access to finance”</li> <li>Diversification of the economy (...) given the risks associated with the dependence on a narrow range of products”.</li> </ul>
First National Communication to the UNFCCC (1999) <sup>84</sup>	<p>The project aligns with key priority needs identified in Nauru’s first national communication such as:</p> <ul style="list-style-type: none"> <li>“Education and training. (...) enhance of local expertise and skills</li> <li>Institutional strengthening</li> <li>Monitoring of Important baselines. (...) These activities should be coordinated together with the Nauru Fisheries and Marine Resources Authority (NFMRA)</li> </ul>
Second National Communication to the UNFCCC (2014) <sup>85</sup>	<p>The project directly feeds into the priority CCA actions for the fisheries and marine resources sector identified in Nauru’s second NDC:</p> <ul style="list-style-type: none"> <li>“<b>Fill knowledge gaps – identify and document vulnerable fisheries and marine resource:</b> collect and analyse fisheries and marine resources data in conjunction with assessments of climate change and disaster impacts on coastal resources. Includes establishing programs for regular monitoring of fish resources, ensuring active community participation. Development of effective monitoring, control and surveillance (MCS) capability, through national programmes and regional cooperation</li> </ul>

<sup>82</sup> Republic of Nauru (2015) Intended Nationally Determined Contribution (iNDC) Under the United Nations Convention on Climate Change.

<sup>83</sup> Republic of Nauru (2019) National Sustainable Development Strategy 2019-2030: Revised 2019.

<sup>84</sup> Republic of Nauru (1999) 1<sup>st</sup> National Communication under the United Nations Framework Convention on Climate Change.

<sup>85</sup> Republic of Nauru (2014) Second National Communication to the UNFCCC, December 2014

Name of climate change and development policy	Contribution of the project to achieving the policy targets
	<ul style="list-style-type: none"> <li>• <b>Support a community-based ecosystem approach</b> to fisheries management (CEAFM): Strengthen the community fisheries program of NFMRA, to support CEAFM. Develop integrated fisheries management plans, through community consultation, which integrates future changes and risks due to climate change</li> <li>• <b>Promote aquaculture as an important contributor to food security that can reduce pressure coastal fisheries:</b> assess the impact of drought on aquaculture develop management tools. Finalize an action plan for aquaculture development</li> <li>• <b>Strengthen the human capacity of government and community stakeholders:</b> Promote and facilitate human resource development through fisheries education and training programmes. Specifically, increase local capacity in aspects of marine science, including fisheries techniques, monitoring and analysis of resources and any impacts of climate change, coastal and marine resource management practices, and seafaring. Increase local capacity to support aquaculture expansion.”</li> </ul>
Framework for Climate Change Adaptation and Disaster Risk Reduction (RONAdapt) <sup>86</sup>	The project directly supports the RONAdapt’s priority CCA actions for fisheries and marine resources, which follow those of the Second National Communication above.
Updated Nationally Determined Contribution (2021) <sup>87</sup>	<p>The project directly supports the achievement of objectives laid out in Nauru’s updated NDC, particularly in relation to food security and SDGs 2, 3, 13, 14 and 17:</p> <ul style="list-style-type: none"> <li>• “Implementation of Coastal Fisheries and Aquaculture Act 2020</li> <li>• Collect and analyze data on climate change impacts on fisheries and marine resources</li> <li>• Develop milkfish farming in support of the development and expansion of aquaculture” (which is the only conditional objective in the food security category).</li> </ul>

## E. Alignment with National Technical Standards

*Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.*

Nauru has several laws and provisions governing the use of environmental resources, setting out terms for environmental and coastal management, and governing the fisheries sector in specific. The most prominent of these are: (i) the Environmental and Climate Change Act No. 34 of 2020; (ii) the Coastal Fisheries and Aquaculture Act; (iii) the Fisheries Act; (iv) the Fisheries and Marine Resources Authority Act; and (v) the Fisheries Regulations, which has several subsequent amendments. In addition, Nauru is a signatory to a number of international and regional agreements which provide provisions regarding the use of marine resources and activities in the fisheries sector throughout Micronesia and the South Pacific. While these agreements are not legally enforceable in Nauru, the Government of Nauru actively works to uphold its commitment, duties, and responsibilities as a signatory, and has entrusted various government agencies with upholding their provisions (in the case of the marine and fisheries sectors, the Department of Commerce, Industry and the Environment).

The table below provides an overview of the relevant legislation and rules which will be applicable for each project output, and the corresponding authorized offices within the Government of Nauru who are responsible for carrying out such legislation and rules.

*Table 10 – Summary of technical standards and legislation relevant to project activities.*

Project Output	AF ESP	Relevant rules, regulations, standards and procedure	Authorizing offices
Output 1.1. Capacity enhancement of national institutions to mainstream climate change resilience across the coastal fisheries and aquaculture sectors.	<ul style="list-style-type: none"> <li>• Compliance with the law</li> <li>• Access and Equity</li> </ul>	<p>Environmental and Climate Change Act No. 34 of 2020</p> <p>Coastal Fisheries and Aquaculture Act No. 12 of 2020</p>	<p>Coastal Fisheries Advisory Council</p> <p>Nauru Department of Commerce, Industry and the</p>

<sup>86</sup> Republic of Nauru (2015) Climate change: Building our resilience. Republic of Nauru Framework for Climate Change Adaptation and Disaster Risk Reduction (RONAdapt).

<sup>87</sup> Republic of Nauru (2021) Updated Nationally Determined Contribution.

Project Output	AF ESP	Relevant rules, regulations, standards and procedure	Authorizing offices
	<ul style="list-style-type: none"> <li>Marginalized and Vulnerable Groups</li> <li>Gender Equity and Women's Empowerment</li> <li>Core Labor Rights</li> </ul>	<p>Fisheries Act No. 18 of 1997</p> <p>Nauru Fisheries and Marine Resources Authority Act 1997</p> <p>Fishing License (FAD Closure) Regulations 2009</p> <p>Fisheries Regulations 1998 (and all subsequent amendments)</p>	Environment (the "Secretary")
Output 1.2. Awareness raising campaigns conducted to enhance understanding of the CFA Act and NFMRA roadmap and promote grant facility	<ul style="list-style-type: none"> <li>Climate Change</li> <li>Pollution Prevention and Resource Efficiency</li> <li>Land and Soil Conservation</li> </ul>	Coastal Fisheries and Aquaculture Act No. 12 of 2020	<p>Coastal Fisheries Advisory Council</p> <p>Community Fisheries Stakeholder Forum<sup>88</sup></p> <p>Nauru Department of Commerce, Industry and the Environment (the "Secretary")</p>
Output 2.1. Provision of infrastructure to national aquaculture institutions to enhance their ability to provide training, extension services and supplies to existing and new aquaculture operators, increasing the resilience of the sector	<ul style="list-style-type: none"> <li>Public Health</li> <li>Protection of natural habitats</li> <li>Conservation of biological diversity</li> </ul>	<p>Environmental and Climate Change Act No. 34 of 2020</p> <p>Coastal Fisheries and Aquaculture Act No. 12 of 2020</p> <p>Fisheries Act No. 18 of 1997</p> <p>Nauru Fisheries and Marine Resources Authority Act 1997</p> <p>Fishing License (FAD Closure) Regulations 2009</p> <p>Fisheries Regulations 1998 (and all subsequent amendments)</p> <p>Federated States of Micronesia Arrangement for Regional Fisheries Access (1994)<sup>89</sup></p> <p>Arrangement Implementing the Nauru Agreement Setting Forth Minimum Terms and Conditions of Access to the Fisheries Zones of the Parties</p>	<p>Coastal Fisheries Advisory Council</p> <p>Community Fisheries Stakeholder Forum</p> <p>Nauru Department of Commerce, Industry and the Environment (the "Secretary")</p>
Output 2.2. Increased adaptive capacity of artisanal fishers and resilience of marine ecosystems in the face of climate variability and change		Federated States of Micronesia Arrangement for Regional Fisheries Access	Nauru Department of Commerce, Industry and the Environment (the "Secretary")

<sup>88</sup> This is not a legal regulatory body, but it is a key stakeholder group that should be consulted and actively engaged with during public-facing activities such as awareness campaigns.

<sup>89</sup> Agreement introduces measures to facilitate and control the access to the exclusive economic zones and fisheries zones of the Parties to this Agreement ("Arrangement Area"). <http://extwprlegs1.fao.org/docs/pdf/mul67613.pdf>



Project Output	AF ESP	Relevant rules, regulations, standards and procedure	Authorizing offices
Output 3.1. Establishment of a knowledge management strategy (KMS) to sustain climate-resilient practices in environmental and natural resource management		Environmental and Climate Change Act No. 34 of 2020  Coastal Fisheries and Aquaculture Act No. 12 of 2020	Nauru Department of Commerce, Industry and the Environment (the "Secretary")
Output 3.2. Learning and dissemination of project results		N/A	N/A

## F. Complimentarily With Other Funding Sources

*Describe if there is duplication of project/programme with other funding sources, if any.*

Because of Nauru's remote geographical location and marginal economic importance on the global scene, funding flows for development (ODA) have plummeted since the early 2010s, from almost 50% of GNI in 2010 to just 16% in 2020<sup>90</sup> ([3/4 of which accounted](#) for by the GCF-ADB Sustainable and Climate Resilient Connectivity Project which aims to rehabilitate Nauru's only port infrastructure). In the climate finance space, funding flows to Nauru have overwhelmingly focused on restoring land ecosystems which have – and continue to be – irreversibly damaged by decades of phosphate mining. Coastal fisheries and aquaculture, despite their cultural significance to Nauruan people, their contribution to livelihoods and food security, and the climate change adaptation potential, have not garnered the attention of bilateral or multilateral donors<sup>91</sup>. Furthermore, past initiatives focusing on improving and modernizing aquaculture production were bilateral efforts and now date back decades, while having had sometimes disastrous consequences (such as the introduction of the invasive Mozambique tilapia in Nauru's brackish aquaculture ponds). As such, currently, there is no ongoing sustainable aquaculture and coastal fisheries project and therefore no duplication of the project interventions or focus with other funding sources, either bilateral or multilateral.

The closest initiative relating to aquaculture was the recent FAO-supported Aquaculture Business Development Planning Strategy (2017-2019) a technical assistance project which aimed to benefit aquaculture divisions from line ministries in several Pacific countries including Nauru (more information on this past project can be found in Table 11 below). Stakeholder consultations carried out as part of the project design shed light on the technical assistance's successes and shortcomings, which included the project focus on aquaculture production for export, rather than focusing on food security and the domestic market<sup>92</sup>, and an attempt to attract private investment in the absence of a conducive, enabling environment.

In the absence of bilateral or multilateral efforts to support Nauru's aquaculture and small-scale fisheries production as a way to adapt ecosystems and livelihoods to projected climate change impacts, the Government of Nauru, in its Conditional NDC (2021) stated its intention to develop a 3 million US\$ aquaculture pilot project to rehabilitate Buada Lagoon and Anabar ponds. However, this proposed intervention would not constitute a duplication with the AF's resources, as the geographical focus specifically focuses on locations that the proposed project did not target, in order to maximise the adaptation impact potential and the use of AF's resources. Lastly, the proposed project design directly arises from the lessons learned of past development and climate change initiatives, and seeks complementarity and synergies in several areas. Table 11 below lists the relevant projects and programmes, and described how the potential synergies, complementarities and lessons learned were built into the proposed project design.

<sup>90</sup> World Bank (2022) Net ODA received (% of GNI) – Nauru. Accessed 12/10/2022/

<sup>92</sup> According to reports from stakeholder consultations conducted in January 2022.

Table 11 - Relevant project and programmes and associated project design considerations, synergies and complementarities

Project title and Implementing Entity	Description and lessons learned (if applicable)	How synergies and complementarities are built into the project design
<p><a href="#">Implementing a Ridge to Reef approach to protect biodiversity and ecosystem functions in Nauru (R2R Nauru)</a>  <b>Feb 2016 – Feb 2021</b>                      (UNDP-GEF)</p>	<p>The Nauru Ridge to Reef (R2R) GEF Project aimed to develop, establish and implement a government and community partnership approach to increase knowledge for better management of natural resources and ecosystem services for the entire Island of Nauru through innovative integrated land, water, biodiversity, coastal and marine management approaches thereby protecting and increasing livelihoods opportunities, food security, and enhancing climate resilience at five initial Pilot Sites (Districts) of Anabar, Ijuw, Anibare, Buada and Meneng. The total project cost of the Nauru R2R Project is US\$11,051,358.</p> <p>The project had four components:</p> <ol style="list-style-type: none"> <li>1. Conservation of marine biodiversity</li> <li>2. Sustainable land and water management</li> <li>3. Governance and institutions</li> <li>4. Knowledge management</li> </ol> <p>The project's Terminal Evaluation was completed in November 2020. The project suffered from significant delays, with an original target end date of April 2019 (actual completion in June 2020). The TE found that although the project design seemed sound according to UNDP-GEF criteria and the needs of the country and communities, the project failed to achieve its planned targets (only 52%), and a number of key activities will never be implemented. Very little progress on the development and implementation of sustainable land use plans has been noted, while "hard" investment activities (such as kitchen gardens, canoes, FADs, water systems etc.) have already died or are missing. This is probably due to a lack of a maintenance plan, with a failure from GoN to develop a documented Sustainability Plan with clear allocation of resources, and the inclusion of these in the institutions' workplans. Therefore, the overall rating for the sustainability of project outputs was marked as "unlikely".</p> <p>On the positive side, the project's governance component has directly helped to address long-standing environmental governance gaps in Nauru, including new legislation. The project directly contributed to support the drafting of the Coastal Fisheries and Aquaculture Act 2020, which paves the way for the enhanced sustainable management of Nauru's coastal and marine resources. Further, the awareness-raising activities around environmental issues, marine biodiversity and sustainable land use among the government and communities have received acclaim from the TE. Lastly, the project supported the signing of MoAs between each pilot districts and the GoN for the development of LMMAs, but at time of writing this still has not progressed passed the MoA stage.</p>	<p>One of the key issues to have hampered the implementation of the R2R project was the lack of accountability mechanisms and monitoring of implementation milestones on the part of GoN. This has resulted in long delays, prevented the implementation of certain activities, and negatively impacted the sustainability of project outputs, notably the enactment of provisions and policies developed during the project. To this day, the roll-out of provisions under the Coastal Fisheries and Aquaculture Act has been slower than expected due to limited community awareness campaigns and understanding on the changes created by the act. To remedy this as part of the proposed project, clear accountability mechanisms and interinstitutional coordination and monitoring will be needed, so that planned initiatives do not fall short due to a lack of incentives to implement them in a timely manner.</p> <p>The project will build on the work initiated by UNDP to support the GoN and NFMRA to develop a recommendations report and associated roadmap for the Coastal Fisheries and Aquaculture Act of 2020 and the Environment and Climate Change Act by:</p> <ul style="list-style-type: none"> <li>• Supporting the identification and enactment of designated fisheries management areas to enhance fisheries resource management</li> <li>• Support the implementation of the Community Fisheries Stakeholder Forum and Community Fisheries Management committees to ensure that there is sufficient capacity among members to effectively implement activities relating to the conservation, protection and monitoring of coastal and reef areas</li> <li>• Supporting Community Fisheries Management areas and plans together with coastal communities, to enable communities to lead the implementation of coastal protection and fisheries resource management measures</li> <li>• Providing technical support to the NFMRA for the development of national aquaculture standards in adequation with best international practice</li> <li>• Providing support to the GoN and NFMRA for mainstreaming climate vulnerabilities into the National Aquaculture Plan with a view to assess the aquaculture sector needs and barriers to</li> </ul>

Project title and Implementing Entity	Description and lessons learned (if applicable)	How synergies and complementarities are built into the project design
		<p>private investment and vulnerabilities with regards to climate change</p> <ul style="list-style-type: none"> <li>• Providing support and recommendations for the preparation and review of the National Coastal Fisheries Management Plan (20-3 of the Act) in relation to mainstreaming climate change adaptation</li> <li>• Ensuring the development of maintenance plans with clearly allocated resources and milestones for any “hard” investment supported by the project</li> </ul>
<p><a href="#">Aquaculture Business Investment Planning and Development to Increase Resilience and Improve Food Security</a> Oct 2017 – Dec 2019 (FAO)</p>	<p>This project had a budget of USD 499,000 and targeted the Marshall Islands, FSM, Palau and Nauru. The timeframe of the project was October 2017 to December 2019 and the final report summarizing its outputs was published in May 2020.</p> <p>The technical assistance project aimed to benefit technical personnel from the aquaculture divisions of line ministries or authorities in MASA (Micronesian Association for Sustainable Aquaculture) member countries (in the case of Nauru, the NFMRA), and private aquaculture farmer associations.</p> <p>The key recommendations of the project were:</p> <ol style="list-style-type: none"> <li>Support the development of national legislation responding to development and investment needs in the aquaculture sector, including on aquatic biosecurity;</li> <li>Assess the economic viability, market potential and environmental sustainability of expanding commercial production of priority species, such as milkfish and giant clams, and provide guidance on facilitating access to capital, research and development and finance streams;</li> <li>Develop loan programmes for entrepreneurs to assist in purchasing necessary equipment and supplies;</li> <li>Evaluate applied research and development technologies to support the implementation of giant clam and milkfish production ponds for demonstration and community and farmer training purposes; and</li> <li>Collect production and/or value data of aquaculture produce to assess availability and profitability.</li> </ol> <p>At time of writing of the FAO report (April 2020), the prepared national aquaculture business development strategy had not been reviewed further or endorsed by the GoN.</p>	<p>The proposed project will pursue the work initiated by FAO by:</p> <ul style="list-style-type: none"> <li>• Supporting the implementation of national legislation in light of identified investment needs and climate change impacts</li> <li>• Demonstrate the economic viability and domestic market potential of aquaculture production</li> <li>• Demonstrating the contribution of the aquaculture sector to national food security and improved health through improved nutrition</li> <li>• Collecting data relating to the costs for the production of key species e.g. milkfish, giant clams and coral</li> <li>• Enhancing local capability at NFMRA and within communities to collect data in aquaculture operations</li> <li>• Supporting the GoN in its efforts to operationalize the MASA network in collaboration with partner countries</li> <li>• Finalising the risk and vulnerability assessment of the aquaculture sector and ensuring that climate change impacts are integrated.</li> <li>• Providing access to finance for small businesses and homeowners to engage in small-scale aquaculture operations</li> </ul>

Project title and Implementing Entity	Description and lessons learned (if applicable)	How synergies and complementarities are built into the project design
<p><a href="#">Sustainable and Climate-Resilient Connectivity (formerly Port Development Project)</a> Dec 2015 – 2022 (expected –delayed) (ADB-GCF)</p>	<p>The project will improve port operations in Nauru by building a wharf, breakwater, and a berth pocket at Aiwo, reconstructing port buildings and the container storage area, and strengthening the institutional capacity of Port Authority of Nauru.</p> <p>Although not directly related to the proposed project, the ADB Port project will enhance Nauru's access to regional and international markets by improving the port infrastructure, reducing loading and unloading times, and securing the docks. These structural improvements will facilitate exports for Nauruan businesses, enhance the nation's connectivity and may attract new shipping companies to provide shipping services.</p>	<p>Although not directly related, the proposed project will leverage the structural developments financed by the ADB-GCF project which will reduce costs and delivery times for the transport of materials and equipment required for the construction of small-scale aquaculture production facilities.</p>
<p><a href="#">Ecosystem Restoration and Sustainable Land Management to improve livelihoods and protect biodiversity in Nauru</a> Project approved in late 2021 (UNEP-GEF)</p>	<p>This recently approved UNEP-GEF project (implementation approved September 2021) has the objective to achieve land degradation neutrality and improve ecosystem services in Nauru through integrated landscape management and conservation and sustainable use of biodiversity. It has four components:</p> <ol style="list-style-type: none"> <li>1. Strengthening policy and institutional capacity for sustainable land management and biodiversity conservation</li> <li>2. Rehabilitation and restoration of degraded land to protect and reinstate ecosystem services in Nauru</li> <li>3. Conservation and sustainable use of Nauru's remaining forests</li> <li>4. Scaling up towards land degradation neutrality and biodiversity conservation</li> </ol>	<p>The project will interact with the UNEP-GEF's project outputs for activities under Component 2 pertaining to the conservation of coastal areas. Other synergies may be found at the time of implementation.</p>
<p><a href="#">Support for the development of Nauru's National Adaptation Plan (NAP)</a> Approved May 2022 (SPREP-GCF)</p>	<p>This project, approved in May 2022 and expected to run 18 months, will carry out a private sector assessment to identify potential adaptation and resilience investors; a national vulnerability and risk assessment of Nauru's economy and livelihoods; and collect baseline data to establish an information management system.</p> <p>Importantly, the NAP support project will include the revision and update of CSIRO's 2014 climate change projections for Nauru.</p>	<p>The proposed project will utilize the outputs of the NAP support project, particularly the vulnerability assessment and the updated climate change projections from CSIRO. Under Component 1, Output 1.1, the policy recommendations report and roadmap will ensure to include findings from the Readiness project to provide the most up-to-date information on project climate change impacts pertaining to the aquaculture and coastal fisheries sectors.</p>

Project title and Implementing Entity	Description and lessons learned (if applicable)	How synergies and complementarities are built into the project design
Higher Ground project 2017- ongoing (Nauru Rehabilitation Corporation)	The project focuses on the preparation of a land use and restoration plan for the Topside. In the long run, it aims to rehabilitate land for use for residential, renewable energy, agriculture, aquaculture, recreation, parks, and natural reserves, etc. as dictated by the revised land use plan. The project has limited funding and is in the process of preparing a land use plan for the Topside based on analysis of remote-sensed data and so far without stakeholder consultations.	The proposed project will seek synergies with the existing work carried out for the rehabilitation of land for aquaculture purposes. In consultation with GoN stakeholders, under Component 1, the project will formulate a set of recommendations to enable the establishment of aquaculture facilities (zoning) in accordance with environmental and social management safeguards and existing sustainable land use plans.
<a href="#">The Pacific Adaptation to Climate Change project</a> 2009-2014 (SPREP-UNDP-GEF)	The project had a budget of US\$ 13,125,000 in funding from the GEF (Special Climate Change Fund) and AusAid. The project aimed to create mechanisms for learning and knowledge sharing on climate change at national and regional level. Demonstration of adaptation options showed very little success in Nauru, as most water purifiers installed by the project were found non-functional by the terminal evaluation.	The proposed project will build on the lessons learned of the PACC project by: <ul style="list-style-type: none"> <li>Utilizing the knowledge sharing mechanisms created for disseminating information on climate change at the national and regional levels (Nauru Environmental Data Portal)</li> <li>Ensuring the development of maintenance plans, with clear allocated resources and milestones, for USPs to be supported by the project under the mini-grant facility</li> </ul>
<a href="#">INFORM/ Building National and Regional Capacity to Implement Multilateral Environment Agreements (MEA) by Strengthening Planning and State of Environment Assessment and Reporting in the Pacific</a> Sept 2016 – Jan 2021 (SPREP-GEF)	This project has a total budget of US\$ 4,319,635 and is due to end in 2021. The project builds a network of national and regional databases for monitoring, evaluating, and analyzing environmental information to support environmental planning, forecasting, and reporting requirements at all levels and has established the Nauru Environmental Data Portal.	The proposed project will utilize the existing regional database and the Nauru Environmental Data Portal to include the data and information generated by the environmental surveillance working group (composed of community members and NFMRA staff) to be established under Component 3.  Additionally, and in alignment with the GoN's Coastal Fisheries and Aquaculture Act of 2020, a training programme will be provided to NFMRA staff in bio-oceanographic monitoring. The data generated from these observations will be added on the regional and national databases.
<a href="#">Biodiversity and Protected Areas Management Phase II (BIOPAMA II)</a> Feb 2018 – Sept 2023 (expected) (SPREP-IUCN-EU)	This project has a total budget of US\$ 1,623,865 until September 2023. The project provides tools for data and information management, services for improving the knowledge and capacity for protected area planning and decision making, and funding opportunities for specific site-based actions. It is a project that focuses on the Africa-Caribbean-Pacific (ACP) group of states and also includes Nauru.  Nauru participated in the regional project inception workshop held in Samoa in June 2018. However, SPREP has had minimal engagement with Nauru on this project simply because they do not have any declared or designated	The project will upload all data collected as part of Component 3 relating to coastal and marine inventories onto the PIPAP Portal, in addition to the Nauru Environmental Data Portal.

Project title and Implementing Entity	Description and lessons learned (if applicable)	How synergies and complementarities are built into the project design
	<p>protected and conserved areas. However, SPREP stands ready by to assist Nauru with any requests related to the process of establishment of protected and conserved areas, and in October 2020, SPREP provided technical advice and additional decision support resources (upon request from the Nauru Environment Department – DCIE) to support their proposal to conserve an area of key national biodiversity importance on the western side of the island (in Anibare district) as recommended through a Biological Rapid Assessment (BIORAP) for Nauru coordinated by SPREP in 2013.</p> <p>The main information platform under the BIOPAMA project is the <a href="#">Pacific Islands Protected Area Portal</a> (PIPAP), which is the main online source for Pacific Island protected and conserved area coverage data and other related information. The Portal can be accessed freely by the public and while there is a Nauru Country Page on the Portal, it has yet to be populated due to the absence of country data. Nevertheless, portal analytics have confirmed that 41 people in Nauru have accessed and/or used the PIPAP since the official commencement of phase II of the BIOPAMA project (June 2017). In addition, the project disseminates a weekly newsletter of which there are subscribers from Nauru.</p>	
<p><a href="#">Integrated Islands Biodiversity project (IIBP) 2012 - 2017</a> (SPREP-UNEP-GEF)</p>	<p>The project had a total funding of US\$ 4,302,720, including US\$ 1,740,600 of GEF funding, of which US\$ 601,660 was spent on Nauru. In 2013, a Rapid Biodiversity Assessment of Nauru (Nauru BioRAP) was carried out to improve the state of knowledge on marine and terrestrial ecosystems and provide a scientific basis for the conservation and management of nationally, regionally, and globally important ecosystems and species. The BioRAP documented the status of biodiversity, identified plant communities, described invertebrates, reptiles, and birds, as well as marine biodiversity, including species previously not reported in Nauru. The BioRAP assessment remains the most complete report on Nauru’s biodiversity.</p> <p>The report made key conservation recommendations for immediate action to promote and establish a strong culture of conservation, protected areas, and sustainable use of biodiversity resources in the country. A particular focus of the Nauru BioRAP was to identify areas of conservation value and to investigate opportunities for establishing marine and terrestrial protected areas. Based on Nauru’s BioRAP recommended priorities for conservation action, efforts are ongoing through R2R Nauru to protect Nauru’s marine and terrestrial biodiversity with a view to formalizing locally managed marine protected areas (LMMAs) covering 30% of the coastline of Nauru. The DCIE is using the BioRAP’s baseline data and information to guide the development of strategies for conservation management and monitoring</p>	<p>The project will pursue efforts initiated by the IIBP project by supporting the formal establishment of community-based fisheries management areas and Designated Fisheries Management Areas to enhance biodiversity resource management and conservation.</p>

Project title and Implementing Entity	Description and lessons learned (if applicable)	How synergies and complementarities are built into the project design
	<p>purposes.</p> <p>Although some progress has been made, the majority of the BioRAP's recommendations for conservation and sustainable use of Nauru's biodiversity remain to be implemented. To date, there are no terrestrial protected areas, declared community conserved areas or landscapes under improved practices in Nauru.</p>	

## G. Learning and Knowledge Management

*If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.*

Knowledge generation, management and dissemination is an integral part of the proposed project and has been approached with an individual component. Component 3 responds to the third objective of the project “**Increased resilience of ecosystems and adaptive capacity of communities through availability of data and knowledge sharing mechanisms for adaptation planning and environmental protection**”. This component aims to strengthen the adaptive capacity of local communities and representatives of national institutions through the provision of tools and skills to collect, monitor, report and use environmental and marine management data and information for decision-making, enhancing the climate resilience of ecosystems.

The activities to be delivered directly arise from identified lessons learned from past projects and programmes. Specifically, the first output focuses on the establishment of a standalone national knowledge management strategy (KMS) for the collection and analysis of marine and environmental management data. Indeed, it was evidenced during consultations carried out as part of the project design process that data on ecosystem health, resource availability and key chemical indicators were not collected by national institutions responsible for marine protection. Additionally, a key project design recommendation included supporting community-government collaboration to support the delivery of climate adaptation planning processes. Therefore, the first activity under this output focuses on the provision of 10 marine monitoring stations to be deployed nationally, while the second activity aims to establish an environmental surveillance working group constituted of representatives from NFMRA, community leaders and Community Fisheries Management Committee members. These activities will enable stakeholders to monitor relevant environmental and ecosystem indicators and correlate them to climate conditions. This increase in relevant data and knowledge across the country will enable enhanced adaptive management of natural resources in the face of predicted climate change to enhance sustainability and increase food security.

As part of the second output to be delivered, activities will focus on the creation of knowledge exchanges between partner Micronesia Association for Sustainable Aquaculture (MASA) countries, and on the compilation and dissemination of project outputs and lessons learned on national and regional information portals. This approach again arose from the identified need to push for a greater collaboration between community-based organisations and associations involved in aquaculture amongst partner countries of the MASA. This activity will support community-driven knowledge generation and dissemination to increase adaptive capacity and foster ownership of sub-grants supported as part of Component 2. The last activity to be delivered will support the compilation of project outputs and lessons learned in different formats for a diverse audience, ranging from decision-makers to researchers to local community groups. The materials will be uploaded onto national and regional information portals, such as the Nauru Environmental Data portal and the Pacific Island Protected Area Portal.

Lastly, the PMU will include a Monitoring and Evaluation Coordinator who will oversee the production and integration of knowledge systems and products for the duration of the project. Throughout its implementation, the project will produce diverse communication and training materials, including some targeting vulnerable audiences such as women, and aim to utilise existing national and regional information platforms to disseminate them to the largest possible audience (decision-makers, researchers, community groups). This will directly contribute to the strengthening of adaptation planning processes and improve the resilience of vulnerable ecosystems and communities.



## H. Consultation Process

*Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.*

Stakeholder engagement and consultation was a key consideration in the elaboration of this initial project design. The preparation of the proposed project involved the Nauru Fisheries and Marine Resources Authority through the Department of Environment Management and Agriculture (formerly the Department of Commerce, Industry and Environment) as the AF Designated Authority, from the onset, in early 2021. Consultations with key stakeholders including development partners, communities and representatives from national institutions have been conducted over the period November 2021 to November 2022. Although the COVID-19 pandemic prevented consultations to take place in person, regular meetings and workshops were carried out in the presence of relevant ministries and institutions. In the context of the COVID-19 recovery, the community stakeholder consultation workshop was carried out in person on 14 November 2022 at Nauru's University of the Pacific, in presence of more than a dozen members of community-based organisations and community leaders (see attendance sheet in Annex 1).

Consultations with development partners and NFMRA were undertaken remotely using online means of communication. The consultations aimed to:

- Gather relevant information on the technical, operational and financial capacity of the NFMRA
- Gather missing information and data for the development of baseline and contexts sections
- Gather lessons learned and insights into past and ongoing relevant projects from other donors
- Seek feedback on the proposed project structure activities to ensure their adequacy with the context and identified climate change drivers
- Gather information for the mapping of barriers hampering the conservation of coastal areas and the uptake of the aquaculture sector
- Ensure overall alignment with national priorities and buy-in.

The community workshop was rolled out as a one-day event to present the proposed project activities to seek feedback and ensure alignment with local needs and expectations. Open-ended questions were formulated to gather community's inputs on the proposed activities which was integrated into a revised intervention plan. This consultation proved particularly useful with regards to maximising the use of AF's resources, as communities evidenced the appropriate nature of Anibare Community Harbour's fish market for the proposed community facility to be established under Component 2. Further, community organisations involved in nearshore fisheries and aquaculture expressed their needs in terms of training and technical assistance, particularly in areas such as sustainable fishing methods and awareness of current aquaculture and fisheries legislation.

Full accounts of the stakeholder consultations carried out can be found in Annexes 1 and 2.

## I. Justification of Full Cost Adaptation Reasoning

*Provide justification for funding requested, focusing on the full cost of adaptation reasoning.*

### Baseline Scenario (Without AF Additionality)

Nauru's economic prospects are dire considering identified climate change impacts which will result in changes in the distribution and quantity of tuna resources, as fishing licenses account for more than a quarter of annual government revenue. Further, as the total catch of coastal fisheries remains marginal and of subsistence nature, considering that climate change will also impact fish and invertebrates' stocks in coastal areas, opportunities to counterbalance future revenue losses are scarce. Attempts to promote the access of small-scale fishers to the large tuna resources have not been successful, mainly to due to the preference of local communities for milkfish, and to the difficulties in providing adequate infrastructure for the development of a domestic tuna market. Additionally, the extreme dependency on imports for 90% of all food consumed on the island has directly

contributed to an unprecedented drop in national food availability and quality, resulting in nutritionally poor diets and a rise in non-communicable diseases. Under the predicted climate conditions this is expected to worsen.

Nauru’s journey to climate change resilience as a whole must start with the creation of income diversification and generating opportunities, with a view to divert pressure away from climate-impacted coastal and oceanic fisheries resources, towards greater food security, nutrition and sustained income. The Government’s ability to robustly link identified climate vulnerabilities to adaptation options appraisal and project feasibility testing and detailed design is limited. As a small Pacific Island Country, with a small pool of generalist technical staff there are significant gaps in national technical expertise to develop viable interventions with a strong climate nexus, that are proportional to the changing scale of the issues and national budget capacities. National capacity to assess positive and negative project impacts in line with national environmental policy or multi-lateral safeguards policies is limited, and will be a continuing barrier to access external funding.

Although Nauru does not belong in the low or lower middle-income group of developing countries<sup>93</sup>, the justification for this request of funding lies in the inability of Nauru’s Treasury to take charge of the full cost of adapting the aquaculture and coastal fisheries sectors to climate change impacts. Indeed, the budgets allocated to Climate Change and the NFMRA for FY 2020-2021 only amounted to 1,036,452 \$US and 2,349,944 \$USD respectively<sup>94</sup>, which is insufficient to implement comprehensive, cross-cutting initiatives to improve the resilience of fisheries and aquaculture in the face of projected impacts. It is to be noted that the entirety of these amounts pays for salaries, office logistics and miscellaneous charges such as utilities, office equipment and insurance, leaving no budget for additional projects in line with climate change commitments.

### Project Scenario (With AF Additionality)

Table 12 below provides a description of the additionality of project activities in alignment with the AF Results Framework.

*Table 12 - Project additionality in alignment with AF Results Framework*

AF Outcomes	AF Outputs	Project Additionality in Nauru with AF finance
Outcome 1: Reduced exposure to climate related hazards and threats	<p>Output 1.1: Risk and vulnerability assessments conducted and updated</p> <p>Output 1.2: Targeted population groups covered by adequate risk reduction systems</p>	<p>Under Output 1.1, the project will support the formulation of a policy recommendations report and roadmap based on the latest risk and vulnerability assessments, as well as updated climate change projections.</p> <p>Additionally, the project will support the implementation of Community Fisheries Management Areas and Plans, which will directly contribute to protect marine resources based through the implementation of adaptation solutions based on identified risks and impacts.</p>
Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	<p>Output 2.1: Strengthened capacity of national and sub-national centers and networks to respond rapidly to extreme weather events</p> <p>Output 2.2: Increased readiness and capacity of national and sub-national entities to directly access and program adaptation finance</p>	<p>Under Outputs 1.1 and 2.2, the project will provide training to NFMRA officers and nearshore fishers. NFMRA officers will receive training in ecological assessments, resource modelling, sustainable aquaculture production methods, among others, which will support marine conservation and fisheries production in a changing climate. Coastal fishers will receive training in sustainable fishing practices and have access to funding to finance equipment to implement these enhanced practices. Finally, community-based organisations will also have</p>

<sup>93</sup> OECD (2022) DAC List of ODA Recipients – Effective for reporting on 2022 and 2023 flows. Accessed 12/10/2022

<sup>94</sup> Republic of Nauru (2020) 2020-2021 Budget and Estimates of Revenue and Expenditures. Budget Paper no. 1. Budget Strategy and Outlook. Available [here](#).

AF Outcomes	AF Outputs	Project Additionality in Nauru with AF finance
		access to funding to finance marine conservation strategies, ecological restoration solutions.
Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	<p>Output 3.1: Targeted population groups participating in adaptation and risk reduction awareness activities</p> <p>Output 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning</p>	A dedicated Component has been developed to enable the generation, collection and utilization of data and information for increased climate resilience. On the national-level, representatives of national institutions and community groups will collaboratively engage in the collection of key chemical indicators on ecosystem health from marine monitoring stations. At the regional level, activities under Output 3.2 will support knowledge exchanges between aquaculture communities in partner MASA countries, while organising regional-level workshops gathering decision-makers, private actors and researchers.
Outcome 4: Increased adaptive capacity within relevant development sector services and infrastructure assets	Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	Eligible activities under the mini grant facility to be established under Component 2 include climate-proofing of existing aquaculture facilities. Additionally, the facility will unlock financing for equipment, tools and structures to increase the resilience of these sectors which are instrumental to Nauru's economy. Further, the project will facilitate the upgrade and completion of NFMRA aquaculture facilities and assets, to help NFMRA officers to deliver on training, extension services and aquaculture supplies.
Outcome 5: Increased ecosystem resilience in response to climate change and variability induced stress	Output 5: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	Under Component 2, the mini grant facility will disburse grants to finance community-based organisations' sub-projects in the coastal zone restoration and ecosystem-based adaptation thematic areas. These sub-grants will aim to mitigate the impacts of sea-level rise, ocean acidification and increasing temperatures through interventions aiming to protect and conserve coastal and marine resources.
Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	Under Component 2, the mini-grant facility will unlock financing for existing and prospective aquaculture operators and nearshore fishers, in order to strengthen the sustainability and climate resilience of these operations while securing, diversifying and increasing incomes.
Outcome 7: Improved policies and regulations that promote and enforce resilience measures	Output 7: Improved integration of climate resilience strategies into country development plans	Under Component 1, the project will support the development of a set of recommendations for the inclusion of climate change risks and impacts into national development and climate change strategies (Environment and Climate Act, Coastal Fisheries and Aquaculture Act). Further, a roadmap detailing milestones, implementation arrangements, objectives and associated budgets will be developed to support the timely implementation of key development plans pertaining to climate-resilient aquaculture and coastal fisheries sectors
Outcome 8: Support the development and diffusion of innovative adaptation practices, tools and technologies	Output 8: Viable innovations are rolled out, scaled up, encouraged and/or accelerated.	Under Component 2, the project will support the provision of a fish feed mill to be installed in the Anibare Fish Market community facility. The innovative potential of this intervention is two-fold: one, there are currently no fish feed mills in Nauru; two, the project, with community support, will pilot the use of fish waste (bi-catch) and Mozambique tilapia (an invasive in brackish water ponds), to increase the resilience of the aquaculture sector

AF Outcomes	AF Outputs	Project Additionality in Nauru with AF finance
		through the development of a national supply chain for feed.

## J. Sustainability

*Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.*

Given the highly uncertain financial trajectory of Nauru, with volatile revenue sources, capacity and infrastructure constraints and climate change, Nauru is at a point of transition with a decline in phosphate mining and the activity associated with the Regional Processing Centre (RPC) for asylum seekers which prevent the financing of adaptation measures. New sources of economic growth and income are needed to support Nauru's development and climate change agenda. Due to the nature and scale of climate change impacts, the GoN is not able to finance upfront costs to ensure the resilience of the aquaculture sector and of the coastal fisheries sector to the degree required (see above). Impacts on tuna fisheries in the medium to longer term will result in important government revenue deficits, and the progressive depletion of coastal fisheries resources will unavoidably result in decreased income and food supply for vulnerable people of Nauru. AF funding would act as a trigger for the transformation of Nauru's local economy and its sustainability will be ensured through the following ways:

1. Supporting the enabling environment for national uptake of aquaculture operations and more climate resilient fisheries practices
2. Transfer financing of the mini-grant facility at the end of the project to GoN
3. Knowledge transfer and dissemination of lessons learned on the national and regional levels

Under Component 1, the project will work with the GoN and NFMRA to develop a roadmap and a set of guidelines for the implementation of the Coastal Fisheries and Aquaculture and Environmental and Climate Change Acts of 2020. Insufficient technical capacity and limited budget allocation have so far hampered the GoN's efforts to implement strategies pertaining to the coastal fisheries and aquaculture sectors. Through the provision of guidance, recommendations, and training, the project will seek to provide the GoN and communities with the necessary tools to effectively manage fisheries resources and contribute to the long-term resilience of ecosystems. Further, support towards the development of the National Aquaculture Plan and national aquaculture standards will be instrumental to the sustainability of a conducive environment for domestic aquaculture production.

Under Component 2, each project to be financed under the mini-grant facility will have to include a maintenance and financial plan with clear allocated resources and responsibilities, to demonstrate how the financed infrastructure will be sustained over the long-term. The additional income that will be generated from the sale of farmed and caught fish at the Anibare Harbour market will provide sustained resources for aquaculture operators and nearshore fishers to implement the maintenance plans. Additionally, the PMU and National Coordination Unit will aim to support the GoN to create an enabling environment for the uptake of the aquaculture sector, with a view to attract private finance in the future.

Under Component 3, regional workshops will serve the purpose of both knowledge and information exchange, as well as platforms to engage with private sector stakeholders. The PMU will utilize the knowledge products generated throughout the project and specifically under Component 3 to disseminate the results of the sub-projects financed through the mini-grant facility.

Lastly, from the start of the project implementation, GoN will take over financing of the mini-grant facility to be established under Component 2 post project, which is a key provision of the CFA Act of 2020. On completion the NFMRA will subsume the mini-grant facility protocols and processes. By the end of the project implementation period, the processes and guidelines for the operation of the mini-grant facility will be effective,

facilitating the transfer of the structure to national authorities.

## K. Environmental and Social Impact and Risk

*Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.*

The AF's checklist of the 15 environmental and social principles of the AF's Environmental and Social Policy (ESP) provides an indication that the project falls in Category B (medium risk), because some activities have potential adverse impacts that are less adverse, fewer in number, smaller in scale, less widespread, reversible or easily mitigated. At this stage, an ESAP has been developed for the project to mitigate the identified risks (see Annex 3). It critically analyses all the project activities with a view of ensuring that any identified environmental and social risks are mitigated. The table below provides the results of screening for potential environment, social and gender impacts and risks to ensure that the project complies with the 15 principles of the AF's ESP and section C in Part III of the proposal includes the specific identified risks and proposed mitigation measures for each identified risk.

*Table 13 - Checklist of project impacts and risks against the AF ESS principles. Further detail is provided in section III*

<b>Checklist of environmental and social principles</b>	<b>No further assessment required for compliance</b>	<b>Potential impacts and risks – further assessment and management required for compliance</b>
<i>Compliance with the Law</i>	X	
<i>Access and Equity</i>		X
<i>Marginalized and Vulnerable Groups</i>		X
<i>Human Rights</i>	X	
<i>Gender Equality and Women's Empowerment</i>	.	X
<i>Core Labour Rights</i>		X
<i>Indigenous Peoples</i>	X	
<i>Involuntary Resettlement</i>	X.	
<i>Protection of Natural Habitats</i>		X.
<i>Conservation of Biological Diversity</i>		X
<i>Climate Change</i>	X	
<i>Pollution Prevention and Resource Efficiency</i>	.	X
<i>Public Health</i>	X	
<i>Physical and Cultural Heritage</i>	X	
<i>Lands and Soil Conservation</i>		X

## PART III: IMPLEMENTATION ARRANGEMENTS

### A. Implementation Arrangements

*Describe the arrangements for project/programme implementation.*

#### Overview

The implementation arrangements are shown diagrammatically in Figure 11 - diagrammatic representation of implementation arrangements. Full details are described in the narrative below. Full details are described in the narrative below, which is followed by a narrative that provides the landscape of project oversight and supervision, elucidates the roles under each entity, and tracks how funds will flow if the proposed adaptation project is approved:

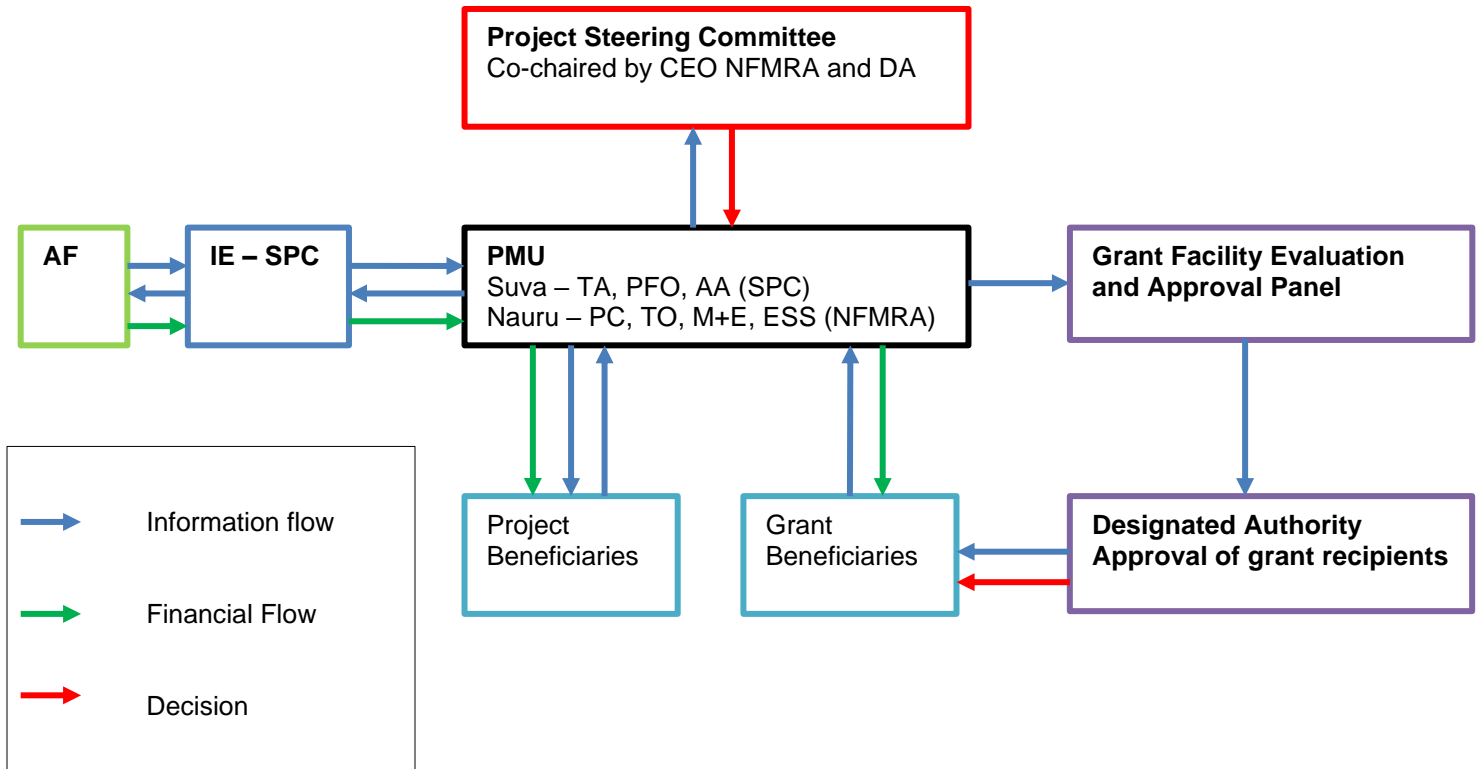


Figure 11 - diagrammatic representation of implementation arrangements. Full details are described in the narrative below

#### Institutional Roles

- **Implementing Entity:** SPC will be in charge of overall reporting to the AF, ensuring alignment with SPC's procurement processes and requirements, oversight of financial management and ensuring monitoring, evaluation and learning (MEL) activities are undertaken. This will be conducted through SPC's Climate Finance Unit (CFU) housed within the Climate Change and Environmental Sustainability Programme.
- **Executing Entity:** The Government of Nauru (GoN) through the NFMRA will carry out the operational management of the project and day to day implementation of the project activities as well as supporting and managing the Grant Facility operations, namely the operationalisation of the sub-grant projects. The NFMRA are well placed to manage operations on the ground, utilising its essential national knowledge to support and facilitate implementation of activities. Most crucially, the NFMRA will also ensure that activities are carried out in alignment with the CFA and Environment and Climate Change Acts 2020 and ensure national alignment and ownership is paramount across the project.
- **Executing Entity:** At the direct request of the country, through the DA, SPC's FAME division will carry out *Direct Project Services* to support the NFMRA in execution of the project. This is in alignment with

Annex 7 of the AF OPG and is compliant with Board Decisions B26/33, B18/30 and B17/17. Relevant formal requests for SPC's involvement are provided as annexes to this proposal and relevant budget implication detailed in Section G below. The support provided by FAME will be specific to two technical areas.

- i) *Procurement support* for the project in compliance with SPC procurement policy, deemed compliant with AF standards. Through design, consultations with the NFMRA indicated that procurement in-country can be a challenge and that SPC support in managing procurement would result in faster and more robust processes and enhanced resource efficiency. As such, FAME through the project Procurement and Finance Officer will carry out procurements for materials, goods and services for the project. This will tap into FAME's experience in similar procurements across the region and its exposure to multiple suitable vendors identified through its years of operations. Specific details will be reflected in the subsidiary agreement signed between SPC and the GoN and will be compliant with SPC's procurement policies and processes.
- ii) *Technical backstopping and advisory support* for training, and implementation of technical components in coastal fisheries and aquaculture sectors. Supervision will be carried out to ensure that operations of technical inputs are in alignment with international best practice and incorporate and build on valuable lessons learned from operations carried out across the Pacific region. This will be supported through the Technical Advisor position. With Nauru, being a small country, having a population of 13,000 people and being remotely located, discussions through consultations indicated that this position would be best placed as an international recruitment based in the SPC FAME Suva office. Benefits to the approach are that the recruitment will attract a strong international candidate, and the location of the position in FAME Suva will allow for the position to tap into the extensive knowledge base of the division, which is the leading unit in the coastal fisheries and aquaculture sectors in the region. This will provide strong technical support that it was felt the project would require.

### **Institutional advantage of SPC as Implementing Entity and Executing Entity**

SPC's comparative advantage and justification for selection as both an IE and EE, lies in its:

- Extensive ties with Pacific Islands governments, administrations, agencies, and partners in all Pacific Island Countries;
- Broad mandate on urgent development issues in the Pacific, including coastal fisheries management, aquaculture development, environmental and social safeguarding, gender and human rights development;
- SPC FAME division has a dedicated coastal fisheries unit with a goal that directly aligns with the project objectives - "coastal fisheries, nearshore fisheries and aquaculture in Pacific Island Countries and Territories are managed and developed sustainably";
- Large funding base with multi-lateral and bilateral donors, allowing for extensive lessons learned from donor funded projects, especially in the target sectors;
- Extensive international partnerships which range from UN agencies to other IGOs, NGOs and civil society groups at grassroots level that facilitates knowledge exchange and cross fertilisation across similar programmes in the sector;
- SPC has 75 years of experience specifically in the region and covers 22 Pacific countries (including all 14 eligible countries to the AF) in the region;
- SPC staffing includes a high proportion of native Pacific Islanders from across the region, that brings extensive contextual knowledge and a large amount of regional ownership;
- As a membership organisation SPC is country focused and places the needs of the members as a paramount priority, ensuring strong country ownership in its designs.

## Project Management Structure

**Project Management Unit (PMU)** - The PMU will be split between Nauru and Suva as detailed below:

- Constituted at the national level through the *Project Coordinator, Monitoring and Evaluation Officer, Environmental and Gender Safeguards Officer and Technical Officer*. These positions will coordinate all on the ground activities in Nauru, liaising closely with the Suva positions to ensure smooth operation. They will carry out day to day implementation functions, including engaging with procured service providers after contracting to ensure smooth operations and implementation, carrying out regular M&E and supporting the grant facility through Environmental and Social Safeguarding screening, development of grants and their implementation, and providing technical inputs on aquaculture and fisheries sector operations, including running of NFMRA aquaculture facilities and supporting installations of other project interventions.
- Suva based positions within SPC FAME division. Positions include the *Technical Advisor, Administrative Assistant, and the Procurement and Finance Officer*. These positions will be responsible for overall procurement and financial management, supporting administrative processes related to fiduciary compliance and oversight functions in relation to these technical areas and ensuring implementation in alignment with SPC and international best practices for the target sector. These positions will liaise closely with the national coordinator and the national team to ensure all procurement is timely and that technical advice and inputs into project activities is of the highest quality.

## Project Governance Structure

**Project Steering Committee (PSC)** - A PSC will be formally established as a part of the inception workshop for the project and will be co-chaired by the Chief Executive Officer of the NFMRA and the AF DA, and constituted of representatives of DEMA, MoF, Dept. of Women's Affairs and Civil Society Organisation representation. In addition, representatives from SPC, the Project Manager, and selected technical partners (identified at inception) will be included in the PSC as observers. The PMU will act as the Secretariat for the PSC. The PSC will provide implementation guidance, strategic support and financial and procedural oversight to the project. Specifically, it will:

- provide strategic guidance and implementation oversight of the Project through review of progress and evaluation reports and provision of recommendations to the PMU for improved implementation.
- provide guidance and direction on cross-cutting issues which require consensus from the various stakeholders involved in the Project.
- ensure that institutional strengthening through the activities is consistent with the Project's overall objective as well as national policies and strategies;
- facilitate full cooperation of various stakeholders under their jurisdictions to provide access and support to the Project team in carrying out their tasks;
- represent the interests of civil society and communities derived through bilateral dialogues;
- approve the project's administrative, financial, accounting and operations manual;
- approve the project's Annual Work Program and Budgets (AWPB);

## Implementation and Governance of the Grant Facility

The Grant Facility will have a dedicated governance structure to review, appraise and approve sub-grants. This structure will include:

- **The PMU:** will issue Expressions of Interest and support prospective applicants in the development of their project idea and applications. Additionally, the PMU will pre-screen sub-grant applications to determine project eligibility prior to sending to the EAP. The ESS officer will ensure that ESS screening is carried out and the ESMF protocols followed as applicable. Please see Annex 3 for details.
- **Grant Facility Evaluation and Approval Panel (EAP):** The EAP will comprise representatives from the



PMU, SPC’s FAME division, SPC’s Procurement Department, an environmental, social and gender expert, and a national expert from NFMRA. The EAP will carry out the full screening, technical and financial review of sub-grant applications to provide recommendations to the DA.

- **Designated Authority Approval of Grant Recipients:** on finalisation of the recommendations from the EAP they will be sent to the DA who will review the projects and recommendations in detail. The DA will then formalise a decision for the grant approvals. This will trigger formalisation of the award and necessary contracting.

SPC’s Climate Finance Unit, in partnership with the Department for Environmental Management and Agriculture (DEMA, as the AF’s Designated Authority) will establish the Evaluation and Approval Panel (EAP) during the first six months of implementation. SPC and the DA will identify representatives for the EAP from relevant organisations and the PMU will act as secretariat to EAP, organising meetings around Expression of Interest calls as appropriate. As the Implementing Entity, SPC will provide supervision through quality assurance, oversight and reporting functions of grants through implementation. This will include carrying out regular supervision missions to ensure that all ESS requirements, reporting obligations and fiduciary aspects are met with compliance through implementation of the project.

### **Screening, review and awarding process**

Environmental and Social risks have been assessed and an associated Environmental and Social Management Framework (ESMF) has been developed to mitigate any risks associated with the mini-grant facility (see Annex 3). The ESMF includes screening criteria for the grant facility as well as a plan for monitoring any flagged risks. Overall, the Environmental and Social impact of the grant facility is likely to be positive through the active engagement of communities in marine resource management and conservation. The grants will also support the diversion of pressure away from coastal fisheries toward sustainable aquaculture production. The overall, environmental impact will be to create a shift for more climate-resilient marine resource management and planning and allow for the development of a greater sustainable domestic food supply.

Sub-grant alignment with the Adaptation Fund’s funding requirements, Environmental, Social and Gender Policy on Unidentified Sub-Projects (USPs) will be ensured through systematic screening, review and awarding processes conducted by the Grant Facility EAP. The table below outlines the screening criteria and considerations in alignment with the AF’s technical review criteria.

*Table 14 - summary of screening criteria for grant applications under the Grant Facility*

Adaptation Fund review criteria	Description of screening criteria
Climate change adaptation potential	<ul style="list-style-type: none"> <li>• Reduced vulnerability to climate change impacts</li> <li>• Benefit to most vulnerable population or groups (women, those with pre-existing health problems, the poor and socially disadvantaged, remote communities etc.)</li> <li>• Dependency on livelihood vulnerable to climate change reduced</li> <li>• Increase adaptive capacity of livelihoods to climate change impacts</li> <li>• Area of land rehabilitated, reforested, conserved, protected or management improved as a result of the sub-grant interventions</li> </ul>
Consistency with national sustainable development strategies	<ul style="list-style-type: none"> <li>• Degree to which the sub-grant aligns with national priorities and plans, such as the Coastal Fisheries and Aquaculture Act of 2020 and the Environment and Climate Change Act</li> </ul>

Adaptation Fund review criteria	Description of screening criteria
Economic, social and environmental benefits	<ul style="list-style-type: none"> <li>• Poverty alleviation, livelihood diversification</li> <li>• Cultural preservation</li> <li>• Gender-sensitive development impact</li> <li>• Health and safety</li> <li>• Preservation of natural habitats</li> <li>• Enhanced ecosystem health</li> </ul>
Meeting national technical standards	<ul style="list-style-type: none"> <li>• Building codes</li> <li>• Fisheries Act</li> <li>• Aquaculture Act</li> <li>• Technical standards</li> </ul>
Cost-effectiveness	<ul style="list-style-type: none"> <li>• Cost effectiveness and efficiency</li> <li>• Financial viability</li> <li>• Application of best practices and technologies</li> <li>• Innovation potential</li> <li>• Avoiding duplication with other funding sources</li> </ul>
Arrangements for management (incl. financial and risk management)	<ul style="list-style-type: none"> <li>• Direct individual or community involvement in implementation</li> <li>• Due diligence conducted according to ESMF and criteria</li> <li>• Risk assessment conducted</li> </ul>
Arrangements for monitoring, evaluation and impact assessment	<ul style="list-style-type: none"> <li>• Budget and maintenance plans</li> <li>• MEL process and milestones</li> </ul>

The application and awarding process of the Grant Facility is divided in seven steps as detailed below:

- I. **Community involvement:** Activity 1.2.1 Outreach campaign will include extensive community engagement (including targeting women and women's groups) to raise awareness of the Grant Facility and the availability of technical assistance to access funding. This campaign will provide an opportunity for potential recipients of the Grant Facility to learn more about the offering and to obtain initial guidance and support around their project idea.
- II. **Expressions of Interest (Eoi) launched by the PMU.** Prospective applicants will be invited to submit their applications (women's groups will be identified and directly targeted for invitations) and be supported by the PMU to formulate their projects. There will be three Eoi's through the project in years 3, 4 and 5.
- III. **Proposals pre-screened by the PMU** against a set of review criteria and an E&S and gender screening will be done by the GESS Officer of the PMU (indicative screening templates for E&S and gender are included in Annex 3 and Annex 4 respectively). If necessary, applicants will be invited to improve their proposal with further support from the PMU.
- IV. **Proposals reviewed by the EAP.** The Grant Facility EAP will firstly provide an advisory report on both technical and financial sides of the proposals. Then, this report will be used by SPC procurement unit to assess if the proposal needs to be reworked from a financial and procurement perspective, or can be sent to the DA for approval.
- V. **Proposals reviewed by the DA** who will make the final decision of the approval process. The DA will assess the technical and financial recommendation from the EAP and make an informed decision on the approval of the grants.
- VI. **Awarding and contracting:** Once approved by the DA, the grant recipient will receive resources to implement their proposal in accordance with the proposals annual project work plan and associated budgets, deliverables and disbursement schedules. Procurement of equipment (e.g. aquaculture ponds and pumps) will be carried out in bulk after each Eoi and approvals by SPC. This will allow for lower costs in procurement and reduced logistical issues. Baselines will need to be established within the first three months of grant sub-grant inception. Each grantee will then be responsible for monitoring, and reporting requirements through implementation, with the support of EE and IE supervision.
- VII. **Implementation, monitoring and reporting:** Grant recipients will be expected to implement their

grants according to the schedules and deliverables that are set out in their proposals. All procurement for goods, materials or professional services will be carried out in line with SPC's procurement policy by the Procurement and Finance Officer. The implementation of the grants according to the pre-defined schedules and milestones under approved applications will be supported by a range of implementing partners, including NFMRA and the PMU.

**E&S Risk and Gender Screening Process:** As part of the Grant Facility, applicants will be requested to include an environmental and social assessment as well as a gender analysis. These will be reviewed and cleared by the GESS Officer. The specific integration of the two processes into the seven steps of the Grant Facility is detailed in Annex 3 (E&S Annex) and Annex 4 (Gender Annex), the annexes include indicative intake forms as well as clearance forms.

**Procurement:** The PMU will follow SPC's procurement process for any procurement activities that it may undertake. This includes but is not limited to the procurement of goods on behalf of grantees for implementation of grants as well as the procurement of services providers such as trainers, constructors, third party implementers, etc.

Once the need for specific goods or services has been identified, solicitation documents will be prepared and issued containing terms of reference, scopes of work, specifications of goods, bid submission forms and any other guidelines required by the nature of the specific procurement. Once bids have been solicited, they will be evaluated in a fair and transparent manner following SPC processes. This includes assessment of quotes against evaluation criteria that include key competencies or minimum requirements outlined in the solicitation documents. The contract will be awarded when it has been determined that a bidder meets the minimum requirements, provides the best value for money and will best be able to provide the goods or services required.

## B. Project and Financial Risk

*Describe the measures for financial and project/programme risk management.*

*Table 15 - Summary of identified project and financial risks as well as proposed mitigation measures*

Risk description	Probability	Impact	Proposed mitigation measure
Changes in political leadership at national and local level result in delays or a refocus or suspension of project activities.	Low	High	The probability of a leadership change resulting in a refocus of the project is highly unlikely given that aquaculture development and coastal fisheries is one of the GoN's top priority. The project management unit and national coordination team will ensure that communication and collaboration channels are maintained regularly throughout the lifetime of the project.
COVID-19 pandemic prevents or increases the costs of transport and freight for necessary supplies and construction materials	Medium	Medium	All project activities will be able to be implemented in the event of disturbances in freight and transport with the exception of construction of small-scale aquaculture facilities, and the regional knowledge exchange with MASA countries. For the former, at the earliest stage once implementation of the mini-grant facility starts, the PMU and national coordination unit will plan and secure the necessary supplies and tools for the construction. For the latter, meetings and workshops will be held virtually.

Risk description	Probability	Impact	Proposed mitigation measure
Insufficient buy-in from local communities to engage in aquaculture and coastal fisheries	Low	High	Engagement from community individuals and organised will be ensured through the following ways: <ol style="list-style-type: none"> <li>1. The national awareness raising campaign on climate change impacts as well as the grant facility awareness campaign will contribute to ensuring early and meaningful engagement from local communities</li> <li>2. The provision of training and technical assistance in sustainable nearshore fisheries and aquaculture operations will demonstrate their economic viability and resilience to incentivize communities to access grant facility funding</li> <li>3. Finally, regular interactions and consultations between community individuals, leaders and government representatives will strengthen awareness and interest from local communities to meaningfully engage in marine protection, coastal fisheries and aquaculture operations in the face of climate change impacts</li> </ol>
High staff turnover and limited national human resource base could compromise the project management unit and delay implementation	Medium	Medium	Competitive salaries will be offered for country-based project staff. Training and other incentives should also help make the positions attractive.
Spillage of construction materials: The transport and supply of material, and any other machinery may have impacts that may arise from accidental spillage of construction materials (e.g. cement).	Low	Medium	Compliance with the project ESMS will significantly reduce both the likelihood and the impact(s) of this risk.

## C. Environmental and Social Risk Management

*Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.*

Overall, to mitigate negative impacts of the interventions highlighted in the checklist included in Section K: Part II, an Environmental and Social Action Plan (ESAP) as well as a separate ESMF has been developed (Annex 3), a gender analysis conducted along with the development of a gender action plan (Annex 4), and a grievance redress mechanism laid out below.

Based on the areas where there may be potential impacts and risks and where further assessment and management required for compliance, the individual risks have been identified per the AF's ES Principles and mitigation measures developed. These are further integrated into the ESAP as well as the separate ESMF (see Annex C).

Table 16 - detailed description of identified ESS risks, evaluation of risk level and relevant mitigation measure implemented by the project.

<b>AF ES Principles</b>	<b>Identified Risks</b>	<b>Level</b>	<b>Mitigation Measures</b>
<i>ESP 1: Compliance with the Law</i>	The project is consistent and complies with the relevant domestic laws and policies (see section 2 – Nauru Environmental Policy Context).	None	The identified project activities do not need mitigation measures since they generate no risks.
<i>ESP 2: Access and Equity</i>	The proposed project promotes fair and equitable access to the project, and is supported by a Gender Analysis and Gender Action Plan (GAP) to ensure that women and vulnerable groups have the opportunity to benefit as well.	Low	The project has been designed to ensure equity in access to and sharing of resources. Gender quotas have been established where relevant and necessary, and a comprehensive gender action plan developed to address needs and vulnerabilities that are specific to women, including the provision of targeted activities for women (see Annex 4).  The stakeholder consultations undertaken during the proposal development stage have been incorporated into project design, to ensure that both national and community-level needs are catered to. As such, the project aims to benefit all categories of stakeholders without discrimination.
<i>ESP 3: Marginalized and Vulnerable Groups</i>	No activities are identified that could generate negative impacts on marginalized and/or vulnerable groups.	Low	The stakeholder consultations undertaken during the proposal development stage have been incorporated into project design, to ensure that both national and community-level needs are catered to. As such, the project aims to benefit all categories of stakeholders without discrimination.
<i>ESP 4: Human Rights</i>	No activities are identified whose execution is not in line with established international human rights regulations. The project's objective promotes basic human rights for equitable access to fisheries and aquaculture resources	None	For project interventions pertaining to construction and rehabilitation that will require additional labour, issues related to treatment of workers by project staff and contractors will be closely monitored during project execution to ensure no labour or human rights violations.
<i>ESP 5: Gender Equality and Women's Empowerment</i>	The activities of the project are oriented to ensure and promote fair and equal access to the project's activities and outcomes for both men and women. SPC promotes equal participation in decision-making processes by ensuring representation of women in all project activities, and establishing quotas for women's participation.	Low	All project activities have been screened and analysed to ensure full participation of women. Furthermore, an in-depth gender analysis has been undertaken, and a comprehensive gender action plan developed to promote women's participation during project implementation.
<i>ESP 6: Core Labour Rights</i>	The project respects the labour standards as identified by the ILO.	Low	There are limited activities which may result in labour violations. However, there are a few activities which present potential occupational health and safety hazards for workers, primarily the construction and rehabilitation of some of the fisheries and aquaculture facilities. Each of these activities will be closely monitored by project staff to ensure no violation of existing labour laws and conventions, including those pertaining to payments, harsh working conditions, exploitation, discrimination, and any other relevant provisions. Any contracts entered into will ensure rights of workers are in line with ILO standards as per SPC's policy.

<i>AF ES Principles</i>	<b>Identified Risks</b>	<b>Level</b>	<b>Mitigation Measures</b>
			There is some risk of staff turnover; this combined with limited national human resource base could compromise project management and delay implementation. To mitigate this, competitive salaries and incentive packages will be offered, as well as targeted training.
<i>ESP 7: Indigenous Peoples</i>	The project promotes the rights and responsibilities set forth in the United Nations Declaration on the Rights on Indigenous Peoples. However, it should be noted that there are no sharp distinctions between indigenous and non-indigenous peoples in Nauru.	Low	The project will coordinate closely with local communities and national governing bodies to ensure that the traditional rights and practices of the Nauruan people are respected throughout implementation – both those enshrined in legislation and those practiced and respected in custom.
<i>ESP 8: Involuntary Resettlement</i>	No project activities will lead to involuntary resettlement.	None	There will be no resettlement as part of the project activities
<i>ESP 9: Protection of Natural Habitats</i>	The protection of marine resources is a core objective of the project, as is facilitating community and national involvement in more sustainable fisheries and aquaculture practices.	Low	The planned small-scale construction through the mini-grant facility should not have any impacts on biodiversity or natural habitat as most of the sites will be in existing residential areas. Criteria in the application to receive grant funding will include questions to assess the expected E&S risk/impact.
<i>ESP 10: Conservation of Biological Diversity</i>	The protection of marine resources is a core objective of the project, as is facilitating community and national involvement in more sustainable fisheries and aquaculture practices.	Low	The project intervention will not contain any UNESCO biosphere reserves or RAMSAR sites applicable to this ESP. The project will also not be introducing invasive species, the only species will be indigenous to the project area and the project area also does not contain any species red listed by the International Union for Conservation of Nature (IUCN).
<i>ESP 11: Climate Change</i>	The project aims to increase the adaptive capacities of both the government and the people of Nauru in respect to the fisheries and aquaculture sectors.	None	The introduction of training, construction/rehabilitation, and additional oversight and regulatory committees will help to create a more engaged, responsive and adaptable ecosystem to continue efforts in combating climate change and an enabling environment for future adaptation interventions.
<i>ESP 12: Pollution Prevention and Resource Efficiency</i>	The project will minimize material resource use and contribute to environmentally-friendly waste disposal practices.	Low	<p>Since the common waste disposal method in Nauru involves an open dump in the south-west part of the island, any additional waste generation must include plans for disposal. To combat this as part of the ESMP, the project will require the implementation of a waste management plan that will be fully developed at project inception (see further detail in Annex 3 under ESP 12) that will be closely monitored to ensure that any unexpected pollution effects are immediately addressed.</p> <p>Under activity 2.1.1. rehabilitation and upgrade of existing NFMRA infrastructure – there is some risk of wastewater containing nutrient overload as the system to be upgraded is an open system. The level of nutrient waste from the process will be determined during project implementation and if needed a treatment tank will be added to the system that to mitigate the risk of any discharge back to the sea.</p>

<i>AF ES Principles</i>	<b>Identified Risks</b>	<b>Level</b>	<b>Mitigation Measures</b>
<i>ESP 13: Public Health</i>	Low risk associated small-scale ponds.	Low	Risks related to water-borne diseases that may occur in small-scale ponds will be mitigated through the provision of biosecurity training and adequate water quality management.
<i>ESP 14: Physical and Cultural Heritage</i>	The project aims to renew interest and facilitate uptake of a cultural heritage that is the production of milkfish. No construction or rehabilitation activities will take place on or around an area of cultural significance.	Low	The project will promote the use of indigenous practices and tools where applicable, and will ensure that new regulations and committees have representation of indigenous and local communities to ensure that all activities and outcomes are locally-led and focused. Consultations with local communities will ensure that culturally important coastal areas are protected and restored in line with traditional knowledge and beliefs.
<i>ESP 15: Lands and Soil Conservation</i>	The project does not address land and soil conservation. It does however require access to privately-owned land for the construction of small-scale aquaculture infrastructure.	Low	While there are no activities which explicitly target or require the use of soil, there is a small risk of the construction and rehabilitation activities having an impact on the soil and land surrounding the facilities. The project will closely monitor to ensure that there are no negative impacts on the land and soil surrounding the activity sites. The project will also actively seek to obtain community endorsement at the onset of the project implementation and beneficiaries have already provided feedback through consultations during the proposal development. Furthermore, awareness campaigns on coastal protection will improve the understanding of the proposed interventions, making sure they are supported and endorsed by the community.

## **D. Monitoring and Evaluation**

*Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan, in compliance with the ESP and the Gender Policy of the Adaptation Fund.*

In its role as Implementing Entity, the Pacific Community (SPC) will oversee and supervise the implementation of this project in accordance with the agreement signed between SPC and the AF. SPC will be responsible for project-level monitoring and evaluation in compliance with SPC and AF policies through coordination between its Climate Finance Unit (CFU), Strategy, Performance and Learning (SPL) Team, the Designated Authority for the Republic of Nauru and Project Management Unit (PMU), implementing the necessary tools and methods to facilitate monitoring and evaluation of the project. The programme indicators described in the results framework will be jointly monitored by the DA, the PMU and SPC during program implementation via six-monthly supervision missions (or as needed) that will include results, reflection and planning meetings with project proponents and grantees. This will happen within the framework of regular monitoring and evaluation (M&E) procedures established during the project's inception phase.

The project implementation unit will include a designated MEL specialist to support the monitoring, evaluation and learning (MEL) of the overall project and of the sub-projects to be implemented under Output 2.3 as part of the mini-grant facility, by undertaking quarterly site visits to project sites. For the individual sub-projects awarded through the mini-grant facility, ongoing M&E will be the responsibility of PMU with oversight and quality assurance from SPC in coordination with the grantees. E&S issues will be incorporated into the monitoring, evaluation and reporting of projects and activities. Annual performance reports and end of project closure reports will include updated information on E&S risks, and this information will be reported to SPC and the AF. For Category B sub-grants, an updated E&S management plan (ESMP) will be submitted annually and certified by SPC to ensure identified risks have been mitigated and that the ESMP is being followed appropriately.

In order to sustain the benefits to vulnerable groups in the targeted communities, the project will monitor

indicators that incorporate gender equity and women empowerment measures for follow-up during project implementation and will ensure that project reports provide and emphasize gender disaggregated data.

This M&E system will be aligned with the various policies and results frameworks of AF, the Nauru DA, SPC and the project itself. The MEL officer will work with the PMU to develop MEL tools, approaches and reporting arrangements for sub-projects. This will include annual performance reports.

The CFU will be responsible for coordinating the independent mid-term and terminal evaluations, guiding SPL technical inputs to align with AF requirements. The evaluations will be conducted using a question-driven approach, and may include assessments against the criteria of relevance, effectiveness and sustainability, among others. The Mid Term Evaluation will be instrumental in contributing – through operational and strategic recommendations – to improve implementation, setting out any necessary corrective and adaptive management measures for the remaining period of the project, and identifying relevant lessons learned for stakeholders in Nauru as well as the broader Pacific region. The Terminal evaluation will assess the relevance of the intervention, its overall performance, as well as sustainability and scalability of results, differential impacts and lessons learned. Both evaluations will contribute to the evidence base for adaptation to climate change in Nauru and across the Pacific region and will be published on the SPC website and other relevant platforms.

The evaluation will draw on mixed-methods, using qualitative methods (e.g. participatory rural appraisal) in combination with counterfactual analysis, depending on the existence of reliable control group data from the project's baseline and end-line surveys. In addition to primary data collected by the evaluators and secondary national data, both interim and final evaluations will draw on the monitoring reports and activities prepared by project staff. Careful attention will be paid to the disaggregation of data, results and outcomes by gender. The interim evaluation will be undertaken when delivery reaches 50% of the initial total budget and/or mid-point of scheduled project duration. The independent Terminal Evaluation will be launched within six months prior to the actual completion date of the project. The budgeted M&E plan is presented in Table 17 below.

*Table 17 - Budgeted M&E Plan*

Type of Monitoring	Responsible Party(ies)	Budget USD	Timeframe
APRs	PMU and SPC Project Manager (review)	\$25,000	Annually
Evaluation and assessment	IE, PMU, SPC Project Manager, External Consultants	\$30,000	Mid-point
Terminal Evaluation	IE, PMU, SPC Project Manager, External Consultants	\$43,000	End of project
Monitoring and Evaluation Officer	PMU	\$135,000	Total for project
<b>TOTAL</b>		<b>\$233,500.00</b>	

### Grievance mechanism

A grievance is a concern or complaint raised by community members and stakeholders related to the perceived or actual impacts of the project activities. The objectives of setting up an appropriate grievance mechanism process are to:

1. Provide stakeholders with a clear process for providing comment and raising grievances.
2. Allow stakeholders the opportunity to raise comments/concerns anonymously.



3. Structure and manage the handling of comments, responses, and grievances in a timely manner.
4. Ensure that comments, responses, and grievances are handled in a fair and transparent manner and in line with local and national policies.

### ***SPC Grievance Redress Mechanism***

SPC has a Grievance and Redress Mechanism in place to ensure that complaints are being promptly reviewed and addressed by the responsible units (see <https://www.spc.int/accountability>). This process aims to address complaints from affected stakeholders, including communities, about the social and/or environmental performance of the project, and to take measures to redress the situation, where necessary. For the process to be efficient, project stakeholders have to be properly informed that SPC has such a mechanism established, and how they can access to it to settle their grievance.

The SPC GRM is operated through a web-hosted page on SPC site for the expression of concerns or complaints, which can be posted by email with the information in using the complaints' template (Please see Annex IV of SPC's GRM on SPC [website](#)). Concerns expressed shall be received by the legal team who will reach out internally, primarily to the division in charge of the project or to relevant division. Grievances will be sorted out through a conflict resolution process. In case this process is not functional, other process will be used, such as a compliance system, the overall objective being to address and redress project stakeholders' grievances in the most simple and efficient manner.

### ***Project-level Grievance Redress Mechanism***

SPC is committed to receiving any concerns or grievances from an affected community about the environmental and social plans or performance of activity under the proposed project. In that direction, communities and stakeholders will be sensitised about the existing grievance process and form. AF Designated Authority will be responsible for supporting the communities with the information they need to properly submit a grievance letter. The DA and Executing Entities are taking part into the grievance and redress mechanism through documenting grievances and coordinating with SPC the process to settle the grievances. For the proposed project, there are several processes to submit project related grievances:

1. An email can be sent to SPC through the online process: <https://www.spc.int/accountability>.
2. Contact the AF Designated Authority or submit a letter to the AF Designated Authority.
3. Bring up the complaint during the project update meetings or community awareness meetings. The complaint then must be directed to the AF Designated Authority who will then forward to the SPC legal team.
4. Mail can be addressed to the NFMRA or the DA, which will then be forwarded to SPC.

The AF Designated Authority will receive and register the grievance and will contact SPC legal team through a proactive outreach. He/she will provide an initial response within two business days to the person who submitted the grievance to acknowledge the grievance and explain that the grievance will be logged onto the SPC GRM. As a first timeframe, a response will be provided to the complainant within a two-month period, with indication of appropriate process to address the grievance. This duration should be sufficient to screen the complaint, outline how the grievance will be processed, screen for eligibility as well as assign organisational responsibility for proposing a response. This response will propose a methodology to reach an agreement and address the complainant's concerns. This process will possibly involve engaging with other project stakeholders to resolve the issue.

SPC GRM is responsible to inform the complainant that he/she has the right to pursue other options to resolve the complaint if unsatisfied after the SPC GRM process, noting that the GRM may respond to questions from the complainant, but does not constitutes an advisor or attorney for the complainant. All grievances will be recorded, and these records will be kept at a secure place for up to three years after the end of the project.

## E. Results Framework

Include a results framework for the project proposal, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.

Table 18 - Detailed results framework for the project.

Result level	Indicators	Baseline	Targets	Means of verification	Assumptions
<b>Outcome 1: Strengthened institutional structures from national to community levels enable integrated climate resilience implementation in the coastal fisheries and aquaculture sectors.</b>	Capacity of national government and NFMRA staff to respond to, and mitigate impacts of, climate-related impacts on the coastal fisheries and aquaculture sector increased	Insufficient integration of climate change aspects from CFA Act into sectoral operations	100% of relevant ministries representatives and coastal and aquaculture staff in the NFMRA comfortable (scoring 4 or 5) in mainstreaming climate resilience aspects into sector operations.	<ul style="list-style-type: none"> <li>5-point scorecard ranking</li> <li>Annual Progress Reports</li> <li>Mid-term and Terminal evaluation</li> <li>Technical reports</li> <li>Policy dialogue minutes</li> </ul>	<p>Government partners and staff from national institutions are willing and able to take part in and provide input on the recommendations report and the training</p> <p>Government partners are able and willing to endorse the resulting recommendations</p> <p>Absence of COVID cases to avoid lockdown</p>
<b>Output 1.1:</b> Capacity enhancement of national institutions to mainstream climate change resilience across the coastal fisheries and aquaculture sectors	Number of recommendations and roadmaps developed, and budgeted in the aquaculture and coastal fisheries sectors	<p>Insufficient interinstitutional planning and organisation and budgetary allocation for adequate adaptation planning</p> <p>Insufficient community-government dialogue on adaptation planning, and insufficient community awareness of the CFA and CC Acts</p>	<ul style="list-style-type: none"> <li>1 Road map developed and under implementation</li> <li>1 recommendations report provided to enhance climate resilience of future development plans</li> </ul>	<ul style="list-style-type: none"> <li>Technical reports</li> <li>CFA and CC Acts Roadmap</li> </ul>	<p>Government partners are able and willing to endorse the resulting recommendations</p> <p>Sufficient budgetary allocation from GoN to ensure the sustainability of the recommendations endorsed on the long term</p>
	Number of technical surveys and assessments conducted to support multi-sectoral planning and implementation of climate resilience mainstreaming	<p>Absence of or limited knowledge base and data on the marine resource status and ecosystem health</p> <p>Limited knowledge base and data to inform</p>	5 technical assessments conducted to enhance institutional adaptive capacities	<ul style="list-style-type: none"> <li>Ecological assessments reports</li> <li>Site surveys reports for FADs deployment and NFMRA facilities upgrades</li> <li>List of attendees and minutes of the community-government</li> </ul>	<p>Availability of national consultants to support survey exercises</p> <p>Survey respondents are comfortable to provide accurate answers</p>

Result level	Indicators	Baseline	Targets	Means of verification	Assumptions
		<p>location of no-take zones and FADs deployment</p> <p>Limited technical and human capacity at NFMRA to determine appropriate technological options</p> <p>Limited understanding of needs of communities and budgetary constraints to determine design characteristics</p> <p>Absence of data and information on gender dynamics relating to the aquaculture and coastal fisheries sector</p>		<p>survey consultation</p> <ul style="list-style-type: none"> <li>Gender assessment report and associated set of recommendations for mini-grant facility</li> <li>Annual Progress Reports</li> <li>Mid-term and Terminal evaluation</li> <li>Technical reports</li> </ul>	National institutions are willing and able to endorse the survey results and take adequate actions to remedy identified issues
<b>Output 1.2.</b> Awareness raising campaigns conducted to enhance understanding of the CFA Act and NFMRA roadmap and promote grant facility	Percentage of targeted population aware of appropriate adaptation responses to enhance resilience of food security through the coastal fisheries and aquaculture sector.	Small-scale coastal fishers engage in unsustainable, unselective fishing techniques, resulting in marine resource degradation and damaged ecosystems	100% of population reached through awareness campaigns and engagement	<ul style="list-style-type: none"> <li>Outreach campaign materials</li> <li>Media outlets</li> <li>Technical assistance reports</li> <li>Annual Progress Reports</li> <li>Mid-term and Terminal evaluation</li> <li>Technical reports</li> </ul>	Assuming average number of people in each community organisation is 35
	Percentage of targeted population aware of grant facility offering and how to access it	N/A	100% of population reached and one shortlist of individuals and community-based organisations who expressed interest	<ul style="list-style-type: none"> <li>Outreach campaign materials</li> <li>Technical assistance reports</li> <li>Annual Progress Reports</li> <li>Mid-term and Terminal evaluation</li> <li>Technical reports</li> </ul>	<p>Outreach campaign bears expected results and raises interest of communities in grant facility</p> <p>Absence of COVID cases to avoid lockdown</p>
<b>Outcome 2: Improved food security and nutrition through increased farmed fish supply, increased adaptive capacity and income of aquaculture operators</b>	% of population with increased access to fresh fish protein on the domestic market at affordable prices	Low aquaculture and nearshore fishing production and lack of competitiveness; poor	100% of targeted population with increased access to fresh fish products from the domestic	<ul style="list-style-type: none"> <li>Fish production volumes reports</li> <li>Revenues of aquaculture operators and nearshore fishers</li> </ul>	Local communities understand the importance of consuming locally produced foods for climate

Result level	Indicators	Baseline	Targets	Means of verification	Assumptions
<b>and reduced pressure on climate-vulnerable coastal and reef ecosystems.</b>		nutrition and diets due to imported processed foods	market comparison to start of project baseline.	<ul style="list-style-type: none"> <li>(household surveys)</li> <li>Annual Progress Reports</li> <li>Mid-term and Terminal evaluation</li> <li>Technical reports</li> </ul>	resilience and enhanced diets
<b>Output 2.1</b> Provision of infrastructure to national aquaculture institutions to enhance their ability to provide training, extension services and supplies to existing and new aquaculture operators, increasing the resilience of the sector	% of national aquaculture facilities upgraded	NFMRA aquaculture facilities outdated or not completed	National aquaculture facility made more climate-resilient  1 innovative fish feed production model piloted and endorsed	<ul style="list-style-type: none"> <li>Site surveys</li> <li>Fish feed production volumes</li> <li>Annual Progress Reports</li> <li>Mid-term and Terminal evaluation</li> <li>Technical reports</li> </ul>	Sufficient availability of resources (bi-catch or tilapia) to use as raw materials for fish feed Sufficient internal capacity at NFMRA to endorse recommendations and maintain new facilities Sufficient budgetary allocation for adequate operations and maintenance
<b>Output 2.2.</b> Increased adaptive capacity of artisanal fishers and resilience of marine ecosystems in the face of climate variability and change	% of nearshore fishers demonstrating application of sustainable fishing practices	Low adaptive capacity of nearshore fishers and gleaners due to lack of finance to engage in sustainable fishing operations	100% of targeted population report to engage in sustainable fishing practices (scoring 4 or 5)	<ul style="list-style-type: none"> <li>5-point scorecard ranking</li> <li>Training modules and reports</li> <li>Attendance lists</li> <li>Respondent's surveys</li> <li>Annual Progress Reports</li> <li>Mid-term and Terminal evaluation</li> </ul>	Willingness and ability of nearshore fishers to endorse sustainable fishing practices  Absence of COVID cases to avoid lockdown
<b>Output 2.3.</b> Grant Facility – Provision of infrastructure and equipment to enable the sustained production of milkfish for increased domestic food supply and income	Number of aquaculture operators and nearshore fishers with increased income	Unavailability of finance products for nearshore fisheries, aquaculture and community-based restoration and operations	<ul style="list-style-type: none"> <li>100 individual grants disbursed</li> <li>10 grants to community-based organisations disbursed incl. 2 to women-led community groups</li> <li>500 direct beneficiaries</li> </ul>	<ul style="list-style-type: none"> <li>Grant agreements</li> <li>ESS Screening checklists</li> <li>Annual Progress Reports</li> <li>Mid-term and Terminal evaluation</li> <li>Technical reports</li> </ul>	Sufficient interest from local communities to engage in aquaculture operations Willingness and ability of nearshore fishers to endorse sustainable fishing practices Assuming 35 people per community-based organisation.
<b>Outcome 3: Increased resilience of ecosystems and adaptive capacity of communities through availability of data and knowledge sharing mechanisms for adaptation planning and environmental protection</b>	Capacity of local communities and national institutions to collect, compile, and use environmental management data and information	Limited community-government collaboration for environmental protection	100% of targeted population demonstrate increased access to and use of data and information on resource availability, ecosystem health, and fisheries. This is classed as	<ul style="list-style-type: none"> <li>5-point scorecard ranking</li> <li>Nauru Environmental Data Portal and PIPAP portal country pages</li> <li>Annual Progress Reports</li> </ul>	Willingness and ability of local communities to engage in data collection and reporting exercise

Result level	Indicators	Baseline	Targets	Means of verification	Assumptions
		Limited knowledge base to inform adaptation planning	scores 4-5 on scorecard a 5 point scoring ratio	<ul style="list-style-type: none"> <li>• Mid-term and Terminal evaluation</li> <li>• Technical reports</li> </ul>	
<b>Output 3.1.</b> Establishment of a knowledge management strategy (KMS) to sustain climate-resilient practices in environmental and natural resource management	Number of marine monitoring stations deployed	No marine monitoring stations	10 marine monitoring stations deployed	<ul style="list-style-type: none"> <li>• Marine monitoring stations data reports (quarterly)</li> <li>• Annual Progress Reports</li> <li>• Mid-term and Terminal evaluation</li> <li>• Technical reports</li> </ul>	Suitable and accessible locations for marine monitoring stations can be found Sufficient budgetary allocation to sustain operations and maintenance of marine monitoring stations post project end
	Number of environmental surveillance groups established	No environmental surveillance groups	1 community-government environmental surveillance group established	<ul style="list-style-type: none"> <li>• Surveillance group reports and attendance lists (quarterly)</li> <li>• Outputs of surveillance exercises</li> <li>• Annual Progress Reports</li> <li>• Mid-term and Terminal evaluation</li> <li>• Technical reports</li> </ul>	Willingness and ability of local community and national institutions staff to engage in data collection exercises
<b>Output 3.2.</b> Learning and dissemination of project results	Number of knowledge exchanges with MASA partner countries	No knowledge exchange between Nauru and MASA partner countries	3 knowledge exchanges carried out between Nauru-based community organisations and Tuvalu, Palau and Kiribati	<ul style="list-style-type: none"> <li>• Workshop reports</li> <li>• Training surveys and reports</li> <li>• Annual Progress Reports</li> <li>• Mid-term and Terminal evaluation</li> <li>• Technical reports</li> </ul>	Absence of COVID cases to avoid lockdown and travel restrictions
	% of project-related data and information compiled in national and regional platforms	Limited reporting of project-related data on national and regional data portals  Restricted access to environmental data to researchers and communities	Open access to national and regional platforms to decision-makers, researchers and communities  100% of project-derived data, information and outputs uploaded onto national and regional platforms	<ul style="list-style-type: none"> <li>• Nauru Environmental Data Portal and PIPAP portal country pages</li> <li>• Annual Progress Reports</li> <li>• Mid-term and Terminal evaluation</li> <li>• Technical reports</li> </ul>	N/A

## F. Alignment of the project against the AF Results Framework

*Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund*

Table 19 - Alignment of project against AF Results Framework

Project Objective(s) <sup>95</sup>	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
The climate resilience of Nauru's domestic fisheries and aquaculture sectors is enhanced to result in greater food security, nutrition and ecosystem health under predicted climate change scenarios	Number of staff from targeted institutions with increased technical and operational capacity to implement coastal fisheries and aquaculture plans  Number of households with increased awareness of the linkages between identified climate change impacts and their livelihoods	<b>Outcome 7:</b> Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	<b>\$1,334,567</b>
The adaptive capacity of fisheries-dependent communities is increased as a result of enhanced practices and knowledge of sustainable, climate-aware practices	Number of households with increased awareness of fisheries and marine resource conservation measures  Number and type of aquaculture facilities established  Number of households with new or additional diversified income source(s)	<b>Outcome 6:</b> Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.2 Percentage of targeted population with sustained climate-resilient alternative livelihoods	<b>\$4,592,128</b>
The adaptive capacity of national institutions is enhanced through the inclusion and onboarding of projected climate change impacts on key climate vulnerable sectors	Rate of compliance with CFA Act provisions by year 5 of project from population (%)  Number and value of marine health indicators improved (coral health, fish stocks, size structure etc.)	<b>Outcome 8:</b> Support the development and diffusion of innovative adaptation practices, tools and technologies	8. Innovative adaptation practices are rolled out, scaled up, encouraged and/or accelerated at national level	<b>\$872,800</b>
Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
<b>Outcome 1:</b> Strengthened institutional structures from national to community levels enable integrated climate resilience implementation in the coastal fisheries and aquaculture sectors.	Number of CFA Act roadmap or implementation plan developed  Number and type of recommendations endorsed  Percentage of households with knowledge of the CFA and CC Acts, its provisions and ways to engage in its implementation	<b>Output 7.</b> Improved integration of climate-resilience strategies into country development plans	<b>7.1</b> No. of policies introduced or adjusted to address climate change risks (by sector) <b>7.2</b> No. of targeted development strategies with incorporated climate change priorities enforced	<b>\$1,334,567</b>

<sup>95</sup> The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

<p><b>Outcome 2:</b> Improved food security and nutrition through increased farmed fish supply, increased adaptive capacity and income of aquaculture operators and reduced pressure on climate-vulnerable coastal and reef ecosystems.</p>	<p>% of population with increased access to fresh fish protein on the domestic market at affordable prices</p> <p>% of national aquaculture facilities upgraded</p> <p>% of nearshore fishers demonstrating application of sustainable fishing practices</p> <p>Number of aquaculture operators and nearshore fishers with increased income</p>	<p><b>Output 6.</b> Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability</p>	<p><b>6.1.1.</b> No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies</p> <p><b>6.2.2.</b> Type of income sources for households generated under climate change scenario</p>	<p><b>\$4,592,128</b></p>
<p><b>Outcome 3:</b> Increased resilience of ecosystems and adaptive capacity of communities through availability of data and knowledge sharing mechanisms for adaptation planning and environmental protection</p>	<p>Capacity of local communities and national institutions to collect, compile, and use environmental management data and information</p> <p>Number of marine monitoring stations deployed</p> <p>Number of environmental surveillance working groups established</p> <p>Number of learning partnership groups established with other PICTs countries</p> <p>Number of topics and data uploaded onto the Nauru Environmental Data Portal and other regional platforms</p>	<p><b>Output 8.</b> Viable innovations are rolled out, scaled up, encouraged and/or accelerated</p>	<p><b>8.1</b> No. of innovative adaptation practices, tools and technologies accelerated, scaled-up and/or replicated</p> <p><b>8.2</b> No. of key findings on effective, efficient adaptation practices, products and technologies generated</p>	<p><b>\$872,800</b></p>

## G. Detailed Budget

Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

Outcome/Output	Activities	Cost Category	Notes and Assumptions	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)
<b>Outcome 1: Strengthened policy and planning strategies together with increased technical ability of civil servants and communities enable an integrated approach to climate change and development challenges</b>									\$1,334,567
Output 1.1. Capacity enhancement of national institutions to mainstream climate change resilience across the coastal fisheries and aquaculture sectors.	Activity 1.1.1. Recommendations report and roadmap for CFA Act and CC Act	<b>Consultants</b>	120 days per year in Year 1 and Year 2 for International and National consultants for the preparation of the report and roadmap (see constants for breakdown)	\$84,000	\$ 84,000				\$168,000
		<b>Workshops</b>	2 workshops per year (30 people) in Year 1 and Year 2 to present findings of policy recommendations reports and discuss roadmap 1 workshop per year (30 people) from Year 3-5 to follow up on roadmap	\$ 3,000	\$ 3,000	\$ 1,500	\$ 1,500	\$ 1,500	\$10,500
		<b>Personnel costs</b>	See personnel cost table below.	\$22,955	\$ 22,955	\$22,955	\$22,955	\$22,955	\$114,773
	Activity 1.1.2. Surveys and inventories	<b>Consultants</b>	Year 1 = 80 international consultant days and 40 national consultant days 60 days for International consultant and 20 days for National consultant to carry out assessment in Year 1 for assessments of natural banks, reef and marine species to determine re-stocking needs (in preparation of Activity 2.2.1) 20 days for International consultant and 20 days for National Consultant per site survey (x2) in Year 1 for site surveys for deployment of FADs and marine monitoring stations: on-site assessments for suitability all around the island  Year 2 = 90 days for international consultant and 30 for national consultant 30 days for International consultant for design specifications in Year 2 for site surveys to determine design specifications of NFMRA facilities constructions and upgrades 30 days for International consultant for construction specifications, engineering, design and logistics in Year 2 for site surveys for suitable land area,	\$48,000	\$51,000				\$99,000



			construction specifications and design, and arrangements of logistics 30 days for International consultant and 30 days for National consultant in Year 2 nationwide data collection exercise to establish new baselines on gender roles and dynamics in relation to the small-scale fisheries and aquaculture sectors						
		<b>Workshops</b>	Year 1 workshops for 90 people Workshop with government stakeholders and NFMRA to discuss findings and statute locations (40 people) in Year 1 Workshop with communities to raise awareness of new equipment, locations and benefits (50 people) in Year 1  Year 2 workshops for 290 people Workshop with government stakeholders and NFMRA to discuss findings and statute locations (40 people) Workshop with communities to raise awareness of new equipment, locations and benefits (50 people) Workshop with government and community stakeholders to discuss options and needs (100 people)  Workshop with government and community stakeholders to discuss findings of the gender assessment report and integration into work programmes and monitoring (100 people)	\$4,500	\$14,500				\$19,000
		<b>Personnel costs</b>	See personnel cost table below.	\$22,955	\$22,955	\$22,955	\$22,955	\$22,955	\$114,773
	Activity 1.1.3. Recruitment and training of NFMRA staff	<b>Training</b>	Training of extension officers aiming at 5 staff per year including costs for trainers		\$3,300	\$3,300	\$3,300	\$3,300	\$13,200
		<b>Personnel costs</b>	See personnel cost table below.	\$22,955	\$122,955	\$122,955	\$122,955	\$122,955	\$514,773
Output 1.2. Awareness raising campaigns conducted to enhance understanding of the CFA Act and NFMRA roadmap	Activity 1.2.1. Outreach campaign and dissemination	<b>Consultants</b>	30 days National Consultant to support PMU in preparation of dissemination campaign		\$6,000				\$6,000
		<b>Communication</b>	Communication costs: 5000 USD per year from Year 2 to Year 4. Distribution platforms: Nauru TV, social media, radio, local newspaper, public boards		\$5,000	\$5,000	\$5,000		\$15,000
		<b>Personnel costs</b>	See personnel cost table below.	\$22,955	\$22,955	\$22,955	\$22,955	\$22,955	\$114,773

and promote grant facility	Activity 1.2.2. Grant facility awareness raising	<b>Communication</b>	Communication costs: 5000 USD per year from Year 2 to Year 4 (printing, ads, distribution)		\$5,000	\$5,000	\$5,000		\$15,000
		<b>Workshops</b>	Workshop space for 100 people from Year 2 to year 4		\$5,000	\$5,000	\$5,000		\$15,000
		<b>Personnel costs</b>	See personnel cost table below.	\$22,955	\$22,955	\$22,955	\$22,955	\$22,955	\$114,773
<b>Outcome 2: Improved food security and nutrition through increased farmed fish supply, increased adaptive capacity and income of aquaculture operators and reduced pressure on climate-vulnerable coastal and reef ecosystems.</b>									<b>\$4,592,128</b>
Output 2.1. Provision of infrastructure to national aquaculture institutions to enhance their ability to provide training, extension services and supplies to existing and new aquaculture operators, increasing the resilience of the sector	Activity 2.1.1. Rehabilitation and upgrade of existing NFMRA infrastructure	<b>Materials</b>	Brood stock holding facility = 60,000 USD for tanks and control equipment + Freight (10,000 USD) Year 2 Hatching facility = 60,000 USD for tanks and control equipment + Freight (10,000 USD) Year 2		\$140,000				\$140,000
		<b>Services</b>	Construction of holding facilities for brood stock and hatchery facilities = 50,000 USD Construction of coral and giant clams raceways + construction of sea cucumber raceways - costs quoted in consultation at 20,000 USD		\$50,000	\$20,000			\$70,000
		<b>Operations</b>	Operations of facilities will be supported for 3 years allowing for the project to support teething issues. Following this, NFMRA will support the continued operations of the facilities as laid out in the CFA Act at the close of the project			\$5,000	\$5,000	\$5,000	\$15,000
		<b>Personnel costs</b>	See personnel cost table below.	\$30,468	\$30,468	\$30,468	\$30,468	\$30,468	\$152,338
	Activity 2.1.2. Development of sustainable feed production supply	<b>Materials</b>	120,000 USD for purchase of the turnkey plant for the feed supply (10,000 estimate for freight)		\$140,000				\$140,000

	and piloting of innovative solutions	<b>Services</b>	Rotifer and shrimp feed growth ponds = 20,000 USD(freight included with hatching facility) Year 2		\$70,000					\$70,000
		<b>Operations</b>	Operations of facilities will be supported for 2 years allowing for the project to support teething issues. Following this, NFMRA will support the continued operations of the facilities as laid out in the CFA Act. At the close of the project				\$5,000	\$5,000		\$10,000
		<b>Personnel costs</b>	See personnel cost table below.	\$30,468	\$30,468	\$30,468	\$30,468	\$30,468	\$30,468	\$152,338
Output 2.2. Increased adaptive capacity of artisanal fishers and resilience of marine ecosystems in the face of climate variability and change	Activity 2.2.1. Training of small-scale fishers and communities in sustainable fishing methods and deployment of FADs	<b>Materials</b>	6 offshore FADs materials at 4500 USD (total 27000 USD) 6 nearshore FADs materials at 1000 USD (total 6000 USD) FAD monitoring equipment 10000 USD Freight 20000 USD		\$53,000					\$53,000
		<b>Services</b>	Deployment of FADs 2000 for offshore and 2000 for nearshore. Boat needs to make multiple trips to port in each case. Costs do not differ largely between near and offshore as distances are marginal to deep water based on bathymetry		\$4,000					\$4,000
		<b>Training</b>	Training for small-scale fishers in sustainable fishing methods - 50 people every years 2, 3, 4 and 5. Travel costs for trainers to deliver training		\$5,400	\$5,400	\$5,400	\$5,400	\$5,400	\$21,600
		<b>Operations</b>	Monitoring and operations check on FADs in years 4 and 5 - taken over by NFMRA post project.				\$1,000	\$1,000		\$2,000
		<b>Personnel costs</b>	See personnel cost table below.	\$30,468	\$30,468	\$30,468	\$30,468	\$30,468	\$30,468	\$152,338
		Activity 2.2.2. Upgrade of Anibare Community Fish Market	<b>Materials</b>	Procurement cost: 75,000 USD for equipment (cold storage, freezers, packaging line, vacuum sealers, AC, ventilation system, elevated storage racks etc.) Technical details and needs to be assessed as part of activity 1.1.2		\$75,000				
	<b>Services</b>		Installation of feed storage, cold storage and associated equipment for fish market		\$25,000					\$25,000
	<b>Operations</b>		Operations cost to ensure smooth operation of the market facility and ensure all teething issues are resolved. This role will be taken over by NFMRA post project as per the CFA Act.			\$5,000	\$5,000	\$5,000		\$15,000

		<b>Personnel costs</b>	See personnel cost table below.	\$30,468	\$30,468	\$30,468	\$30,468	\$30,468	\$152,338	
Output 2.3. Grant Facility – Provision of infrastructure and equipment to enable the sustained production of milkfish for increased domestic food supply and income	Activity 2.3.1. Establishment and operationalisation of a mini-grant facility	<b>On grant</b>	Number of beneficiaries: 100 individuals, 10 community-led initiatives of 35 people each Cost of individual sub-projects: 25000 USD Cost of community sub-projects: 50000 USD - 30 individual projects et 3 community projects in Year 3 - 35 individual projects et 3 community projects in Year 4 - 35 individual projects et 4 community projects in Year 5			\$900,000	\$1,025,000	\$1,075,000	\$3,000,000	
		<b>Personnel costs</b>	See personnel cost table below.	\$30,468	\$30,468	\$30,468	\$30,468	\$30,468	\$152,338	
	Activity 2.3.2. Provision of technical assistance to access mini-grant facility	<b>Consultants</b>	60 days for international consultant to prepare technical assistance package (according to type of beneficiary, either individual or community organisation)		\$30,000					\$30,000
		<b>Workshop</b>	Engagement at community level to support designs and support writing, community workshops allowing for 50 people per session over years 3, 4 and 5				\$2,500	\$2,500	\$2,500	\$7,500
		<b>Personnel costs</b>	See personnel cost table below.	\$30,468	\$30,468	\$30,468	\$30,468	\$30,468	\$152,338	
<b>Outcome 3: Increased resilience of ecosystems and adaptive capacity of communities through availability of data and knowledge sharing mechanisms for adaptation planning and environmental protection</b>									<b>\$872,800</b>	
Output 3.1. Establishment of a knowledge management strategy (KMS) to sustain climate-resilient practices in environmental and natural resource management	Activity 3.1.1. Provision of marine monitoring stations	<b>Materials</b>	20000 (2000 USD per monitoring stations - 10 in total) Freight is shared under FAD procurement	\$20,000					\$20,000	
		<b>Services</b>	2000 USD per deployment to cover fuel and boat operational costs	\$2,000	\$2,000				\$4,000	
		<b>Operations</b>	Monitoring and operations checks on stations each year - taken over by NFMRA post project.		\$1,000	\$2,000	\$2,000	\$2,000	\$7,000	
		<b>Personnel costs</b>	See personnel cost table below.	\$36,465	\$36,465	\$36,465	\$36,465	\$36,465	\$182,325	

	Activity 3.1.2. Establishment of an environmental surveillance working group	<b>Workshop</b>	Workshop costs for 80 people twice a year each year from year 2.		\$4,000	\$4,000	\$4,000	\$4,000	\$16,000
		<b>Personnel costs</b>	See personnel cost table below.	\$36,465	\$36,465	\$36,465	\$36,465	\$36,465	\$182,325
Output 3.2. Learning and dissemination of project results	Activity 3.2.1. Establishment of learning partnerships with other PICTs countries	<b>Travel</b>	Knowledge exchanges in Kiribati, Tuvalu and Palau for 5 people at 1500 USD for flights and DSA			\$14,500	\$14,500	\$14,500	\$43,500
		<b>Personnel costs</b>	See personnel cost table below.	\$36,465	\$36,465	\$36,465	\$36,465	\$36,465	\$182,325
	Activity 3.2.2. Compilation and dissemination of lessons learned	<b>Workshop</b>	Workshop space for 40 people (20 beneficiaries of learning exchanges + 20 members of GoN and National institutions) in year 3 and year 5			\$2,000		\$2,000	\$4,000
		<b>Travel</b>	Regional workshop (MASA) international travel costs for 10 people				\$29,000		\$29,000
		<b>Communication</b>	For dissemination of lessons learned through appropriate channels.		\$5,000	\$5,000	\$5,000	\$5,000	\$20,000
		<b>Personnel costs</b>	See personnel cost table below.	\$36,465	\$36,465	\$36,465	\$36,465	\$36,465	\$182,325
<b>Total project cost</b>			\$604,939	\$994,639	\$1,858,639	\$1,666,639	\$1,674,639	\$6,799,495	
<b>Project Execution costs</b>									
Technical Officer				\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$112,500
Project Coordinator				\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
Monitoring and Evaluation Officer				\$13,500	\$13,500	\$13,500	\$13,500	\$13,500	\$67,500
Environmental and Gender Safeguards Officer				\$13,500	\$13,500	\$13,500	\$13,500	\$13,500	\$67,500
Office space - rent				\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$120,000
Administrative costs				\$8,000	\$8,000	\$8,000	\$8,000	\$8,000	\$40,000
Terminal Evaluation								\$43,000	\$43,000

<b>Project Execution costs (&gt;9.5%)</b>		<b>\$106,500</b>	<b>\$106,500</b>	<b>\$106,500</b>	<b>\$106,500</b>	<b>\$149,500</b>	<b>\$575,500</b>
<b>Project Cycle Management fee</b>							
Direct project supervision from IE		\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	<b>\$400,000</b>
Inception workshop		\$10,000					<b>\$10,000</b>
Travel		\$14,500	\$14,500	\$14,500	\$14,500	\$14,500	<b>\$72,500</b>
IE financial and fiduciary compliance		\$8,000	\$8,000	\$8,000	\$8,000	\$10,000	<b>\$42,000</b>
Evaluation and assessment				\$10,000	\$10,000	\$10,000	<b>\$30,000</b>
Annual Progress Reports (APRs)		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	<b>\$25,000</b>
Technical reports		\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	<b>\$15,000</b>
Auditing		\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	<b>\$30,000</b>
<b>Project Cycle Management fee charged by the Implementing Entity (8.5%)</b>		<b>\$126,500</b>	<b>\$116,500</b>	<b>\$126,500</b>	<b>\$126,500</b>	<b>\$128,500</b>	<b>\$624,500</b>
<b>Total project cost</b>							<b>\$7,999,495</b>

## Budget notes

Calculation of eligible cost under the 1.5% rule for PEC.

EE	Budget Allocation	Eligible PEC %	Eligible PEC (USD)	Actual PEC
SPC	\$ 1,249,245	1.5%	\$ 18,739	\$ 0
GoN	\$ 6,125,750	9.5%	\$ 581,946	\$ 575,000

## Personnel Costs

Personnel costs (annual)	Annual cost	Total cost (total project)	Allocation
Technical Advisor	\$ 120,000	\$ 575,100	14.3% on each Output in Outcome 1, 2 and 3.

Personnel costs (annual)	Annual cost	Total cost (total project)	Allocation
Administrative Assistant	\$ 33,000	\$ 175,725	14.3% on each Output in Outcome 1, 2 and 3.
Procurement and Finance Officer	\$ 104,000	\$ 498,420	30% in each Output of Outcome 2. 10% in output 1.1.
Technical Officer (aquaculture)	\$ 50,000	\$ 225,000	10% on each output in outcome 1+2 50% on PEC
Project Coordinator	\$ 50,000	\$ 250,000	7.15% on each Output in Outcome 1, 2 and 3. 50% on PEC
Monitoring and Evaluation Officer	\$ 30,000	\$ 135,000	7.15% per Output across Outcomes 1, 2 and 3 50% PEC
Environmental and Gender Safeguards Officer	\$ 30,000	\$ 135,000	7.15% per Output across Outcomes 1, 2 and 3 50% PEC
Extension officers x5	\$ 20,000	\$ 500,000	100% on Activity 1.1.3

### Constants

Constants	USD
International consultant/day	\$ 500
National consultant/day	\$ 200
Workshop cost per person (catering and venue hire included in cost)	\$ 50
Training costs for trainees (catering and venue hire included)	\$ 50
Travel - international travel ticket and DSA for 7 days	\$ 2,900
Communications cost annual (printing, adverts, radio contracting and dissemination costs etc)	\$ 5,000
Freight (1x container)	\$ 10,000

## H. Disbursement Schedule

Budget type	Year 1	Year 2	Year 3	Year 4	Year 5	Total (US\$ millions)
Activities cost	\$604,939	\$994,639	\$1,858,639	\$1,666,639	\$1,674,639	\$6,799,495
Execution cost	\$106,500	\$106,500	\$106,500	\$106,500	\$149,500	\$575,500
Project Cycle Management fee charged by the Implementing Entity	\$126,500	\$116,500	\$126,500	\$126,500	\$128,500	\$624,500
<b>TOTAL</b>	<b>\$837,939</b>	<b>\$1,217,639</b>	<b>\$2,091,639</b>	<b>\$1,899,639</b>	<b>\$1,952,639</b>	<b>\$7,999,495</b>


## PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

(Enter Name, Position, Ministry) BERILYN JEREMIAH SECRETARY - ENVIRONMENTAL MGT & AGRICULTURE DEPT OF ENVIRONMENTAL MANAGEMENT & AGRICULTURE	Date: (Month, day, year) DECEMBER 23RD 2022
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### Implementing Entity certification

Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans of Nauru, and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
<b>Name &amp; Signature:</b> Dirk Snyman Climate Finance Coordinator The Pacific Community <div style="text-align: right; margin-top: 10px;">  </div>	
<b>Date: (Month, Day, Year)</b> 06 January 2023	<b>Tel. and email:</b> <a href="mailto:dirks@spc.int">dirks@spc.int</a>
<b>Project Contact Person:</b> Jack Rossiter Climate Finance Advisor The Pacific Community	
<b>Tel. And Email:</b> <a href="mailto:jackr@spc.int">jackr@spc.int</a>	

<sup>6</sup>. Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.



**Annex 5. Letter of Endorsement from the Designated Authority**



**Government Offices  
Yaren District  
NAURU  
Ph: +674 5573133 Ex:303**

**Republic of Nauru  
Department of Environmental Management & Agriculture**

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22<sup>nd</sup> December 2022

To: The Adaptation Fund Board  
c/o Adaptation Fund Board Secretariat  
Email: [Secretariat@Adaptation-Fund.org](mailto:Secretariat@Adaptation-Fund.org)  
Fax: 202 522 3240/5

**Subject: Endorsement of the grant proposal "*Resilient Coastal Fisheries and Aquaculture in Nauru*" and request for Direct Project Services**

In my capacity as the Designated Authority for the Adaptation Fund in Nauru, I confirm that the above national grant proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of and risks posed by climate change in Nauru.

Through the project design, detailed consultations were held between the Government of Nauru's Department of Commerce, Industry, and Environment (the Designated Authority) and Nauru Fisheries and Marine Resources Authority (NFMRA), and the Pacific Community (Implementing Entity). Through these consultations, it was identified that Direct Project Services<sup>1</sup> from the Implementing Entity to support the NFMRA in execution would be beneficial to the project. The services provided by the Implementing Entity in this capacity would relate to:

- i) Procurement and financial services support in alignment with SPC procurement processes.
- ii) Technical support related to the implementation of aquaculture and coastal fisheries technical interventions, building off SPC's Fisheries, Aquaculture and Marine Ecosystems division's extensive experience in the region.

The proposal document submitted for Adaptation Fund (AF) Board consideration provides full details of these services and budget implications<sup>2</sup>. Further, the document includes justifications for the selection of the Pacific Community in these roles.

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<sup>1</sup> Following the approach outlined in AF Board Decision B.26/33 ([https://www.adaptation-fund.org/wp-content/uploads/2016/01/AFB-26-report\\_final1.pdf](https://www.adaptation-fund.org/wp-content/uploads/2016/01/AFB-26-report_final1.pdf)).

<sup>2</sup> The budget for Direct Project Services is in alignment with AF Board Decisions B.17/17 and B.18/30, in compliance with guidance under OPG Annex 7 (<https://www.adaptation-fund.org/wp-content/uploads/2017/11/OPG-ANNEX-7-Project-Programme-Implementation-Approved-Oct-2017.pdf>).

Accordingly, I am pleased to endorse the above-mentioned grant proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Pacific Community and executed by the Government of Nauru through the NFMRA with Direct Project Service support from the Pacific Community.

Sincerely,

A handwritten signature in black ink, appearing to be 'B. Jeremiah', written in a cursive style.

**Ms. Berilyn Jeremiah**

Secretary for Commerce, Industry, and Environment,  
Government of Nauru

## Annex 1. Stakeholder consultation report

The meeting minutes of stakeholder consultations carried out over the period November 2021 – November 2022 are presented below in chronological order.

### Meeting with A. Halford, N. Smith and A. Smith - SPC

Name (Person(s) at meeting)	Designation and Organization (title/organization)	Dates
7th December 2021 meeting: - Andrew Halford (SPC) - Andrew Smith (SPC) - Neville Smith (SPC) 28 <sup>th</sup> February 2022 meeting: - Andrew Halford - Robert Jimmy	Coastal fisheries specialists R. Jimmy: Aquaculture specialist	7 December 2021 28 February 2022
<p><b><u>Key Points (first meeting):</u></b></p> <ol style="list-style-type: none"> <li>1. Discussion on the outcomes of the gap analysis conducted at project inception</li> <li>2. Discussion on the barrier analysis</li> <li>3. Insights into Nauru's aquaculture sector</li> <li>4. Discussion on FADs</li> </ol> <p><b><u>Key Points (second meeting):</u></b></p> <ol style="list-style-type: none"> <li>5. Overview of final project structure</li> <li>6. Appropriate type, number and costs of anchored FADs</li> <li>7. Learning partnership opportunities with the MASA network</li> <li>8. Monitoring buoys and stations (type, costs)</li> </ol>		
<p><b><u>Meeting Minutes</u></b></p> <p>The meeting took place soon after project inception therefore initial findings from the gap analysis and barrier analysis were discussed. The SPC team informed that barriers at NFMRA included high staff turnover and potential issues with the legal framework to enable community-based fisheries management. Additionally, the SPC team noted that NFMRA had recently requested support for the development of CCA actions and measures for the fisheries sector.</p> <p>On FADs, there is a generally shortage on the economic benefits of FADs across the Pacific region. FADs in Nauru targets near-shore pelagic fish, but the science is not clear on the benefits of FADs as offsetting tools to relieve pressure on reef fisheries. Additionally, there are issues around behaviour change and traditional fish consumption habits which explains the preference for reef fish over larger pelagic species.</p>		

Meeting with R. Jimmy – SPC

Name (Person(s) at meeting)	Designation and Organization (title/organization)	Date
- Robert Jimmy (SPC)	Aquaculture specialist	21 December 2021
<p><b><u>Key Points:</u></b></p> <ol style="list-style-type: none"> <li>1. Introduction of the project idea</li> <li>2. Insights into relevant baseline projects</li> <li>3. History of aquaculture production in Nauru</li> <li>4. Capacity and needs at NFMRA</li> </ol>		
<p><b><u>Meeting Minutes</u></b></p> <p>After a brief overview of the findings from the gap analysis carried out by the Consultant, R. Jimmy described the process and outputs of the FAO Aquaculture Business development project which focused on milkfish aquaculture production. R. Jimmy advised to focus on milkfish production as it is a priority species as stated by the GoN and has long cultural significance to the people of Nauru. Additionally, R. Jimmy listed the infrastructure and capacity needs at NFMRA to sustain aquaculture production, such as a storage and processing facility, a hatchery and a grow out system. The meeting ended with a discussion around existing aquaculture associations in Nauru and the dynamics of aquaculture production at Buada Lagoon.</p>		

Meeting with F. Nelson – SPREP

Name (Person(s) at meeting)	Designation and Organization (title/organization)	Date
- Filomena Nelson	Climate Change Adaptation Advisor	14 Jan 2022
<p><b><u>Key Points:</u></b></p> <ol style="list-style-type: none"> <li>1. SPREP project to support the development of a National Adaptation Plan (NAP) for Nauru (not yet implemented)</li> <li>2. Discussion on Nauru INFORM portal</li> <li>3. Discussion on the Pacific Adaptation to Climate Change (PACC) project</li> </ol>		
<p><b><u>Meeting Minutes</u></b></p> <p>After the Consultant provided an overview of the project design structure, Filomena described the upcoming NAP development support project, which will update the climate change projections for Nauru (based on CSIRO work from 2014), centralise climate change adaptation data for Nauru on the INFORM portal, and seek to understand how the private sector could invest in CCA in Nauru (through the development of a private sector assessment). There was then a discussion on in-country capabilities which are limited in terms of technical knowledge of CCA and how to conduct vulnerability and risk assessments for resilience investments. The discussion on the PACC project was focused on the failure to establish maintenance plans and allocate resources which led to the loss or damage of provided solar-powered water purifiers.</p>		

After the meeting, Filomena liaised with SPREP colleagues to provide further information on the BIOPAMA II project, the Integrated Islands Biodiversity project (IIBP) and the INFORM project, with further inputs provided by email in the form of notes.

#### Meeting with B. Yeeting – Nauru Fisheries and Marine Resources Authority (NFMRA)

Name (Person(s) at meeting)	Designation and Organization (title/organization)	Date
- Being Yeeting	Fisheries and Aquaculture Advisor at Nauru Fisheries and Marine Resources Authority (NFMRA)	18 Jan 2022 24 Jan 2022

#### **Key Points:**

1. NFMRA staff, capacity, barriers and past training received
2. Status of NFMRA aquaculture facilities
3. Status of information and data collection for coastal fisheries
4. Overview of aquaculture sector in Nauru
5. Land tenureship
6. Lessons learned from past projects
7. Policy and strategic frameworks

#### **Meeting Minutes**

Due to the high number of aspects to be discussed, this consultation was split into two one-hour sessions, which took place a week apart.

Being informed the Consultant that the Nauru Fisheries Corporation does not exist anymore, and that the Nauru Fisheries Association exists but is not very active. He provided a list of NFMRA staff and roles, and explained the capacity issues - there is no qualified staff and only one graduate at NFMRA, which hampers the institution's capacity to plan and implement measures and projects requiring technical, scientific or management knowledge. Being informed that it is difficult to attract and retain staff before there's a shortage in qualified candidates. Some NFMRA staff were sent to receive training in Kiribati and the Philippines which proved useful due to the "hands-on" nature of the training.

On the status of NFMRA aquaculture facilities, there are currently holding tanks for milkfish fry quarantining and recently installed raceways for giant clams rearing and coral farming. These facilities are in need of an upgrade, particularly with a new water supply inlet for the tanks, and an aeration system. In addition, a hatchery is needed to secure a steady supply of milkfish fry domestically.

In terms of data collection for coastal fisheries, due to a lack of technical capacity the data collected as part of the 2019 survey is yet to be compiled into a report. No data was collected on the role and dynamics of women and gender involved in coastal fisheries. Catch estimates for both subsistence and commercial coastal fisheries will be released in July 2022 (expected). Little to no data is collected on a regular basis, as most efforts are focusing on offshore tuna fisheries. On reef areas, there are no chemical variables collected on the health of coral reefs, and no monitoring stations.

The discussion then moved on to the barriers hampering the development of the aquaculture sector for

domestic milkfish production, which include a complete reliance on external imported inputs, insufficient technical capacity. Being provided inputs on the status of existing ponds, the costs of production inputs and retail price of fish, as well as the possibility of using tilapia (which is an invasive species in Nauru). On Buada Lagoon, we discussed the issues around land ownership and tenure, which has prevented the rehabilitation of the lagoon and efforts to establish a collaborative approach to milkfish production.

On lessons learned from past projects, Being informed that for all projects there was a lot of community engagement and involvement, but these efforts were hampered due to project management issues and delays (such as for the R2R project). According to Being, the FAO Aquaculture business development project is more oriented toward aquaculture production for export rather than for subsistence and domestic food security.

Finally, Being provided an overview of the Coastal Fisheries and Aquaculture Act of 2020 and their implementation status. Some provisions are in the early-stages of implementation (such as the Community Stakeholder Engagement Forum and the National Coastal Fisheries Management Plan) but the process is delayed due to unclear responsibilities and the absence of a schedule for implementation of the Act's provisions.

#### Meeting with S. Lee and S. Nawadra – UNEP

Name (Person(s) at meeting)	Designation and Organization (title/organization)	Date
<ul style="list-style-type: none"> <li>- Sang Jin Lee</li> <li>- Sefanaia Nawadra</li> </ul>	<ul style="list-style-type: none"> <li>- Task Manager</li> <li>- Head of UNEP Sub-regional office for the Pacific</li> </ul>	27 Jan 2022

**Key Points:**

1. Ecosystem Restoration and Sustainable Land Management to improve livelihoods and protect biodiversity in Nauru (project approved in September 2021)
2. Building National and Regional Capacity to Implement MEAs by Strengthening Planning, and state of Environment Assessment and Reporting in the Pacific Islands” project
3. “Integrated Islands Biodiversity project” (IIBP)

**Meeting Minutes**

After a brief overview of the project design structure, we discussed the recently approved GEF project, which is similar to the Nauru R2R project and was directly informed by consultations with GoN and RoNPHOS (Nauru Phosphate mining corporation). The UNEP team informed that it was difficult to determine which area to target for natural areas, because land use is dictated by mining activities and environmental protection comes second. The project will leverage SPREP-supported Nauru Environmental Data Portal. On the whole this project will not be directly relevant to the UNEP-GEF project, but a plant nursery may be leverage for coastal restoration and planting activities.

On the MEA project, the UNEP team informed that there was insufficient political will from the GoN to carry out the State of the Environment report (for reasons stated above). Capacity building support for data collection on environment and fisheries is provided through the Pacific Island Country network.

Lastly, on the IIBP project, the UNEP team mentioned the importance of early and sustained engagement with local communities to ensure the success and sustainability of project results and outputs. There needs to be a “win-win” situation for environmental protection measures to be successful, where communities gain from the implementation of the measures.

#### Meeting with J. Turaganivalu and L. Sivo – UNDP

Name (Person(s) at meeting)	Designation and Organization (title/organization)	Date
<ul style="list-style-type: none"> <li>- Josua Turaganivalu</li> <li>- Loraini Sivo</li> </ul>	<ul style="list-style-type: none"> <li>- RSD Program Associate (UNDP Pacific Office)</li> <li>- VF Programme Associate</li> </ul>	1 Feb 2022

**Key Points:**

1. Lessons learned and outcomes of the R2R project
2. Discussion on the Coastal Fisheries and Aquaculture Act
3. Recommendations for project implementation arrangements

**Meeting Minutes**

After a brief overview of the project design structure, the UNDP team listed the key barriers and shortcomings of the R2R project. These included:

- Capacity in-country for the project management team: UNDP couldn't find people to set up and manage the project in-country, due to the limited qualifications of nationals. It took one year to recruit people. UNDP had to resort using a UNV UN Volunteer. In the first year of implementation, UN Volunteers were in-country (6-month periods) as PMU, while local partners were trained. Even after the provision of training, local people left during implementation: technical capacity issue (fisheries, agriculture, land). The UNDP Task team had issues with locals not coming for work, and the local project coordinator had to go and find people to replace them. Some staff weren't happy with the salary they were getting. By Year 3, UNDP hired a chief technical advisor (international advisor), which they say should have been designed and budgeted into the project.
- Difficulty in aligning with NFMRA and DCIE agenda which were sometimes conflicting, and UNDP had only one point of contact at NFMRA
- Data was sometimes collected, but there is no technical capacity to compile it in a reporting format

Despite these shortcomings, the UNDP team said that a lot was achieved, notably the support to develop the Coastal Fisheries and Aquaculture Act of 2020. First, a consultant was hired to develop a policy recommendations report and shortlist of marine areas (MMAs). The UBDP team said the establishment of MMAs proved difficult due to land tenure complexities (land is owned by individuals and marine areas owned by government). The engagement of local communities in the establishment of MMAs and the identification of needs for the CFA Act was successful, as was the national awareness raising campaign.

Lastly, to avoid similar shortcomings with the proposed project, the UNDP team recommended a number of items for consideration in the implementation arrangements and budget:

- Inclusion of a project board to avoid bottlenecks
- Inclusion of a Technical Working Group (for sectoral expertise)
- Development of specific ToR to separate people from Project Board and Technical Working Group
- Inclusion of technical specialists in each component
- Budgeting a project vehicle and providing bikes for PMU staff to go to work

The meeting ended with last recommendations provided relating to regular interactions with GoN and other line ministries and institutions to ensure alignment with changing objectives and plans.



Name (Person(s) at meeting)	Designation Organization (title/organization) and	Date
- Mele Tauati	Small-scale fisheries and aquaculture consultant	7 Feb 2022
<p><b><u>Key Points:</u></b></p> <ol style="list-style-type: none"> <li>1. FAO Aquaculture Business Development project</li> <li>2. Request of outputs and reports produced as part of the project</li> <li>3. Capacity in data collection and management</li> </ol>		
<p><b><u>Meeting Minutes</u></b></p> <p>After an overview of the proposed project structure, Mele introduced the project and listed a number of shortcomings, including:</p> <ul style="list-style-type: none"> <li>• A donor/investment forum for aquaculture was planned but the lack of data and information, in addition to an inconducive enabling environment (pre-conditions for private investment prevented the forum from occurring</li> <li>• FAO was not able to publish the final report of the project</li> <li>• No training was provided as part of the project and instead carried out a risk analysis and assessment for the aquaculture sector.</li> </ul> <p>Based on the project findings, M. Tauati had a number of recommendations:</p> <ul style="list-style-type: none"> <li>• Developing legislation that directly addresses aquaculture is a key recommendation</li> <li>• Data collection efforts need to be scaled up as it is a main barrier to private investment and the uptake of the sector, particularly cost information</li> <li>• Supporting the implementation of the MASA network</li> <li>• Carefully design a national awareness campaign (some aquaculture operators were not aware of the loan scheme or didn't have the required financial literacy)</li> <li>• Spelling out steps and milestones toward the implementation of measures for GoN and community stakeholders</li> </ul>		

## Annex 2. Community workshop

16 November 2022,  
University of the South Pacific, Nauru Campus, Yaren District.

### Transcript for the Consultation for “Resilient coastal fisheries and aquaculture in Nauru”

#### Questions and Discussion Topics on Component 1

##### GROUP 1

#### Activity 1.1.1 – Recommendations report and roadmap for Coastal Fisheries and Aquaculture Act and Climate Change Act.

- Overall the group believed that there needs to be a lot of work done to progress things forward – need more awareness, community outreach, understanding of climate change impact, promote sustainable fishing practices
- Both Acts are new 2020 so it is needed to provide best practices, challenges for implementation etc.

a) Are you aware the Coastal Fisheries and Aquaculture Act and what are your thoughts on it?

YES – Through NFMRA’s Community outreach but the impact is somewhat negative due to limited community participation. Those who attend those are those who are genuinely concern about Nauru’s coastal resources.

a) What do you think could be done to protect coastal and reef areas? What could be done to increase aquaculture production?

#### Recommendation from Group

- Training is highly needed, in sustainable fishing, climate impact, aquaculture as an alternative to ease the pressure of overfishing that would lead to change of best practices and joint community effort in promoting sustainable fishing.
- More awareness on both legislations
- More community outreach
- Provide easy access of information
- Regulations to be in place to fully implement the requirements under both Acts.
  - Implement issuance of license permit, fishing permit etc
- Revive and promote traditional ways of fishing.

b) Are there people who are members of the Community Fisheries Management Committees? If so what has been your experience of it. What could be done better?

- No one in our group is a member and both Legislations are new and are at its infant stages to make any comments.

c) In your view, are the views of the community adequately represented in the Coastal Fisheries and Aquaculture?

- As mentioned above the Coastal Fisheries and Aquaculture Act 2020 is premature to provide anecdotal evidence. However, for better understanding, legislative requirement requires the responsible Ministry, Agency, and Corporation to undertake public consultation to seek community feedback on the First, Second and Third Draft of any proposed legislation before the legislation is passed in Parliament.

#### Recommendation

- Raise more awareness on the content of legislation
- NFMRA to use existing Social Media Group to ensure information are widely disseminated as people on island have more access to FB rather that Company websites.

d) Are you aware of Climate Change Act and its provision

NO – as previously mentioned people on island do not understand the importance of knowing or understanding legislation why they are created in the first place.

- Newly passed
- Not a lot of people are aware
- There is still gaps within, the absence of regulation to fully implement the Act is the downside of making the Act fit for purpose

### **Recommendation**

- Need more community awareness, public awareness on the specific legislation the content, objective etc
- Regulation needs to be in place to fully implement the Act.

e) In your view how does climate change impact your daily life? Your occupation/income source? Your future prospects?

- People do not understand what the real impact is
- Older generation do realize the coastal resources are declining but may not understand whether the decline is related to climate change or overfishing or both

### **Recommendations**

- More awareness and training that will lead to sustainability
- Promote sustainable fishing
- Revive traditional ways of fishing

g) In your view how has climate change impacted coastal and reef areas? Fish stocks and marine resources in general? Aquaculture production.

The current generation are not fully aware nor do they understand the impact of climate change to fully appreciate the need to conserve, protect and manage coastal fish resources. Therefore there is an urgent need for the training to understand that if we disregard putting in place effective management our future generations will face the consequences of our inactions to address the need to manage our coastal fisheries and implement best practices.

### **Recommendations**

- More public awareness on the need to manage our coastal fisheries
- Training to understand the impact of climate change
- Training how to mitigate climate change impacts on our coastal fisheries including aquaculture
- Promote sustainable fishing
- Introduce new measures of coastal fishing
- Undertake assessment to support regulations
- Collect data on species that are declining

h) in your view, what could be done to adapt/mitigate these impacts.

Since there is not enough data, research and assessment undertaking at national level to understand, identify where climate change has impacted in order to mitigate the impacts.

### **Recommendations**

- Training is needed on how to collect and collate data
- Undertake surveys, study what are the climate change impacts
- Collect data to support mitigations measures
- Produce a report
- Develop action plans on how to manage.

## **GROUP 2**

### **Activity 1.1.2. Surveys and inventories**

Currently, where is the selling or marketing of fish (either farmed or caught) happening?

**Fish are sold direct to the public.**

- The marketing and selling of fishes are at the Nauru Community Boat Harbour in Anibare near the Nauru Fisheries Market.
- The other spot is at Gabab Channel which most of the pelagic fishes are sold and some canoe/kayak fishers are also selling their catches at Gabab Channel in BOE District.
- There are also fishes sold at the Boulevard in Aiwo usually from canoes/kayaks and divers
- Fishes are also commonly sold at home where locals know the fishers and would often visit them to ask for fish or you would see signs outside their houses.
- Private shops owned by locals are also common places to sell fish as well.

**Marketing of Fish**

- Social media is a popular platform to sell Fish which are often marketed on private groups in Facebook which are being administered by locals on where to sell your products. Some fishers also directly sell their fish on FB. Some fishers sell their catch through public billboards at major shopping areas.

**In your view, what would be a good location for the storage and market facility? This may be an existing building that needs an upgrade, or a new location.**

The existing Fish Market at Anibare Community Boat Harbour.

Key factors for selecting the existing infrastructure;

- It has existing storage areas.
- Near offloading areas e.g. Boat ramps for launching and re-launching.
- Near saltwater for fish processing. E.g gill gutting and filleting fishes.
- Close access to ice and freshwater from the fisheries.
- Potential location for future fish exports as the fish could be processed there with accessibility of blast freezers.
- Fishers has easy access including reef gleaners, not limited to boat fishers only.
- Could potentially be a good location for waste bi products from fish waste which could be collected and processed for fertilizers or animal feed.

**Recommendations:**

- To revamp existing fish market in Anibare with the potential of developing value added bi products such as:
  - Air conditioned acclimatised for food/fish products.
  - Facilitate a Hazard Analysis & Critical Control Points (HACCP) to provide an international standards for food safety in processing standards.
  - The area is owned by Government it is built on high level water mark which legally means it belongs to state. No landowner issues.
  - Perhaps expand another fish market at Gabab or Aiwo Boulevard this is to increase accessibility of fish product and also raise awareness and capacity building towards the wider community.

**Activity 1.2.2. Outreach campaign**

- What media channel do you prefer to use to access information?
- Radio
- Nauru Television (NTV).
- Community Outreach.
- Official Sources – i.e Database portal, Government Information Sources – Government News, Radio, GIS datasets.
- School curriculums e.g pamphlets, posters and advertisements.

**Activity 1.2.3. Provision of technical assistance to access mini-grant facility**

**For members of community associations: What are the barriers to the financing of projects? Do you require specific training / assistance to plan and implement those projects? What kind of assistance would be most useful?**

- How to prepare and write up project proposals.
- Getting to understand different formats or projects proposals or compliance with different donors.
- Community Leaders knowledge retention after a new leadership has taken over the new role. The election of community leaders is usually like the tenure of members of parliament (2 to 3years).

### **Questions / discussion topics on Component 2**

#### **Activity 2.1.2. Development of sustainable feed production supply**

**Is there any production of fish feed on the national level? If so, what is the feed made of? What are the barriers to scaling-up or diversify production?**

This is not applicable in Nauru as there is no fish feed at the national level. NFMRA does this on a very small scale for aquaculture feed as this is still very much in its infancy.

**If not, what is your opinion on the installation of a fish feed mill at NFMRA's site?**

This would be acceptable especially for aquaculture pond owners as they find it hard to source fish feed which they used to get from the Taiwan Agricultural Mission Farm which they do not supply the feed anymore.

### **Project description - Component 3**

**Objective: To implement regular monitoring and data collection processes for enhanced marine conservation**

#### **Activity 3.1.1. Provision of marine monitoring stations.**

There would be marine monitoring systems placed around the island. (BOE, Yaren, Anibare, Anabar, Denig, Ijuw, Baisti, Ewa, Meneng, Aiwo, Anetan).

There would 10 monitoring stations placed around the communities. The monitoring stations would be responsible for collecting fisheries data, and enforce regulations for conservation zone when they have been identified. The 10 monitoring stations would be manned by each communities and the initiative would be to monitor their marine resources and they would be enumerated under the NFMRA budget. This is similar to the community liaison officers who are funded under the Women's Department.

#### **Activity 3.1.2. Establishment of an environmental surveillance group**

There should be safety safeguards officer aligned with the NFMRA Staff and the Communities so that safety measure are also adhered to within the project. The group will monitor compliance with community fisheries management areas regulations, monitor reef catch, FADs surveillance, collect data on reef health, and evaluate the effectiveness of conservation measures

#### **Activity 3.2.1. Establishment of learning partnerships with other PICTs**

Knowledge exchange trips to share learnings on aquaculture production and sustainable small-scale fisheries. The group fully supported this learning partnerships and even recommended that their group be nominated to attend the first learning partnership. There are similar project that has used this partnership exchange.

#### **Activity 3.2.2. Compilation and dissemination of lessons learned**

Compilation of all project learning on the Nauru Environmental Data Portal. There is an existing environmental portal currently managed by SPREP which is only accessible to Government Focal points. The accessibility should be re-looked so that researchers and Nauruan's could access it as well. There is an existing data collecting software call Tails which Fisheries is currently using for their data collection. This should be made available and also training provided for local fishers so that they could produce input their own data. There are also other data collecting apps that are more user friendly where training could be done for the fishers to use such as Kobo Toolbox.

### **General Gender Aspects.**

#### **1) How are men and women involved in decision making at the community level?**

Culturally the Women prepare the post-harvest from their husbands or sons catches and they also preserve the

catch for and plan their daily intake of fish.

**2) What are key methods that should be considered to ensure women and other vulnerable groups are involved in project activities?**

Through outreach programs specifically targeted towards the vulnerable groups. Invite them in a consultation committee that is led by community member groups.

**3) Are there any barriers and opportunities based on gender, age, disabilities in relation to mobility as well as in access to services (for example ability to travel, ability to access coastal resources or partake in fishing/aquaculture)?**

No there isn't as all males and females have easy access to the marine and coast.

**4) What is the nature and extent of women run businesses, cooperatives and women's groups?**

They need capacity building and funding assistance for processing their products. E.g. dried and cured fish.

**5) What are the key NGOs in-country that should be included as part of the project?**

There are several NGO groups who are active in Marine and the environment which are; EcoNauru, Women's Empowerment Group and 2 youth Groups Naoero Amo and Nauru National Youth Group.

**6) Are there specific women's groups who should be part of the implementation and can be consulted further during the project preparation phase?**

There are several women's group and individual women fishers who are active in fisheries. The key group that is active is the group called Kirira who are active in conservation measures for their coastal resources.

**7) Are there differences between women and men regarding access to and control over fishing rights and access to the coast?**

There is no disparity between women and men regarding access and control over fishing rights and access to the coast.

**8) Are there areas where women can be supported to more actively participate in the fisheries sector?**

Marketing the fish and providing tools to process and produce value added goods such as processed cured fish, dried fish and other preservation methods that are marketable.

### **Environmental and social safeguards**

**1) Waste Management: Our understanding is that Nauru does not have a waste management and disposal system in place. How is waste that is part of any construction activities currently disposed of and are there any estimates of the costs associated with such disposal?**

There is no waste management and disposal system in place. NRC is currently managing the waste management for Nauru. There is a Nauru Solid Waste Management Strategy which is enforced under the Environmental Management and Climate Change Act 2020. There is an awareness program under the Nauru Rehabilitation Corporation (NRC) to process at the landfill site the segregation process.

Waste constructing is disposed of into the landfill area. There are fees associated with the dumping of waste by commercial companies. Hazardous waste from construction site is guided under the Environmental Management and Climate Change Act 2020.

**2) Safety Concerns: Are there safety concerns for the project? Specifically, related to small-scale construction? Are there any specific safety concerns for women working within the fisheries sector? How can these be addressed or mitigated for this project?**

None that they know off. There are fisheries staff who have encountered difficult situation as they needed to wear proper PPE for Women in fisheries. They have been told not to go to certain sites as they were not properly wearing PPE.

**3) Land Tenure:**

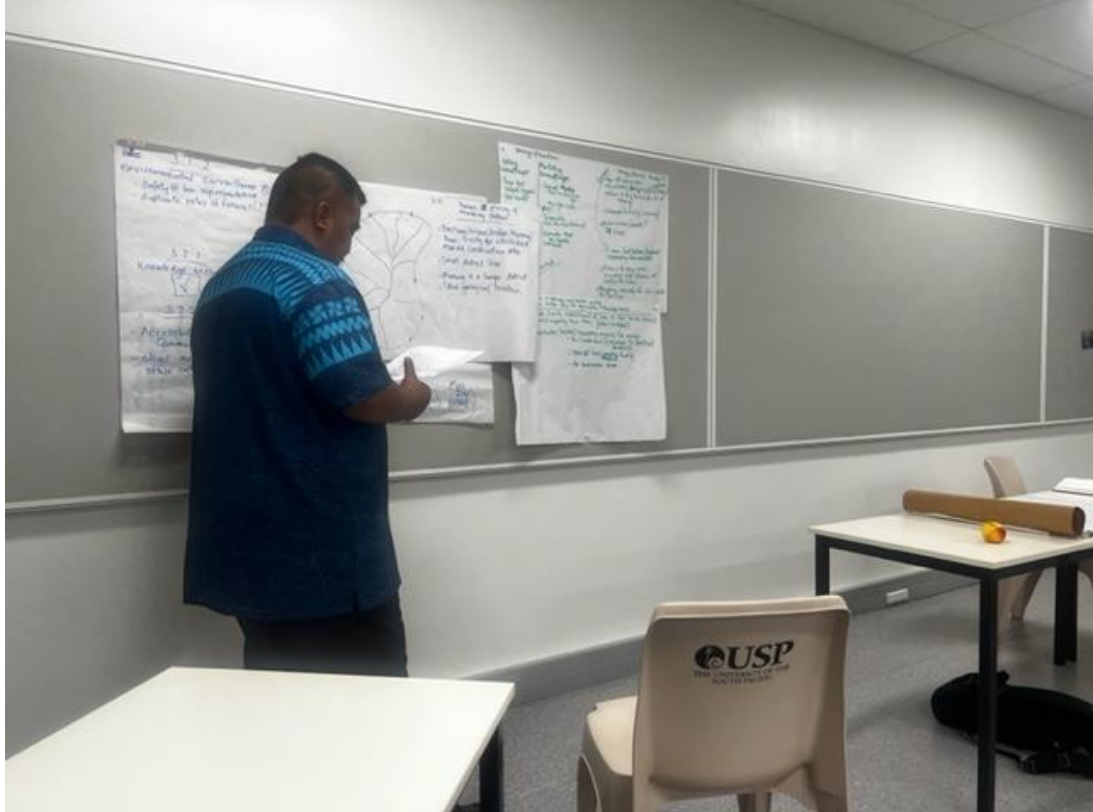
Build relationship with key landowners who would be part of the stakeholder group. Awareness and inclusiveness in decision making consultation is key in involving and informing them of what their land is being used for.

Pictures from the consultation











### ATTENDANCE SHEET

Date: 16/11/2022

Purpose: Resilient Coastal Fisheries and Aquaculture in Nauru.

Name	Phone	Email	Organization
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## Annex 3. Environmental and Social Management Plan

### *ESMP for the AF Project “Resilient Coastal Fisheries and Aquaculture, Nauru”*

#### 1. Introduction

The following annex provides an overview of the Nauru context for environmental and social risk assessment, details the specific environmental and social risks associated with the Adaptation Fund (AF) project “Resilient Coastal Fisheries and Aquaculture Project” in Nauru, includes an Environmental and Social Management Plan (ESMP) for the overall project, and outlines an environmental and social (E&S) screening process criteria for the mini-grant facility implemented through Outcome 2.

The Environmental and Social Policy (ESP) of the AF is designed to ensure that supported projects promote positive environmental and social benefits and mitigate or avoid adverse environmental and social risks and impacts. The ESP, in effect since November 2013, requires that all AF projects enhance positive social and environmental opportunities and benefits and minimize adverse social and environmental risks and impacts.

The ESP has 15 principles to manage unnecessary risks that are put into practice during the development of a project. Among them are compliance with the law, access and equity, marginalized and vulnerable groups, human rights, gender equality and women’s empowerment, core labour rights, indigenous people, involuntary resettlement, protection of natural habitats, conservation of biological diversity, climate change, pollution prevention and resource efficiency, public health, physical and cultural heritage and lands and soil conservation.

An initial screening to identify potential adverse environmental and social impacts and risks was undertaken at the feasibility stage of project design, which identified a few areas for further assessment during the full project design stage, this included areas related to labour and working conditions for construction workers, disposal of waste and pollutants, and land tenure and ownership dynamics. During the full proposal development process these areas were evaluated further and an inclusive multi-stakeholder consultations and engagement took place in order to:

- Integrate the ESP Principles in order to maximize social and environmental opportunities and benefits and strengthen social and environmental sustainability,
- Identify any further potential social and environmental risks and their significance; and
- Determine the level of social and environmental assessment and management required to address potential risks and impacts.

Based on the identified risks and determination of E&S level as medium risk (Category B) an ESMP along with an E&S Management Framework (ESMF) for the mini-grant facility were developed to ensure these risks are fully mitigated during project implementation.

#### 2. Project Summary

The objective of the project is ***to utilize an integrated approach to natural resource management and utilization to address a number of long-standing barriers that have hampered the implementation of adaptation solutions with regards to Nauru’s coastal fisheries and aquaculture sectors***. In doing so, the project aims to provide strong incentives to the Government of Nauru (GoN) stakeholders to actively engage in marine resource management and conservation by supporting the development of a clear roadmap for the CFA Act and providing technical assistance for its implementation, and to communities to divert pressure away from coastal fisheries to sustainable, extensive aquaculture production.

To do this, the project will utilize a combination of capacity strengthening, training, awareness-raising and financial support activities to create a paradigm shift for more climate-resilient marine resource management and planning, and domestic food supply. Learnings and data gathered as part of the project will continue to inform

policy and regulatory developments by constituting a robust baseline in terms of community-based fisheries and marine resource management, climate change adaptation solutions, coastal and reef restoration, and sustainable aquaculture production. The project will support three specific thematic areas that have been identified by local communities and by the Nauru government (GoN) as areas requiring urgent resources to combat climate risks and impacts.

The project is structured around three main components with associated outputs and outcomes, please see table below.

Outcome	Expected Concrete Outputs
<b>Outcome 1:</b> Strengthened institutional structures from national to community levels enable integrated climate resilience implementation in the coastal fisheries and aquaculture sectors	Output 1.1. Capacity enhancement of national institutions to mainstream climate change resilience across the coastal fisheries and aquaculture sectors.
	Output 1.2. Awareness raising campaigns conducted to enhance understanding of the CFA Act and NFMRA roadmap and promote grant facility
<b>Outcome 2:</b> Improved food security and nutrition through increased farmed fish supply, increased adaptive capacity and income of aquaculture operators and reduced pressure on climate-vulnerable coastal and reef ecosystems.	Output 2.1. Provision of infrastructure to national aquaculture institutions to enhance their ability to provide training, extension services and supplies to existing and new aquaculture operators, increasing the resilience of the sector
	Output 2.2. Increased adaptive capacity of artisanal fishers and resilience of marine ecosystems in the face of climate variability and change
	Output 2.3. Grant Facility – Provision of infrastructure and equipment to enable the sustained production of milkfish for increased domestic food supply and income
<b>Outcome 3:</b> Increased resilience of ecosystems and adaptive capacity of communities through availability of data and knowledge sharing mechanisms for adaptation planning and environmental protection	Output 3.1. Establishment of a knowledge management strategy (KMS) to sustain climate-resilient practices in environmental and natural resource management
	Output 3.2. Learning and dissemination of project results

### 3. Nauru Environmental Policy Context for Fisheries and Aquaculture

In Nauru, a number of policies and laws provide the framework for environmental and social management and compliance. A high-level overview of the environmental laws, policies and agreements that Nauru is party to is included in Section E of the full funding proposal. The following section provides a more detailed overview of specific national legislation in respect of the environment and marine life in Nauru is covered here. The Secretariat of the Pacific Regional Environmental Programme (SPREP) and the Environmental Defenders Office Ltd (EDO NSW) conducted an extensive review of natural resource and environment related legislation for Nauru.<sup>96</sup> From that review, discussions with stakeholders and additional desk research, the following section provides a summary of the policy and regulatory context for the fisheries sector in Nauru. The project has been designed to align closely to the policies and strategies of the country and to ensure compliance with relevant laws and regulations.

<sup>96</sup> SPREP Legislative Review for Nauru; Available at: <https://www.sprep.org/att/IRC/eCOPIES/Countries/Nauru/14.pdf>

## **Constitution and Administrative Structure**

The Constitution of Nauru (1968) is the basis of all laws in Nauru, though no reference is made in the Constitution to environment-related matters. There is also no reference in the constitution to specific rights pertaining to a healthy environment, principles of sustainability, or the rights of future generations. There are however relevant sections of the constitution that include:

- **Article 5:** Nauruans have protection of personal liberty, particularly when it comes to the spread of disease.
- **Article 8:** The taking of property that is reasonably necessary because it is in a dangerous state or is injurious to the health of human beings, plants or animals is allowed on behalf of the government.
- **Article 83:** The right to mine phosphate is vested in the Republic of Nauru, unless otherwise provided by the law. Nothing in the Constitution makes the Government of Nauru responsible for rehabilitation of land from which phosphate was mined before the 1<sup>st</sup> of July 1967.<sup>97</sup>

Nauru's Custom and Adopted Laws Act of 1971 contains a specific provision which makes clear that many laws of England which relate to issues of environmental management are not to be adopted as part of the laws of Nauru. Specifically, Section 3 states that the institutions, customs, and usages of the Nauruan people prior to the commencement of this Act must be accorded recognition by every court unless they are abolished, altered, or limited by any law. These matters specifically relate to:

- Title and land interests (other than interests granted in accordance with any written law)
- Right to dispose of real and personal property (during their lives or by will)
- Succession to deceased estate and persons who die without making a will
- Any matter affecting Nauruans only.

Whereby, the Regulations Validity Act of 2001 retroactively seeks to validate certain regulations, including those which have relevance to environmental management. Section 3 of the law validates the Fisheries Regulations of 1998, and the Animals Regulations of 2001.

## **Environmental Management and Climate Change Act (2020)**

Historically, Nauru's environmental legislation has focused on particular environmental topics separately such as fisheries or disaster risk management but did not create an overarching regime for environmental protection. However, in 2020, the government passed the Environmental Management and Climate Change Act, which includes provisions for reviewing and approving Environmental Impact Assessments (EIA). Clause 14 establishes an EIA committee and Clause 17 lays out the requirement for an EIA report which includes the following:

- detail any environmental impact that the project will or likely to cause;
- justification for the use or commitment of depletable or non-renewable resources if any to the project;
- reconciliation of short-term uses and long-term productivity of the affected resources;
- proposed action to monitor and mitigate environmental impacts; and
- proposed plan to monitor environmental impacts arising out of the project.<sup>98</sup>

The Environmental Management and Climate Change Act also lays out the coordination roles of the government and the public in relation to all environmental management and protection decision-making processes, codifies and defines principles of sustainable use of environmental resources, and takes measures to ensure that Nauru meets its international and regional obligations relating to the management or protection of the environment, including its commitments to the UNFCCC. The project also aligns directly with Part 8 of the act, which aims to address climate change, including:

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<sup>97</sup> [https://ciad.nottingham.ac.uk/documents/implementations/pdf/Constitution\\_of\\_Nauru.pdf](https://ciad.nottingham.ac.uk/documents/implementations/pdf/Constitution_of_Nauru.pdf)

<sup>98</sup> [http://ronlaw.gov.nr/nauru\\_lpms/files/em/d47173aa0d821a7f0e779eb2913dd2e6.pdf](http://ronlaw.gov.nr/nauru_lpms/files/em/d47173aa0d821a7f0e779eb2913dd2e6.pdf)

- facilitate and implement projects to protect water resources, coastal areas, land, biological diversity, fisheries and public infrastructure; put in place strategies and action plans to address a global warming, rising sea level and other effects of climate change;
- address the environmental impacts of climate change on water resources, coastal areas, lands and land usage, food security, biological diversity, fisheries, economic welfare, public infrastructure and its vulnerability to natural disasters; and
- participate in international and regional meetings and forums with a view to obtaining the fullest possible assistance to address the implications of climate change and undertake adaptation initiatives.<sup>99</sup>

## **Fisheries Sector**

Fisheries in Nauru provide a crucial natural resource and the legal provisions applying to the development and conservation of fisheries is a key element of the environmental protection regime in Nauru.<sup>100</sup> There are several key legislative acts that are particularly relevant for the proposed project and have been integrated fully through the project development process. These include the following

**Sea Boundaries Act of 1997:** The act demarcates Nauru's sea boundaries; the law is essential for the effective exercise of jurisdiction over the country's maritime zones with implications for its capacity to protect its environment and implement its international obligations.<sup>101</sup>

**Nauru Fisheries and Marine Resource Authority Act 1997:** The legislation established the Nauru Fisheries and Marine Resources Authority (NFMRA) (the main executing partner for the project). Through the act the NFMRA is tasked:

- a. To manage, develop, conserve and protect the fisheries and marine resources of Nauru in such a way as to conserve and replenish them as a sustainable asset for future generations;
- b. To promote the sustainable utilization of the fisheries and marine resources of Nauru to achieve economic growth, improved social standards, improved nutritional standards, human resource development, increased employment and a sound ecological balance;
- c. To pursue effective strategies for managing the fisheries and marine resources of Nauru so as to maintain the integrity of marine ecosystems, to preserve biodiversity, to avoid adverse impacts on the marine environment, and to minimise the risk of long-term or irreversible effects of resource extraction operations; and
- d. To enhance the administrative, legal, surveillance and enforcement capacities of the Republic for the management, development, conservation and protection of the fisheries and marine resources of Nauru.<sup>102</sup>

**Coastal Fisheries and Aquaculture Act 2020:** a coastal fisheries and aquaculture management legal framework was approved by the Nauru Parliament in 2020. The new act lays down rules for the protection and development of coastal fisheries waters of the country; the sustainability of coastal fisheries waters and aquaculture management and development; protection of livelihood and food security; management, development and utilization of fishery resources taking into consideration traditional knowledge, best available scientific information and in accordance with best management practices; community participation in coastal fisheries and aquaculture management; and the cooperation between the Government and the community to ensure compliance with conservation and management measures for coastal fisheries waters and aquaculture.<sup>103</sup>

## **4. Environmental and Social Impact Assessment (ESIA)**

Below is an assessment of the **overall project risks** against the AF's checklist of environmental and social principles. It is anticipated that the only activities which would be subject to environmental and/or social risks are

<sup>99</sup> IBID.

<sup>100</sup> <https://www.sprep.org/attachments/Publications/EMG/sprep-legislative-review-nauru.pdf>

<sup>101</sup> [https://www.ffa.int/system/files/Sea\\_Boundaries\\_Act\\_1997.pdf](https://www.ffa.int/system/files/Sea_Boundaries_Act_1997.pdf)

<sup>102</sup> [https://www.ffa.int/system/files/Nauru\\_Fisheries\\_Marine\\_Resources\\_Authority\\_Ac\\_1997.pdf](https://www.ffa.int/system/files/Nauru_Fisheries_Marine_Resources_Authority_Ac_1997.pdf)

<sup>103</sup> [http://ronlaw.gov.nr/nauru\\_lpms/files/acts/0396cd0f5de48ecbb5afb4a68ddb361.pdf](http://ronlaw.gov.nr/nauru_lpms/files/acts/0396cd0f5de48ecbb5afb4a68ddb361.pdf)

those falling under Outcome 2, which includes the construction and rehabilitation of fisheries and aquaculture facilities, as well as the mini-grant facility.

Table 1: Assessment of E&S Risks for Each Component and associated Outcome

Component and Outcome	Risk Categorization
<p>Outcome 1: Strengthened institutional structures from national to community levels enable integrated climate resilience implementation in the coastal fisheries and aquaculture sectors</p>	<p>Risk: Low Potential Impact: Low</p> <p>The main activities of Outcome 1 include the provision of surveys and inventories, policy recommendations, and trainings to ensure the development of GoN capacities. It also includes trainings for small-scale fishers on more sustainable practices, and the provision of an outreach campaign to promote the mini-grant facility. As a result, there are limited risks pertaining to the AF's E&amp;S principles.</p>
<p>Outcome 2: Improved food security and nutrition through increased farmed fish supply, increased adaptive capacity and income of aquaculture operators and reduced pressure on climate-vulnerable coastal and reef ecosystems. Component 2: Financing climate resilience for the coastal fisheries and aquaculture sectors</p>	<p>Risk: Low Potential Impact: Medium</p> <p>The activities under Outcome 2 are the only ones across the project that include any physical activities which utilize land and marine resources – these include the rehabilitation and construction of more sustainable and efficient NFMRA infrastructure, marine feed supply, a storage facility, and the mini-grant facility. This outcome present slight E&amp;S risks pertaining to potential degradation due to pollution, labour issues, and land tenure issues. The project will mitigate these risks through its ESMP as well as a separate ESMF for the mini-grant facility. An E&amp;S Officer will be hired to monitor and screen for any potential risks during implementation.</p>
<p>Outcome 3: Increased resilience of ecosystems and adaptive capacity of communities through availability of data and knowledge sharing mechanisms for adaptation planning and environmental protection Component 3: Monitoring, Evaluation and Learning</p>	<p>Risk: Low Potential Impact: Low</p> <p>The activities under Outcome 3 pertain to monitoring and evaluation, including the dissemination of project results. As a result, there are limited risks pertaining to the AF's E&amp;S principles.</p>

To elaborate on the assessment above, the assessment of potential E&S risks against AF's checklist of environmental and social principles is provided in table 2 below. Table 2 details the mitigation measures that may or may not be required. Each of these risks will be further expanded upon in the project's ESMP, with specific mitigation strategies and stringent roles and responsibilities for monitoring and reporting.

Table 2: AF E&S Principles and Risk Assessment of Project

AF ES Principles	Identified Risks	Level	Mitigation Measures
<p>ESP 1: Compliance with the Law</p>	<p>The project is consistent and complies with the relevant domestic laws and policies (see section 2 – Nauru Environmental Policy Context).</p>	<p>None</p>	<p>The identified project activities do not need mitigation measures since they generate no risks.</p>



AF ES Principles	Identified Risks	Level	Mitigation Measures
<i>ESP 2: Access and Equity</i>	The proposed project promotes fair and equitable access to the project , and is supported by a Gender Analysis and Gender Action Plan (GAP) to ensure that women and vulnerable groups have the opportunity to benefit as well.	Low	The project has been designed to ensure equity in access to and sharing of resources. Gender quotas have been established where relevant and necessary, and a comprehensive gender action plan developed to address needs and vulnerabilities that are specific to women, including the provision of targeted activities for women (see Annex 4).  The stakeholder consultations undertaken during the proposal development stage have been incorporated into project design, to ensure that both national and community-level needs are catered to. As such, the project aims to benefit all categories of stakeholders without discrimination.
<i>ESP 3: Marginalized and Vulnerable Groups</i>	No activities are identified that could generate negative impacts on marginalized and/or vulnerable groups.	Low	The stakeholder consultations undertaken during the proposal development stage have been incorporated into project design, to ensure that both national and community-level needs are catered to. As such, the project aims to benefit all categories of stakeholders without discrimination.
<i>ESP 4: Human Rights</i>	No activities are identified whose execution is not in line with established international human rights regulations. The project 's objective promotes basic human rights for equitable access to fisheries and aquaculture resources	None	For project interventions pertaining to construction and rehabilitation that will require additional labour, issues related to treatment of workers by project staff and contractors will be closely monitored during project execution to ensure no labour or human rights violations.
<i>ESP 5: Gender Equality and Women's Empowerment</i>	The activities of the project are oriented to ensure and promote fair and equal access to the project 's activities and outcomes for both men and women. SPC promotes equal participation in decision-making processes by ensuring representation of women in all project activities, and establishing quotas for women's participation.	Low	All project activities have been screened and analysed to ensure full participation of women. Furthermore, an in-depth gender analysis has been undertaken, and a comprehensive gender action plan developed to promote women's participation during project implementation.
<i>ESP 6: Core Labour Rights</i>	The project respects the labour standards as identified by the ILO.	Low	There are limited activities which may result in labour violations. However, there are a few activities which present potential occupational health and safety hazards for workers, primarily the construction and rehabilitation of some of the fisheries and aquaculture facilities. Each of these activities will be closely monitored by project staff to ensure no violation of

AF ES Principles	Identified Risks	Level	Mitigation Measures
			<p>existing labour laws and conventions, including those pertaining to payments, harsh working conditions, exploitation, discrimination, and any other relevant provisions. Any contracts entered into will ensure rights of workers are in line with ILO standards as per SPC's policy.</p> <p>There is some risk of staff turnover; this combined with limited national human resource base could compromise project management and delay implementation. To mitigate this, competitive salaries and incentive packages will be offered, in addition to means of transportation to/from the office, as well as targeted training.</p>
<i>ESP 7: Indigenous Peoples</i>	The project promotes the rights and responsibilities set forth in the United Nations Declaration on the Rights on Indigenous Peoples. However, it should be noted that there are no sharp distinctions between indigenous and non-indigenous peoples in Nauru.	Low	The project will coordinate closely with local communities and national governing bodies to ensure that the traditional rights and practices of the Nauruan people are respected throughout implementation – both those enshrined in legislation and those practiced and respected in custom.
<i>ESP 8: Involuntary Resettlement</i>	No project activities will lead to involuntary resettlement.	None	There will be no resettlement as part of the project activities
<i>ESP 9: Protection of Natural Habitats</i>	The protection of marine resources is a core objective of the project, as is facilitating community and national involvement in more sustainable fisheries and aquaculture practices.	Low	The planned small-scale construction through the mini-grant facility should not have any impacts on biodiversity or natural habitat as most of the sites will be in existing residential areas. Criteria in the application to receive grant funding will include questions to assess the expected E&S risk/impact.
<i>ESP 10: Conservation of Biological Diversity</i>	The protection of marine resources is a core objective of the project, as is facilitating community and national involvement in more sustainable fisheries and aquaculture practices.	Low	The project intervention will not contain any UNESCO biosphere reserves or RAMSAR sites applicable to this ESP. The project will also not be introducing invasive species, the only species will be indigenous to the project area and the project area also does not contain any species red listed by the International Union for Conservation of Nature (IUCN).
<i>ESP 11: Climate Change</i>	The project aims to increase the adaptive capacities of both the government and the people of Nauru in respect to the fisheries and aquaculture sectors.	None	The introduction of training, construction/rehabilitation, and additional oversight and regulatory committees will help to create a more engaged, responsive and adaptable ecosystem to continue efforts in combating climate change and an enabling environment for future adaptation interventions.

AF ES Principles	Identified Risks	Level	Mitigation Measures
<i>ESP 12: Pollution Prevention and Resource Efficiency</i>	The project will minimize material resource use and contribute to environmentally friendly waste disposal practices.	Low	<p>Since the common waste disposal method in Nauru involves an open dump in the south-west part of the island, any additional waste generation must include plans for disposal. To combat this as part of the ESMP, the project will require the implementation of a waste management plan that will be fully developed at project inception (see further detail below under ESP 12) that will be closely monitored to ensure that any unexpected pollution effects are immediately addressed.</p> <p>Under activity 2.1.1. rehabilitation and upgrade of existing NFMRA infrastructure – there is some risk of wastewater containing nutrient overload as the system to be upgraded is an open system. The level of nutrient waste from the process will be determined during project implementation and if needed a treatment tank will be added to the system that to mitigate the risk of any discharge back to the sea.</p>
<i>ESP 13: Public Health</i>	Low risk associated small-scale ponds.	Low	Risks related to water-borne diseases that may occur in small-scale ponds will be mitigated through the provision of biosecurity training and adequate water quality management.
<i>ESP 14: Physical and Cultural Heritage</i>	The project aims to renew interest and facilitate uptake of a cultural heritage that is the production of milkfish. No construction or rehabilitation activities will take place on or around an area of cultural significance.	Low	The project will promote the use of indigenous practices and tools where applicable and will ensure that new regulations and committees have representation of indigenous and local communities to ensure that all activities and outcomes are locally led and focused. Consultations with local communities will ensure that culturally important coastal areas are protected and restored in line with traditional knowledge and beliefs.
<i>ESP 15: Lands and Soil Conservation</i>	The project does not address land and soil conservation. It does however require access to privately-owned land for the construction of small-scale aquaculture infrastructure.	Low	While there are no activities which explicitly target or require the use of soil, there is a small risk of the construction and rehabilitation activities having an impact on the soil and land surrounding the facilities. The project will closely monitor to ensure that there are no negative impacts on the land and soil surrounding the activity sites. The project will also actively seek to obtain community endorsement at the onset of the project implementation and beneficiaries have already provided feedback through consultations during the proposal development. Furthermore, awareness campaigns on coastal protection will improve the understanding

AF ES Principles	Identified Risks	Level	Mitigation Measures
			of the proposed interventions, making sure they are supported and endorsed by the community.

A more detailed analysis of the possible environmental and social impacts and risks of the project in relation to the social and environmental principles of the AF that apply to this project is presented below. The section presents the probability of risks occurring, anticipated magnitude of impacts and possible mitigation measures.

**Principle 1: Compliance with the law:** The project activities shall be implemented in compliance with the National laws and regulations as explained in section 3. All relevant laws and regulations and their relevance to the project has been explained and no further assessment of potential impacts and risks is required for compliance with the law. For activities in component 2 involving construction or rehabilitation, the risk screening process has been done considering the adherence of these activities in accordance with the national laws and technical standards. For sub-projects, funded through the mini-grant facility, a screening process has been developed as part of the ESMS and will include adherence to this principle.

**Principle 2: Access and equity:** There is a potential risk if selection criteria of the beneficiaries are not fairly done. This could be a barrier to accessing benefits and marginalize stakeholders not selected. In order to address this a detailed stakeholder mapping, consultations and assessments have been undertaken during the proposal development stage. Special focus has been given to vulnerable groups including women. Issues and proposed actions specific to each group have been captured and incorporated in the design of the project and included in both the Gender Action Plan and the ESMS.

**Principle 3: Marginalized and vulnerable groups:** Detailed stakeholder mapping and consultations have ensured that all the marginalized and vulnerable groups in the project area have been identified and incorporated in the project design. Some project activities such as capacity building is mainly designed to benefit these groups, particularly women. To ensure equity amongst the groups, there will be deliberate effort to integrate vulnerable and marginalized groups such as women, youth, as well as poorer communities to directly benefit from project activities. Furthermore, the selection of project activities was done after wide consultations with all stakeholders and potential beneficiaries. The project’s M&E system will include disaggregated data to enable tracking of the participation by these groups during project implementation.

**Principle 4: Human rights:** The project is designed to respect and adhere to the requirements of all relevant conventions on human rights in compliance with the ESMS. No violation of human rights is envisaged during implementation of this project and the project shall promote the rights of all stakeholders involved in the project. No activities are identified whose execution is not in line with the established international human rights. Project objectives promote basic human rights for fair and equitable access to resources to enhance their resilience to climate change in the beneficiary communities.

**Principle 5: Gender equality and women’s empowerment:** Though Nauru is a historically matrilineal society, today women have little access to economic resources and opportunities. Women are less likely to participate in fisheries and aquaculture activities, and often require the accompaniment of men when engaging in the fisheries sector. This project aims to combat some of the most critical gaps identified which hinder women’s equality and socio-economic participation by directly engaging women, setting quotas for women’s participation, and offering tailored services – including technical trainings – for women. Women will be specifically targeted in the awareness campaign to participate in the mini-grant facility and will also receive targeted support and training if selected. The M&E Framework as well as the Grievance Redress Mechanism shall incorporate gender equity and women empowerment issues such that they are closely followed during project implementation. To emphasize the issues of gender in this project a more detailed assessment focusing on integration of gender issues in project design and implementation has been done separately, and a gender action plan has been development (see Annex 4).

**Principle 6: Core labour rights:** There is a potential risk, especially for Activities under component 2 involving construction or rehabilitation which shall involve the use of local labour. The project's management will ensure that the project activities fully comply with relevant National labour laws and regulations as elaborated in section 3, and those detailed in the full proposal, as well as the ILO labour standards. Contracts under this project shall have clear clauses on compliance with the National labour laws and regulations as well as requirements relating to the safety of workers in accordance with ILO Convention in so far as they are applicable to the project. The project itself will offer competitive salaries, transportation to and from work, and training opportunities to project management staff. All stakeholders including workers and populations should be sensitized about the risks related to the activities to be undertaken activities. In addition, adequate safety measures for timely payments for services offered, non-discrimination on basis of sex, and a defined grievance redress mechanism will be put into place.

**Principle 7: Indigenous people:** No sharp distinction between indigenous and non-indigenous people can be made in Nauru. As of 2019, there were 13,000 residents, over 90% of whom are indigenous Nauruan. There is a risk that traditional natural resource use and land use rights are undermined, and a risk that the community will be averse to the utilization of land for the fisheries and aquaculture infrastructure to be developed under Component 2. Therefore, community buy-in will be sought from the outset and the community will be actively engaged with throughout the project's implementation period. Requirements for community engagement will be included in

**Principle 8: Involuntary resettlement:** There are no activities that will lead to involuntary resettlement under this project.

**Principle 9: Protection of Natural Habitats and Principle 10: Conservation of biological diversity:** The project activities will be taking place in the land and marine spaces along the coast of Nauru. It is intended for the project's activities to have positive impact on the integrity of coastal and marine resources, as they aim to promote their conservation. Key among these is sensitizing stakeholders and the broader community in sustainable utilization of natural resources, fishing and aquaculture practices. As such, there is need to engage the project beneficiaries during implementation, which will be done through the formation of several committees to monitor and oversee aquaculture and fisheries activities, including feeding and preservation/farming, beyond the project's completion.

The planned small-scale construction through the mini-grant facility should not have any impacts on biodiversity or natural habitat as most of the sites will be in existing residential areas. Criteria in the application to receive grant funding will include questions to assess the expected E&S risk/impact.

Construction of infrastructure will not occur in potential or effective terrestrial or marine protected areas. This will be ensured through the inclusion of relevant criteria and questions in the application forms for the mini-grant facility (see ESMF). The project will also not introduce any non-native species to the project sites. For coastal restoration activities if the developed community fisheries management plans choose revegetation activities only native species will be utilized.

The mini-grant facility will include a screening process to ensure proposed interventions do not contain critical natural habitats including those that are (a) legally protected; (b) officially proposed for protection; (c) recognised by authoritative sources for their high conservation value, including as critical habitat; or (d) recognised as protected by traditional or indigenous local communities.

**Principle 11: Climate change:** A detailed climate change vulnerability study has been conducted as part of the prefeasibility study during the design and preparation of the project's full proposal. All three project components are in line with Nauru's National Climate Change Policy and Strategic Plan, NDC and priorities defined in the NAPA, and will also actively seek to enhance the Government's capacity to implement the Coastal Fisheries and Aquaculture Act of 2020. Apart from potential changes in land use due to the field clearing to construct aquaculture and fisheries infrastructure (for processing and feeding, primarily) that may result in a slight decrease in sequestration capacity of the environment none of the activities is envisaged to result in any significant or unjustified increase in greenhouse gas emissions or other drivers of climate change. Any decreases in vegetation will be offset through restoration activities, and closely monitored as per the M&E Framework and ESMS. In addition, the project's emphasis on raising awareness and community engagement is anticipated to have a

significant impact on behavioural change, which will likely cause a shift and buy-in for more sustainable practices.

**Principle 12: Pollution prevention and resource efficiency:** Activities under Component 2 will involve construction or rehabilitation activities and as such there is risk of waste not being disposed of properly. Since the common waste disposal method in Nauru involves an open dump in the south-west part of the island<sup>104</sup>, any additional waste generation must include plans for disposal. To combat this as part of the ESMP, the project will require the implementation of a waste management plan to dispose of waste and waste by-products resulting from the small-scale infrastructure construction activities (i.e. concrete, plastic packaging etc.). Waste generated as part of the construction activities may need to be evacuated from the island after completion that will be closely monitored to ensure that any unexpected pollution effects are immediately addressed. During implementation the project will monitor the implementation of the waste management plan to ensure that any unexpected pollution effects are immediately addressed. The waste management plan will be developed during project inception and will provide information on the procedure envisaged for the proper management of waste produced by type of waste produced, will outline responsibilities for removal, and detail the means for disposal of waste. An indicative outline of such a plan is provided below:

1. Identification of the different types of waste from activities:
  - a. **Organic waste:** leftover food, plant debris, animal droppings, ...
  - b. **Non-hazardous waste:** plastic tools and bags, cardboard packaging, wooden boxes, etc.
  - c. **Hazardous waste:** used oils, used batteries, etc.
2. Responsibilities for waste disposal
  - a. Monitoring of progress
  - b. Incorporation of provisions in ToRs for contractors/service providers
  - c. Training for communities
3. Rules for small-scale construction
  - a. No burning of waste on the construction site.
  - b. No waste can be left abandoned or locked up in uncontrolled areas
4. Procedure for the proper management of waste
  - a. Awareness of workers during site meetings,
  - b. Installation of sorting resources on the site,
  - c. Establishment of a practical and accessible collection organization.
5. Recovery and Disposal
  - a. Composting of organic waste
  - b. Transport of waste from the site to a designated transit site
  - c. Final disposal

In terms of nutrient pollution from the project's promotion of small-scale, artisanal fisheries this is mitigated because of the small-scale nature of the fisheries as well as the focus on recirculating aquaculture systems. This combined with training in sustainable fishing methods will help mitigate any risk.

The project has been specifically designed to avoid aquaculture at Buada Lagoon, which has been the epicenter of aquaculture production in Nauru for decades, and the focus of much of the development assistance funds targeting aquaculture, the proposed project aims to incentivise communities to establish aquaculture production ponds elsewhere on the island. This choice is informed by the geographical nature of Buada Lagoon, which has a limited surface area, and land ownership constraints which do not allow for further expansion of aquaculture activities at this site. Further, the costs associated with the elimination of tilapia in the lagoon and with its rehabilitation far exceed the potential adaptation benefits that would be generated due to the limited number of potential direct beneficiaries. The focus away from the lagoon removes the risk of maladaptation or inadequate use of project resources with regard to the tilapia infestation issue at Buada Lagoon.

Promoting aquaculture as a way to adapt to climate change will reduce non-climatic pressure on climate-vulnerable, overexploited coastal and marine ecosystems, by meeting the high demand for affordable aquaculture products (particularly milkfish) on the domestic market while providing diversified, stable income opportunities for vulnerable communities. Promoting small-scale, artisanal fisheries in combination with training in sustainable fishing methods (Activity 2.2.1) will tackle the issue of non-selective fishing to enable the

<sup>104</sup> <https://www.sprep.org/sites/default/files/documents/publications/PacWastePlos-country-profile-Nauru.pdf>

regeneration of vulnerable ecosystems and avoid the risk of nutrient overload associated with larger scale aquaculture.

In terms of any nutrient pollution under activity 2.1.1. rehabilitation and upgrade of existing NFMRA infrastructure – there is some risk of wastewater containing nutrient overload as the system to be upgraded is an open system. As such, in the ESMP there are provisions for monitoring the level of nutrient waste from the process during project implementation and if needed a treatment tank will be added to the system to mitigate the risk of nutrient discharge back to the sea.

**Principle 13: Public Health:** Construction and rehabilitation activities under Component 2 may cause air and water pollution and stagnant water in storage facilities may pose health risks such as water-borne diseases and vectors. Risks related to water-borne diseases that may occur in small-scale ponds will be mitigated through the provision of biosecurity training and adequate water quality management through the technical assistance training provided under Activity 1.2.3. These shall be closely monitored in line with the provisions of the ESMP to ensure compliance with national laws and technical standards as well as the AF ES principles.

**Principle 14: Physical and cultural heritage:** As mentioned in principles 9 and, 10 above most of the project activities promote and enhance biodiversity conservation including sensitizing stakeholders in sustainable utilization of natural resources (i.e. appreciation and importance of the natural ecosystems), and by actively engaging with local community and placing representatives from the local community in positions of authority, management and oversight. The project will not have any activity that damages or affects physical and cultural heritages. Instead, the project will promote their protection/conservation. The project aims to renew interest and facilitate uptake of a cultural heritage that is the production of milkfish. No construction or rehabilitation activities will take place on or around an area of cultural significance. A set of exclusionary criteria have been developed to ensure interventions through the mini-grant facility do not take place around areas of cultural significance.

**Principle 15: Land and soil conservation:** While there are no activities which explicitly target or require the use of land and soil, there is a small risk of the construction and rehabilitation activities could have an impact on the land surrounding the facilities in terms of the number of soil disruption and pollution. The project has accounted for this in its prefeasibility study and will closely monitor to ensure that there are no negative impacts on the land and soil surrounding the activity sites. Furthermore, awareness campaigns on coastal protection will improve the understanding of the proposed interventions, making sure they are supported and endorsed by the community.

### **Overall Risk Categorization**

Based on the above assessment the majority of the project activities are low-risk with the potential for medium risk through activities in Component 2. The bulk of any construction or infrastructure installation will occur within the context of the mini-grant facility (maximum value of each individual grant will be US\$ 25,000 and US\$50,000 for community-based grants), any risk associated with the grants will cause limited adverse E&S impacts and can be readily addressed through mitigation measures.

As such, **the overall risk level for the project is rated as medium risk (Category B)**. To mitigate the risk an ESMP has been developed (see section 6 below) as well as an ESMF for the mini-grant facility (Activity 2.2.1).

## **5. Environmental and Social Management Plan (ESMP)**

Based on the ESIA the main E&S risk for the project is concentrated within component 2. The risks identified are included in table 3 below which lays out the overall ESMP for the project. Given the mini-grant facility, will select specific projects during implementation an E&S management framework (ESMF) has been designed to include an E&S safeguard screening process of the sub-projects to avoid, minimize and mitigate any harm to people and ecosystems and to incorporate environmental and social concerns as an intrinsic part of project cycle management.

Table 3. Resilient Coastal Fisheries and Aquaculture Project ESMP

ESP AF Principles	Risks identified Against ESPs	Mitigation measures	Risk categorization	Monitoring responsibility and frequency	Budget
<i>ESP 1: Compliance with the Law</i>	None	None	None	NA	NA
<i>ESP 2: Access and Equity</i>	Slight risk of inequitable access	<p>The project design supports equal access to training, equipment, infrastructure and services, taking especially into account marginalized and vulnerable groups, including women, youth and poorer communities. The planning and designing of the mini-grant facility will ensure grants follow a consultative, inclusive process</p> <p>The project will take a number of transparent steps that will help ensure that the benefits of the project are being distributed fairly with no discrimination nor favoritism. This will include, advertising broadly and conduct extensive outreach and consultative activities aimed at targeting the most vulnerable in outputs 1.2. and 2.3. SPC will publicly advertise and tender all contracts including the staff / technical experts of the PMUs as well as any contractors that will be involved in the</p>	Low	PMU, SPC through procurement process and M&E reports	M&E budget



ESP AF Principles	Risks identified Against ESPs	Mitigation measures	Risk categorization	Monitoring responsibility and frequency	Budget
		designing, upgrading or constructing of infrastructure.			
<i>ESP 3: Marginalized and Vulnerable Groups</i>	The project will specifically target the marginalized and vulnerable groups	By offering small grants through a community-led and demand-based mini-grant facility, the project aims to incentivise aquaculture production among the most vulnerable communities by lifting barriers of accessing finance to enable investment in small-scale aquaculture facilities (Output 2.3).	Low	PMU, SPC annually through M&E reports	M&E budget
<i>ESP 4: Human Rights</i>	None	None	None	NA	NA
<i>ESP 5: Gender Equality and Women's Empowerment</i>	The activities of the project are oriented to ensure and promote fair and equal access to the project's activities and outcomes for both men and women	The project has developed a separate gender action plan (see Annex 4) that includes specific gender targets and quotas to ensure women are included in the sub-grant facility as well as engaged in other activities of the project targets and budget allocations, service providers to ensure outreach to women and integrate gender aspects in all reports. The project will encourage the inclusion of women and specific targets have been identified for them. The project has taken proactive measures to integrate gender focused development strategies that will ensure it will not pose a risk to the	Low	PMU, SPC, GESS Officer, annually through M&E reports	M&E budget GESS Officer position (US\$ 135,000)

ESP AF Principles	Risks identified Against ESPs	Mitigation measures	Risk categorization	Monitoring responsibility and frequency	Budget
		principle of gender equality and women's empowerment.			
<i>ESP 6: Core Labour Rights</i>	Limited activities which may result in labour violations. A few activities which present potential occupational health and safety hazards for workers, primarily the construction and rehabilitation of some of the fisheries and aquaculture facilities.	Relevant national labour laws guided by the ILO labour standards will be followed throughout project implementation. Each of these activities will be closely monitored by project staff to ensure no violation of existing labour laws and conventions, including those pertaining to payments, harsh working conditions, exploitation, discrimination, and any other relevant provisions. Any contracts entered into will ensure rights of workers are in line with ILO standards as per SPC's policy.	Low	PMU, SPC, ongoing	Labour rights and adherence to international laws embedded in SPC's contracts Part of contracting process
<i>ESP 7: Indigenous Peoples</i>	None	None	None	NA	NA
<i>ESP 8: Involuntary Resettlement</i>	None	None	None	NA	NA
<i>ESP 9: Protection of Natural Habitats</i>	The protection of marine resources is a core objective of the project, as is facilitating community and national involvement in more sustainable fisheries and aquaculture practices.	The mini-grant facility will include a screening process to ensure proposed interventions do not contain critical natural habitats including those that are (a) legally protected; (b) officially proposed for protection; (c) recognised by authoritative sources for their high conservation value, including as critical habitat; or (d) recognised as protected	Low	PMU, GESS Officer (to conduct screening/ clearance of E&S risks) through ESMF	GESS Officer position (US\$ 135,000)

ESP AF Principles	Risks identified Against ESPs	Mitigation measures	Risk categorization	Monitoring responsibility and frequency	Budget
		by traditional or indigenous local communities.			
<i>ESP 10: Conservation of Biological Diversity</i>	Construction of infrastructure will not occur in potential or effective terrestrial or marine protected areas. The project will also not be introducing invasive species; the only species will be indigenous to the project area.	The mini-grant facility will include a screening process to ensure proposed interventions are not in any terrestrial or marine protected areas. For coastal restoration activities, if communities choose revegetation activities, only native species will be utilized.	Low	PMU, GESS Officer (to conduct screening/clearance of E&S risks) through ESMF on a project by project basis.	GESS Officer position (US\$ 135,000)
<i>ESP 11: Climate Change</i>	None	None	None	NA	NA
<i>ESP 12: Pollution Prevention and Resource Efficiency</i>	Activities under Component 2 will involve construction or rehabilitation activities and as such there is risk of waste not being disposed of properly.	Development of a waste management plan as per outline (see section 5 above) for the disposal of waste and waste by-products resulting from the small-scale infrastructure construction activities.  As part of activity 2.1.1. rehabilitation and upgrade of existing NFMRA infrastructure – once the upgrade is complete the level of nutrient waste from the process will be measured and if needed a treatment tank will be added to the system to mitigate the risk of nutrient discharge back to the sea.	Low	GESS Officer to develop waste management plan in year 1 of project implementation; GESS Officer to measure nutrient load and determine need for treatment tank; PMU, SPC, GESS officer to monitor waste management plan throughout implementation	GESS Officer position (US\$ 135,000)
<i>ESP 13: Public Health</i>	Risks related to water-borne diseases	Provision of biosecurity training and adequate	Low	PMU, SPC, service provider delivering	To be included in ToR for technical

ESP AF Principles	Risks identified Against ESPs	Mitigation measures	Risk categorization	Monitoring responsibility and frequency	Budget
	that may occur in small-scale ponds	water quality management as part of Activity 1.1.3		Activity 1.2.3 on project by project basis	assistance as part of Activity 1.2.3
<i>ESP 14: Physical and Cultural Heritage</i>	The project will not have any activity that damages or affects physical and cultural heritages. project aims to renew interest and facilitate uptake of a cultural heritage that is the production of milkfish.	No construction or rehabilitation activities will take place on or around an area of cultural significance. A set of exclusionary criteria as part of the ESMF has been developed to ensure interventions through the mini-grant facility do not take place around areas of cultural significance.	Low	PMU, GESS Officer (to conduct screening/ clearance of E&S risks) through ESMF	GESS Officer position (US\$ 135,000)
<i>ESP 15: Lands and Soil Conservation</i>	There are no activities which explicitly target or require the use of soil. There is a small risk that construction and rehabilitation activities could have an impact on the land and soil surrounding the facilities.	The project will closely monitor to ensure that there are no negative impacts on the land and soil surrounding the activity sites. The mini-grant facility will also require a community endorsement letter through the application process.	Low	PMU, GESS Officer (to conduct screening/ clearance of E&S risks) through ESMF	GESS Officer position (US\$ 135,000)

## Mini-grant Grant Facility ESMF (Output 2.3)

As part of the project a mini-grants facility (Activity 2.3.1) that is will be included to address the barrier of the unavailability of finance products, especially microfinance, to new and existing aquaculture operators in Nauru. This financing mechanism will award grants of up to US\$ 25,000 for individual grants and US\$ 50,000 for community grants and will be open to existing and new aquaculture operators as well as community fisheries management committees.

The various entities involved in the governance of the project are all ultimately responsible for environmental and social risk management and the effective execution of the ESMP and ESMF, but each have unique and complementary roles and responsibilities related specifically to the Grant Facility as summarized below:

- **The PMU** The PMU will issue calls for Expressions of Interest and support prospective applicants in the development of their project idea and applications. Additionally, the PMU will pre-screen sub-grant applications to determine project eligibility prior to sending to the Evaluation and Approval Panel (EAP). The GESS officer will ensure that ESS screening is carried out and the ESMF protocols followed as applicable. The ESMF protocols are detailed below
- **Grant Facility Evaluation and Approval Panel (EAP):** The EAP will comprise a representative from the PMU, a SPC's FAME division, SPC's Procurement Department, an environmental, social and gender expert, and a national expert from NFMRA. The EAP will carry out the full screening, technical and financial review of sub-grant applications to provide recommendations to the Grant Facility Board.
- **Designated Authority Approval of Grant Recipients:** on finalisation of the recommendations from the EAP grant proposals will be sent to the DA who will review the project s and recommendations in detail. The DA will then formalize a decision for the grant approvals. This will trigger formalization of the award and necessary contracting.

SPC's Climate Finance Unit, in partnership with the Department for Environmental Management and Agriculture (DEMA, as the AF's Designated Authority) will establish the Evaluation and Approval Panel (EAP) during the first six months of implementation. SPC and the DA will identify representatives for the EAP from relevant organisations and the PMU will act as secretariat to EAP, organizing meetings around EOI calls as appropriate. As the Implementing Entity, SPC will provide supervision through quality assurance, oversight and reporting functions of grants through implementation. This will include carrying out regular supervision missions to ensure that all ESS requirements, reporting obligations and fiduciary aspects are met with compliance through implementation of the project.

- **Gender and Environment and Social Safeguard (GESS) Officer:** The project will hire a GESS officer to support the implementation of the ESMP and ESMF. The GESS Officer will be in charge of carryout the E&S screening and clearance of grants through the mini-grant facility. The GESS Officer will also be tasked with developing a waste management plan for the project and monitoring and reporting on the ESMP through the annual reporting process as part of the M&E system.

## ESMF - Screening, review and clearance protocol

The mini-grant facility will include a separate ESMF to screen mini-grant proposals for any potential E&S risks. The ESMF will be structured to include the following steps:

1. Through the EOI grant applications will be requested to include: (i) To complete AFs initial ESP checklist to be filled out by the potential grant recipient; (ii) To fill out an E&S Assessment form with specific questions aligned to the project 's overall ESMP; and (ii) To provide a community endorsement letter of the application.
2. A screening of the E&S risks for each grant application will be undertaking by the project 's GESS Officer and cross-checked against the exclusionary criteria (see below) The GESS Officer will assign a risk category to each application - low, medium or high (C, B or A).
  - a. Applications falling under low risk (Cat C) will be monitored throughout implementation
  - b. Applications with a medium risk (Cat B) will need to develop an ESMP in coordination with the GESS officer and submit before clearance is given

- c. Applications with a high risk (Cat A) will be returned to the applicant for modification or will be rejected,
- 3. A final clearance on the E&S risk and ESMPs (for Cat B grant applicants) will be provided by the GESS Officer and submitted to the EAP prior to grant approval.
- 4. Signed grant agreements will include E&S provisions including the requirement to report annually on E&S risks and provide an updated ESMP annually.
- 5. **Monitoring:** The PMU and M&E Officer with support from the GESS Officer will monitor the grant E&S risks throughout implementation. For Category B mini-grants, an updated ESMP will be required to be submitted annually and certified by the GESS Officer to ensure identified risks have been mitigated and that the grant-level ESMP is being followed appropriately.
- 6. **Evaluation:** The mid-term review as well as the terminal evaluation will provide an evaluation of the overall ESS function as well as provide an evaluation of the effectiveness of the project 's ESMF for the mini-grant facility.

below presents an overview of the E&S screening and review process for the mini-grant facility. The indicative screening templates are provided below.

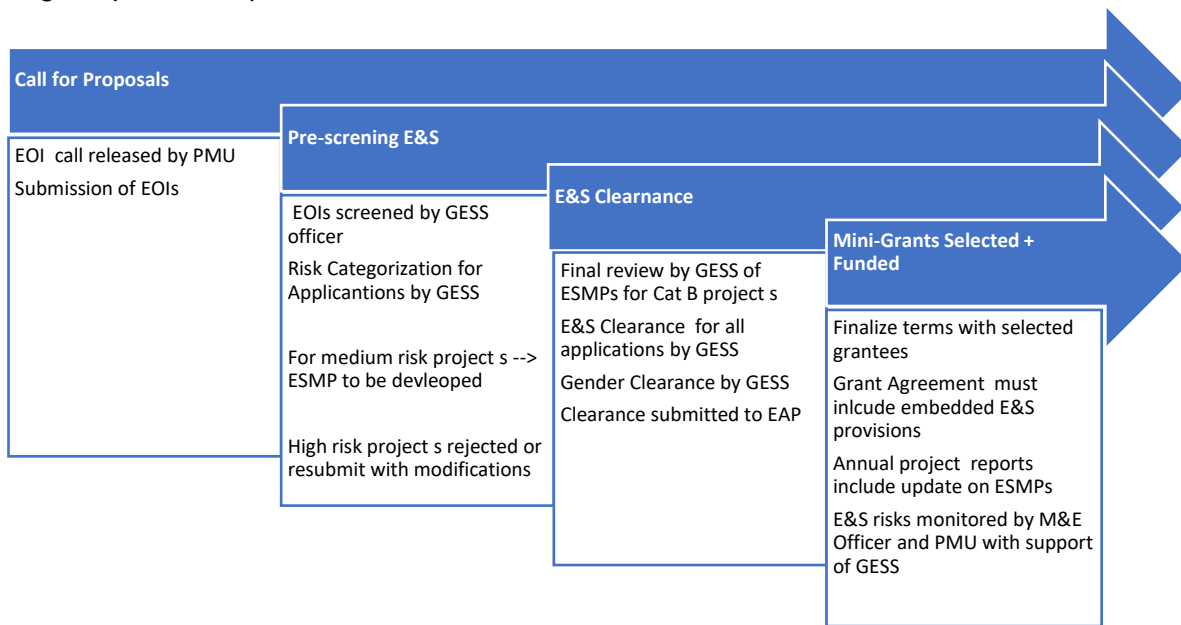


Figure 3. E&S Screening Process for Mini-Grant Facility

Overall, the Environmental and Social impact of the mini-grant facility is likely to be positive through the active engagement of communities in marine resource management and conservation. The mini-grants will also support the diversion of pressure away from coastal fisheries toward sustainable aquaculture production. The overall, environmental impact will be to create a shift for more climate-resilient marine resource management and planning and allow for the development of a greater sustainable domestic food supply.

### Templates for Mini-Grant Facility

Grant proponents will be requested to complete the AF's E&S checklist along with the submission of their proposal to the mini-grant facility (see table 4 below) in addition to a checklist grant proponents will submit a more detailed E&S assessment responding to potential risks identified in the project's overall ESMP (table 5 below). The E&S assessment will be validated and refined as necessary prior to the launch of the Mini-Grant Facility. The GESS officer will provide any edits and inputs and submit to the Grant Facility EAP for final approval.

Table 4. AF ESP Checklist for Mini-Grant Proponents

Checklist of AF's ESPs	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
ESP1: Compliance with the Law		
ESP2: Access and Equity		
ESP3: Marginalized and Vulnerable Groups		
ESP4: Human Rights		
ESP5: Gender Equality and Women's Empowerment		
ESP6: Core Labour Rights		
ESP7: Indigenous Peoples		
ESP8: Involuntary Resettlement		
ESP9: Protection of Natural Habitats		
ESP10: Conservation of Biological Diversity		
ESP11: Climate Change		
ESP 12: Pollution Prevention and Resource Efficiency		
ESP13: Public Health		
ESP14: Physical and Cultural Heritage		
ESP15: Lands and Soil Conservation		

Table 5. E&S Assessment

E&S Assessment		Risk Description		Risk assessment to be completed only if the answer is "Yes" under the risk description column	Score
		Yes, No, n/a, TBD	If no answer, please shortly justify If Yes answer, describe potential issues, specify activities causing the risk identified. Characterize the identified risk or impacts (likelihood, intensity, duration, reversibility) Indicate the risk localization (local/national/global)	Where applicable, identify the remedial actions that would mitigate the identified risk	Characterize the risk level: Low (L), Medium (M) high (H)
1 Human Rights	Is the project likely to negatively impact on the human rights of the affected populations? (e.g. their rights to water, work, health, to a healthy environment, etc.)?				
	Is the project likely to create less favourable treatment of, or discrimination against, any person or group such as persons with disabilities?				
2 Gender	Is there a likelihood that the project would have adverse impacts on gender equality, and/or the situation of women and girls?				
	Have community groups/leaders raised gender equality concerns regarding the project during the stakeholder engagement process?				
4 Climate change	Could the project adversely contribute to climate change by generating greenhouse gas emissions including through deforestation or forest degradation?				
	Could the project negatively affect the resilience to climate change?				



E&S Assessment		Risk Description		Risk assessment to be completed only if the answer is "Yes" under the risk description column	Score
		Yes, No, n/a, TBD	If no answer, please shortly justify If Yes answer, describe potential issues, specify activities causing the risk identified. Characterize the identified risk or impacts (likelihood, intensity, duration, reversibility) Indicate the risk localization (local/national/global)	Where applicable, identify the remedial actions that would mitigate the identified risk	Characterize the risk level: Low (L), Medium (M) high (H)
5 Labour and Working Conditions	Will the project present unsafe, indecent or unhealthy working conditions for stakeholders involved?				
	Is there potential for the project to apply adverse discriminatory practices based on religious, racial, gender, disability or political considerations?				
6 Resource Efficiency and Pollution Prevention	Will the project generate hazardous waste? Is the project likely to lead to environmental damages due to an uncontrolled management of waste?				
	Is the project likely to lead to pollutants release? Are chemicals (including pesticides) likely to be used during the project?				
7 Community health safety	Any risk that populations perceive they did not receive enough opportunities to raise their concerns regarding the project?				
	Is there a risk that the project would create or exacerbate conflicts with or within affected populations?				

E&S Assessment		Risk Description		Risk assessment to be completed only if the answer is "Yes" under the risk description column	Score
		Yes, No, n/a, TBD	If no answer, please shortly justify If Yes answer, describe potential issues, specify activities causing the risk identified. Characterize the identified risk or impacts (likelihood, intensity, duration, reversibility) Indicate the risk localization (local/national/global)	Where applicable, identify the remedial actions that would mitigate the identified risk	Characterize the risk level: Low (L), Medium (M) high (H)
	Is the project likely to increase community exposure to disease (water borne, water based, water related, and vector borne diseases as well as communicable diseases)?				
8 Land Acquisition and Involuntary Resettlement	Is the project likely to negatively affect Peoples or communities rights: rights of affected populations, including procedural rights such as the right to be consulted or to have access to information, or substantive rights (real or personal) such as the right of access to natural resources or benefit-sharing related to these natural resources (carbon rights, benefits from access to genetic resources , etc.).				
	Could the project involve the physical relocation of people? (encompassing displacement as well as planned relocation)				
	Could the project require the relocation of Peoples from their homes or lands subject to traditional ownership or customary use?				
9. Biodiversity Conservation and Sustainable Management of Living Natural	Could the project lead to adverse impacts on biodiversity or natural habitat?				

E&S Assessment		Risk Description		Risk assessment to be completed only if the answer is "Yes" under the risk description column	Score
		Yes, No, n/a, TBD	If no answer, please shortly justify If Yes answer, describe potential issues, specify activities causing the risk identified. Characterize the identified risk or impacts (likelihood, intensity, duration, reversibility) Indicate the risk localization (local/national/global)	Where applicable, identify the remedial actions that would mitigate the identified risk	Characterize the risk level: Low (L), Medium (M) high (H)
Resources	Is the project likely to negatively impact a protected area?				
	Is the project likely to introduce invasive alien species to the project area?				
	Is the project likely to restrict People's access to natural resources and their means of livelihoods?				
	is the project likely to favor unsustainable exploitation of a renewable resource				
10. Cultural heritage	Is the project likely to negatively affect cultural heritage?				
	Is the project likely to negatively affect a legally protected cultural heritage area?				
11 Indigenous Peoples/Marginalized Groups	Is the project likely to negatively affect Peoples or communities rights: rights of affected populations, including procedural rights such as the right to be consulted or to have access to information, or substantive rights (real or personal) such as the right of access to natural resources or benefit-sharing related to these				

E&S Assessment		Risk Description		Risk assessment to be completed only if the answer is "Yes" under the risk description column	Score
		Yes, No, n/a, TBD	If no answer, please shortly justify If Yes answer, describe potential issues, specify activities causing the risk identified. Characterize the identified risk or impacts (likelihood, intensity, duration, reversibility) Indicate the risk localization (local/national/global)	Where applicable, identify the remedial actions that would mitigate the identified risk	Characterize the risk level: Low (L), Medium (M) high (H)
	natural resources (carbon rights, benefits from access to genetic resources ...).				
	Could the project require the relocation of Peoples from their homes or lands subject to traditional ownership or customary use?				

After submission of the proposal the ESS Officer will provide clearance to the EAP through a standardized E&S clearance form that includes an indication of the grant's risk category. See table 6 below for an indicative form to be used. The final clearance form will be refined/modified as needed by the GESS and approved by the Grant Facility EAP. If a grant is categorized as Cat B (medium risk), then the applicant will be required to develop an ESMP.

*Table 6. Environmental and Social Clearance Form*

<b>Key Mini-grant Information</b>			
Grant Name			
Estimated Project Duration	Start:	Completion:	Months:
Total Grant Amount:			
Grantee (Requesting Organization)			
Any other partners (in delivery)			
Key Partners (in delivery)			
Type of organization (i.e. non-profit, community association)			
AF screening template provided.	<i>Provide date</i>		
E&S Checklist Review Against Proposal	<i>Provide Brief Overview</i>		
Based on review select mini-grant risk category A, B, or C (high, medium or low)			
Environmental and Social Clearance decision:	<i>Please tick one</i> <input type="checkbox"/> <i>Cleared</i> <input type="checkbox"/> <i>Conditionally cleared</i> <input type="checkbox"/> <i>Clearance rejected</i>		
For mini-grants cleared or conditionally cleared, define any additional work required	<i>Describe additional work required</i>		
Justification for the clearance decision	<i>Please describe the basis for the clearance decision.</i>		

### **Implementation Arrangements**

The Grant Facility will have a dedicated governance structure to review, appraise and approve sub-grants. This structure will include:

- **The PMU:** will issue Expressions of Interest and support prospective applicants in the development of their project idea and applications. Additionally, the PMU will pre-screen sub-grant applications to determine project eligibility prior to sending to the EAP. The ESS officer will ensure that ESS screening is carried out and the ESMF protocols followed as applicable.
- **Grant Facility Evaluation and Approval Panel (EAP):** The EAP will comprise representatives from the PMU, SPC's FAME division, SPC's Procurement Department, an environmental, social and gender expert, and a national expert from NFMRA. The EAP will carry out the full screening, technical and financial review of sub-grant applications to provide recommendations to the DA.
- **Designated Authority Approval of Grant Recipients:** on finalisation of the recommendations from the

EAP they will be sent to the DA who will review the projects and recommendations in detail. The DA will then formalise a decision for the grant approvals. This will trigger formalisation of the award and necessary contracting.

SPC's Climate Finance Unit, in partnership with the Department for Environmental Management and Agriculture (DEMA, as the AF's Designated Authority) will establish the Evaluation and Approval Panel (EAP) during the first six months of implementation. SPC and the DA will identify representatives for the EAP from relevant organisations and the PMU will act as secretariat to EAP, organising meetings around Expression of Interest calls as appropriate. As the Implementing Entity, SPC will provide supervision through quality assurance, oversight and reporting functions of grants through implementation. This will include carrying out regular supervision missions to ensure that all ESS requirements, reporting obligations and fiduciary aspects are met with compliance through implementation of the project.

### **Mini-grant Facility: Exclusionary Criteria**

The project will focus on developing priority fisheries and aquaculture activities with the mini-grants focused specifically on activities pertaining to (i) increased farming and production of milkfish; (ii) increased adaptive capacity and income of aquaculture operators; and (iii) reduction of pressure on climate-vulnerable coastal and reef ecosystems. There are however a number of activities that the project will not fund. A simple set of exclusion criteria will be implemented to ensure that all project activities are supporting priority adaptation sub-grants aligned with AF's ESPs and meeting an E&S low or medium risk level. As such, the project's mini-grant facility will not be used to directly or indirectly fund activities that:

- Conflict with adopted plans and established uses of the target community
- Substantially affect a rare or endangered species of animal or plant or the habitat of such species.
- Interfere substantially with the movement of any resident or migratory fish or wildlife species.
- Substantially diminish habitat for fish, wildlife, or plants.
- Breach standards relating to solid waste or litter control.
- Substantially degrade water quality.
- Contaminate a public water supply.
- Encourage activities which result in the use of large amounts of fuel, water, or energy.
- Use fuel, water, or energy in a wasteful manner.
- Disrupt or adversely affect an archaeological site or a property of historic or cultural significance.
- Induce substantial growth or concentration of population.
- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system.
- Displace a large number of people over the long term.
- Increase substantially the ambient noise levels for adjoining areas over the long term.
- Cause substantial flooding, erosion or siltation.
- Expose people or structures to major geological hazards.
- Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the areas affected.
- Violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations.
- Convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land.
- Interfere with emergency response plans.
- Relate to the extraction or depletion of non-renewable natural resources.
- Cause involuntary resettlement of people or the removal or alteration of any physical cultural assets and property.

These criteria are meant to be an initial indicative exclusionary list and are in alignment with the provisions and goals of Nauru's Environmental Management and Climate Change Act (2020). They may be amended upon the recommendation of the EAP during implementation.

## 6. Grievance Mechanism

A grievance is a concern or complaint raised by community members and stakeholders related to the perceived or actual impacts of the project activities. The objectives of setting up an appropriate grievance mechanism process are to:

5. Provide stakeholders with a clear process for providing comment and raising grievances.
6. Allow stakeholders the opportunity to raise comments/concerns anonymously.
7. Structure and manage the handling of comments, responses, and grievances in a timely manner.
8. Ensure that comments, responses, and grievances are handled in a fair and transparent manner and in line with local and national policies.

### ***SPC Grievance Redress Mechanism***

SPC has a Grievance and Redress Mechanism in place to ensure that complaints are being promptly reviewed and addressed by the responsible units (see <https://www.spc.int/accountability>). This process aims to address complaints from affected stakeholders, including communities, about the social and/or environmental performance of the project, and to take measures to redress the situation, where necessary. For the process to be efficient, project stakeholders have to be properly informed that SPC has such a mechanism established, and how they can access to it to settle their grievance.

The SPC GRM is operated through a web-hosted page on SPC site for the expression of concerns or complaints, which can be posted by email with the information in using the complaints' template (Please see Annex IV of SPC's GRM on SPC website). Concerns expressed shall be received by the legal team who will reach out internally, primarily to the division in charge of the project or to relevant division. Grievances will be sorted out through a conflict resolution process. In case this process is not functional, other process will be used, such as a compliance system, the overall objective being to address and redress project stakeholders' grievances in the most simple and efficient manner.

### ***Project -level Grievance Redress Mechanism***

SPC is committed to receiving any concerns or grievances from an affected community about the environmental and social plans or performance of activity under the proposed project. In that direction, communities and stakeholders will be sensitized about the existing grievance process and form. AF Designated Authority will be responsible for supporting the communities with the information they need to properly submit a grievance letter. The DA and Executing Entities are taking part into the grievance and redress mechanism through documenting grievances and coordinating with SPC the process to settle the grievances. For the proposed project, there are several processes to submit project related grievances:

5. An email can be sent to SPC through the online process: <https://www.spc.int/accountability>.
6. Contact the AF Designated Authority or submit a letter to the AF Designated Authority.
7. Bring up the complaint during the project update meetings or community awareness meetings. The complaint then must be directed to the AF Designated Authority who will then forward to the SPC legal team.
8. Mail can be addressed to the NFMRA or the DA, which will then be forwarded to SPC.

The AF Designated Authority will receive and register the grievance and will contact SPC legal team through a proactive outreach. He/she will provide an initial response within two business days to the person who submitted the grievance to acknowledge the grievance and explain that the grievance will be logged onto the SPC GRM. As a first timeframe, a response will be provided to the complainant within a two-month period, with indication of appropriate process to address the grievance. This duration should be sufficient to screen the complaint, outline how the grievance will be processed, screen for eligibility as well as assign organisational responsibility for proposing a response. This response will propose a methodology to reach an agreement and address the complainant's concerns. This process will possibly involve engaging with other project stakeholders to resolve the issue.

SPC GRM is responsible to inform the complainant that he/she has the right to pursue other options to resolve

the complaint if unsatisfied after the SPC GRM process, noting that the GRM may respond to questions from the complainant, but does not constitute an advisor or attorney for the complainant.

All grievances will be recorded, and these records will be kept at a secure place for up to three years after the end of the project.

The project will ensure that there is a Grievance and Redress Mechanism in place to ensure that complaints are being promptly reviewed and addressed by the responsible units (see <https://www.spc.int/accountability>).

**What for?** A grievance mechanism is a process to address complaints from affected stakeholders, including communities, about the social and/or environmental performance of the project, and to take measures to redress the situation, where necessary. It is also a tool to be used by staff to assess whether social and environmental safeguards are respected on the ground.

**Nota Bene:** The grievance mechanism is to be designed and scaled to fit the level of risks and impacts of each project. Stakeholders must be properly informed once such a mechanism has been established, how to get access to it and how it works.

**When?** It can be used from the project design (screening) phase until its final implementation.

**How?** The grievance mechanism must be practical, easily accessible and transparent: it is operated through a web-hosted page for the expression of concerns or complaints, which can be posted by email with the information in using the complaints' template (Appendix 5).

**By Whom?** Concerns expressed shall be treated internally primarily by the division in charge of the project or transferred to the executive level if complaints are related to sensitive issues.

SPC is committed to receiving any concerns or grievances from an affected community, about the environmental and social plans or performance of any SPC project, including this proposal. Communities and stakeholders will be able to access the **grievance complaint form**.

## 7. Monitoring and Evaluation

Per the E&S screening policies, the overall project E&S risks shall be monitored by the GESS officer to ensure compliance with the ESMP. Monitoring will enable the project team to adjust and respond to unexpected events during the implementation phase as well as to build trust and respond to stakeholders and affected communities. The scope, robustness, frequency of project monitoring and reporting will vary depending on the type of activities and the significance of risks/impacts identified through the screening process.

For the individual mini-grants awarded through the mini-grant facility (output 2.2), ongoing M&E will be the responsibility of the GESS Officer along with support from the PMU and SPC. Reporting will integrate ESS tracking, monitoring and evaluation. Annual performance reports and end of project closure reports will include updated information on E&S risks and this information will be reported to SPC and AF.

For Category B mini-grants, an updated E&S management plan (ESMP) will be required to be submitted annually and certified by the GESS Officer to ensure identified risks have been mitigated and that the grant-level ESMP is being followed appropriately.



## Annex 4. Gender Assessment and Action Plan

### 1. Overview

It is now widely recognized that development and governance processes will not be effective or sustainable until women and men participate in and benefit from such processes on a basis of both formal and substantive equality. Despite this, women continue to be significantly under-represented in governance and development processes, and experience discrimination and diminished opportunity in virtually all development sectors. Contrary to a wide range of commitments that Pacific Island governments have made to achieving equality between men and women, women's perspectives and contributions continue in many cases to be on the periphery of development and governance dialogue.<sup>105</sup>

Nauru is one of the world's smallest countries, consisting of a single island of 21 sq. km. situated in the South Pacific Ocean, east of Papua New Guinea. Nauru's island is a central plateau (46-60m above sea level) surrounded by a coastal strip (150-300m) where the majority of Nauru's population lives.<sup>106</sup> Nauru consists of a single island that comprises 15 districts: Yaren, Boe, Aiwo, Buada, Denigomodu, Nibok, Uaboe, Baitisi, Ewa, Anetan, Anabar, Ijuw, Anibare, Meneng, and Location. The country does not have a capital but an administrative center in Yaren in the south of the island. The export of phosphate, which started in 1907, saw a period of huge economic growth for the country, however, after a decline in phosphate mining in the late 1980, Nauru's economy also declined dramatically. At the same time, since gaining independence in 1968, Nauru's political system has been relatively stable.<sup>107</sup> Women account for approximately 49% of the total population. Although traditional Nauruan society was matrilineal, the status of women has been eroded in the past century - roles are very gendered with clear responsibilities for men and women respectively. For the past 50 years, Nauruan women have historically held positions secondary to their husbands, who served as the head of household and sole income earner.<sup>108</sup> Today, women are no longer tied to the home – they are able to participate in the workforce but there is still much to be improved upon.

The following Gender Analysis provides the overall context and framework for mainstreaming gender into the proposed Adaptation Fund (AF) project: *Resilient Coastal Fisheries and Aquaculture in Nauru*. Embedded within this analysis are a set of recommendations for incorporating gender mainstreaming throughout the project's activities. As specific projects for funding under the mini-grant facility will only be identified in the course of calls for applications during implementation, the document also includes a framework for sub-grant level gender assessments and action plans that will be developed as part of the mini-grant development and approval process.

### 2. Methodology

This gender analysis and associated action plan was completed through a desk review of the legal and policy framework and publicly available gender data pertinent to this assessment. In addition, a detailed questionnaire was developed with gender-specific questions to be utilized during stakeholder and community-level consultations that were held during the proposal development process. Desk review findings were validated against the findings of consultations and assessment refined accordingly.

### 3. Gender Baseline

#### 3.1 Relevant Legal and Policy Framework

The following section details the legal frameworks and regulations related to gender, at the international, regional, and national levels that Nauru is party to.

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<sup>105</sup> [https://hrsd.spc.int/sites/default/files/2021-07/Nauru\\_Stocktake\\_Report\\_whole.pdf](https://hrsd.spc.int/sites/default/files/2021-07/Nauru_Stocktake_Report_whole.pdf)

<sup>106</sup> [Assessment of the Role of Women in Fisheries in Nauru](https://asiapacific.unfpa.org/sites/default/files/pub-pdf/Nauru_family_health_support_survey_report_2014.pdf)

<sup>107</sup> [https://asiapacific.unfpa.org/sites/default/files/pub-pdf/Nauru\\_family\\_health\\_support\\_survey\\_report\\_2014.pdf](https://asiapacific.unfpa.org/sites/default/files/pub-pdf/Nauru_family_health_support_survey_report_2014.pdf)

<sup>108</sup> [https://asiapacific.unwomen.org/en/countries/fiji/co/nauru#:~:text=The%20Constitution%20of%20Nauru%20affords,Discrimination%20Against%20Women%20\(CEDAW\).](https://asiapacific.unwomen.org/en/countries/fiji/co/nauru#:~:text=The%20Constitution%20of%20Nauru%20affords,Discrimination%20Against%20Women%20(CEDAW).)

Table 1: Relevant legal and policy framework for Gender Applicable to/in Nauru<sup>109</sup>

Agreement	Notes
<b>International/Global</b>	
<ul style="list-style-type: none"> <li>Chapter 24 of Agenda 21 (United Nations Conference on Environment and Development, 1992).</li> <li>Convention on Biodiversity (1992).</li> <li>Beijing Declaration and Platform for Action (1995, Fourth World Conference on Women).</li> <li>the 2015 Paris Agreement of the UN Framework Convention on Climate Change (UNFCCC).</li> <li>the Agenda 2030 for the Sustainable Development Goals (SDGs).</li> <li>Sendai Framework for Disaster Risk Reduction 2018 – 2030.</li> <li>CRC Report in 2020.</li> <li>Convention on the Elimination of all forms of Discrimination Against Women</li> <li>Contention on the Rights of the Child (1994)</li> </ul>	<p>Though Nauru has ratified the Committee on the Elimination of Discrimination against Women (CEDAW), its national legislation does not yet grant all the benefits and outcomes required under CEDAW.</p>
<b>Regional</b>	
<ul style="list-style-type: none"> <li>Pacific Principles of Practice of National Mechanisms for implementation, Reporting and Follow up (NMRIF - 2020).</li> <li>Pacific Leaders' Gender Equality Declaration (2012).</li> </ul>	<p>The Pacific Island Forum has recently commenced (2022) a review of the Gender Equality Declaration to evaluate its effectiveness, relevance, impact and sustainability<sup>110</sup>,</p> <p>An earlier report found that the unavailability of necessary information and data as well as a lack of resources to facilitate consultation hindered progress on the declaration.<sup>111</sup></p>
<b>National</b>	
<ul style="list-style-type: none"> <li>Nauru Constitution</li> <li>Nauru National Women's Policy (2014)</li> <li>Nauru Sustainable Development Strategic Pan 2005-2025</li> </ul>	<p>The government is currently undertaking a review of its Criminal Code, which is anticipated to include revisions to address domestic violence.</p>

Nauru has a mixed record on promoting gender equality, despite ratifying CEDAW.<sup>112</sup> Information about women's economic participation is lacking. Women's political participation is limited, with only two women elected national Members of Parliament in its history. The Constitution of Nauru affords women formal equality before the law but stops short of granting all benefits and outcomes required by the CEDAW, for example Nauru has no domestic violence, sexual harassment or family legislation, or any other legislation in place that addresses human trafficking or sex tourism. Nauru's definition of rape is limited to sexual intercourse. Fault-based divorce is practiced in Nauru, and division of matrimonial property in cases of divorce does not take non-financial contributions into account (a rule that can place women at a substantial economic disadvantage).

### 3.2. Existing Gender Inequality – Statistical Overview

Some progress on women's rights has been achieved. However, work still needs to be done in Nauru to achieve gender equality. At a high level, Nauru still underperforms more frequently than other Pacific Islands nations, and there is comparatively more missing data in respect of several key indicators (see figure 1).<sup>113</sup>

<sup>109</sup> In part drawn from: <https://asiapacific.unwomen.org/en/countries/fiji/co/nauru>

<sup>110</sup> <https://www.forumsec.org/2021/02/17/review-coming-for-forum-pacific-gender-equality-declaration/>

<sup>111</sup> Pacific Island Forum Secretariat (2016) – Pacific Leaders' Gender Equality Declaration Trends Report (2012-2016): <https://www.aidsdatahub.org/sites/default/files/resource/pacific-leaders-gender-equality-declaration-2016.pdf>

<sup>112</sup> [https://www.adb.org/sites/default/files/project-documents/48480/48480-001-sprss-en\\_0.pdf](https://www.adb.org/sites/default/files/project-documents/48480/48480-001-sprss-en_0.pdf)

<sup>113</sup> <https://data.unwomen.org/country/nauru>

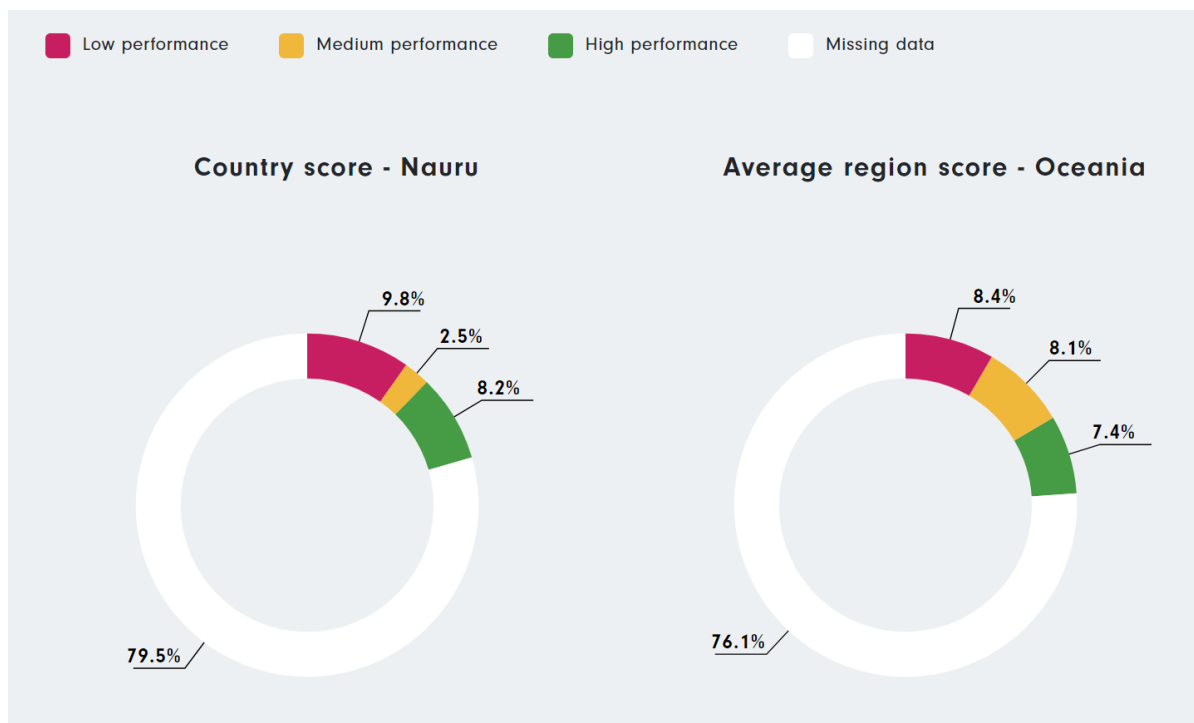


Figure 1: Nauru Gender Indicator Performance Comparison (Source: UN Women Country Data (Nauru))<sup>114</sup>

Below is an overview of the unique components of gender inequality in Nauru as compared to other Pacific Islands. Nauru is comparatively lacking in terms of women’s representation in parliament, tertiary education completion, and employment, but is relatively aligned with other countries in the Pacific region for the remaining categories (Table 2).

Table 2: Overview Comparison of Gender Indicators for Pacific Island Countries

Indicator	Cooks	FSM	Fiji	Kiribati	RMI	Nauru	Niue	Palau	PNG
Women Representation in Parliament HD-GEN-1.1 MDG.3.3	17 2014	0 2016	16 2016	7 2016	9.1 2016	5.3 2016	10 2016	0 2016	2.8 2014
Govt Budget Allocated to Women’s Department (% Recurrent) HD-GEN-1.4	0.3 2011-12	0 2004	0.1 2014	0.1 2014	0 2015	0.1 2010-11	0.1 2011-12	0 2014	
Tertiary Education Completion Rate HD-GEN-1.7	13.1 2016	9.1 2013		4 2015	2.3 1999	3 2013	3.3 2001	16.2 2015	
Female Labor Participation Rate HD-GEN-1.8	58.4 2016	36.2 2013	37.4 2017	55.8 2015	35.4 1999	52.7 2013	63 2016	74.3 2015	60.5 2011
Female-Male Labor Participation Ratio HD-GEN-1.9	0.8 2016	0.6 2013	0.5 2017	0.8 2015	0.5 1999	0.7 2013	0.8 2016	0.9 2015	1 2011
Female-Male Employment Ratio HD-GEN-1.10	0.8 2016	0.5 2013		0.7 2015		0.6 2013	0.8 2016	0.8 2015	1 2011
Women Employed in a Non-Ag Sector HD-GEN-1.11 MDG.3.2	48.8 2016	33.1 2013	34 2007	44.7 2015	36.7 2011	37.4 2013	49.3 2016	48.7 2015	32.1 2000
Prevalence of Violence Against Women HD-GEN-1.12	33 2014	33 2014	64 2013	68 2010	51 2014			25 2014	65 2010

<sup>114</sup> <https://data.unwomen.org/country/nauru>

Indicator	Cooks	FSM	Fiji	Kiribati	RMI	Nauru	Niue	Palau	PNG
Attitudes VAW				76	56.5				
HD-GEN-1.13				2010	2007				

### 3.3. Women's Economic Participation

Compared to other Pacific nations Nauru has the worst poverty index of all Pacific nations. Similar political and economic crises emerged from the global economic crisis in 2008. The economy at the moment is mainly driven by phosphate mining (17% of Gross Domestic Product in 2014) and foreign aid due to the hosting of refugees and payments by the Australian government.<sup>115</sup> The 2012/13 Household Income and Economic Survey (HIES) results show, that 586 households were headed by females (accounting for 35.4% of all households) of which 17.7 were below the Basic Needs Poverty Line (BNPL) accounting for 36.3% of all households under the BNPL.<sup>116</sup> Around 7.5% of female-headed households were categorized as being extremely vulnerable (within 20% above BNPL), accounting for nearly 42% of households in this vulnerability group. Female headed households, therefore, are more vulnerable than male-headed households. Widowed persons are another risk group with 60% being classified as being poor or vulnerable to varying degrees.<sup>117</sup>

### 3.4. Women's Health and Violence Against Women

Nauru's under-5 mortality rate is 44 per 1000 – countries with more than 40 deaths per 1,000 live births are considered to have high child mortality. Nauru's infant mortality rate of 36 deaths per 1,000 live births is also high by regional standards, and has increased since the 1990s.<sup>118</sup> Participation in fishing and local agriculture has declined since the phosphate boom and with the increase of a more westernized diet of rice and fatty goods, Nauruan's now have the highest levels of obesity in the Pacific Region. This is a significant risk factor for Nauruan women, with 92.3% of the total female population considered overweight and 51.2% classified as physically inactive. Diabetes rates have increased in Nauru with 30% of the population having type 2 diabetes and Health Department surveys show that 50% of Nauruan's binge drink. Life expectancy for women in Nauru is 58 years old, compared to 52 years old for men.<sup>119</sup>

Violence against women is anecdotally reported to be widespread in Nauru; women who report violence may be stigmatized and they are also at risk of further violence from perpetrators. This set of social patterns makes it difficult for women to break out of abusive situations. The Government of Nauru is making efforts to raise awareness that violence against women is a crime and should not be accepted. Initiatives include the White Ribbon and 16 Days of Activism campaigns. Despite this, most cases reported to police are withdrawn and few cases are heard in court. There are no comprehensive baseline studies on prevalence or severity of violence against women and children.<sup>120</sup> In 2014 UNFPA was working with Nauru to undertake a Family Health and Safety study using WHO methodology to document intimate partner violence. At the outset of the survey, response rates were average in the first two or three communities. However, as information about the content of survey questions was shared around the island, women in other communities declined to participate despite confidentiality protocols.<sup>121</sup> The small size of the Nauru population and the lack of privacy in communities seem to create peer pressure and stigma against reporting. Of those surveyed, the findings were as follows:<sup>122</sup>

- Nearly half of ever-partnered women (48.1%) who participated in the survey experienced physical and/or sexual violence by a partner at least once in their lifetime;
- Nearly half of ever-partnered women (46.6%) who participated in the survey experienced physical partner violence at least once in their lifetime and 20.6% indicated experiencing such violence in the 12 months before the interview took place;
- The most commonly mentioned act of physical partner violence was being slapped or having something thrown at them (84.1%);

<sup>115</sup> [https://hrsd.spc.int/sites/default/files/2021-07/Nauru\\_Stocktake\\_Report\\_whole.pdf](https://hrsd.spc.int/sites/default/files/2021-07/Nauru_Stocktake_Report_whole.pdf)

<sup>116</sup> Nauru Hardship and Poverty Report (2012/2013): [https://nauru-data.sprep.org/system/files/Nauru\\_UNDP\\_Hardship%20and%20Poverty%20Report\\_2012\\_2013.PDF](https://nauru-data.sprep.org/system/files/Nauru_UNDP_Hardship%20and%20Poverty%20Report_2012_2013.PDF)

<sup>117</sup> [https://hrsd.spc.int/sites/default/files/2021-07/Nauru\\_Stocktake\\_Report\\_whole.pdf](https://hrsd.spc.int/sites/default/files/2021-07/Nauru_Stocktake_Report_whole.pdf)

<sup>118</sup> <https://data.unwomen.org/country/nauru>

<sup>119</sup> [https://asiapacific.unwomen.org/en/countries/fiji/co/nauru#:~:text=The%20Constitution%20of%20Nauru%20affords,Discrimination%20Against%20Women%20\(CEDAW\).](https://asiapacific.unwomen.org/en/countries/fiji/co/nauru#:~:text=The%20Constitution%20of%20Nauru%20affords,Discrimination%20Against%20Women%20(CEDAW).)

<sup>120</sup> [https://hrsd.spc.int/sites/default/files/2021-07/Nauru\\_Stocktake\\_Report\\_whole.pdf](https://hrsd.spc.int/sites/default/files/2021-07/Nauru_Stocktake_Report_whole.pdf)

<sup>121</sup> [https://hrsd.spc.int/sites/default/files/2021-07/Nauru\\_Stocktake\\_Report\\_whole.pdf](https://hrsd.spc.int/sites/default/files/2021-07/Nauru_Stocktake_Report_whole.pdf)

<sup>122</sup> Family Health and Safety study (2014)

- Among ever-pregnant women who reported experiences of physical and/or sexual partner violence, 25.4% experienced physical violence in at least one pregnancy.
- One-fifth of ever-partnered women (20.6%) experienced sexual violence by a partner at least once in their lifetime and 9.9% said to experience such violence in the 12 months prior to the interview.

The examination of Nauru's Universal Periodic Review in 2011 recommended that Nauru complete its ongoing review of the Criminal Code with the aim of promoting and protecting women's rights, including provisions dealing with violence against women, particularly domestic violence. Nauru accepted this recommendation and the review is in progress.

### 3.5. Education

At the tertiary level, there is one vocational training centre to provide young Nauruans in such trades as carpentry, electrical work, and motor mechanics. However, there is no university in Nauru. Instead, the USP Extension Centre offers university level education through correspondence. Overseas education can be obtained either privately, or through the government scholarship scheme, which covers both secondary and tertiary education. In fact, many children obtain scholarships at the age of 12 years to attend six years of secondary schooling at a boarding school overseas. More girls tend to receive secondary school scholarships, while more boys have obtained university scholarships.<sup>123</sup>

## 4. Gender Analysis and Assessment

### 4.1. Gender Considerations in the Fisheries Sector and Aquaculture

Assessing gender dynamics in relation to the coastal fisheries and aquaculture sector in Nauru is made difficult due to the unavailability of data. Since the 1998 SPC's Gender Assessment on the role of women in fisheries, only a couple of reports have been developed<sup>124</sup>. The 2015 SPC Gender Stocktake identified a number of barriers and issues hampering gender mainstreaming into government mandates and organizational structures, as well as in policy frameworks. However, this analysis does not specifically cover gender dynamics and mainstreaming capacity relating to the fisheries and aquaculture sectors. The NFMRA does not collect any data with regards to the roles and responsibilities of women in the fisheries sector, and there is little collaboration between the NFMRA and the Department for Women's Affairs. As a sector-specific gender assessment is not available at this stage, the assessment provided below focuses on an overview of gender dynamics across the sector in the Pacific.

The ocean and its capacity to support life (through marine resource protein stocks) are increasingly threatened by the scale of human-induced greenhouse gas emissions (GHGs). These GHGs continue to alter some of ocean's underlying characteristics and hence fish stocks. Increased sea temperatures and increasing acidification are some of the consequences that impact fish supplies, and hence affecting human health<sup>125</sup>. Sustainable fisheries management is an integrated process that seeks to attain an optimal state that balances ecological, economic, social and cultural objectives for fisheries.

Globally, in 2014, women accounted for about 50 percent of the workforce in fisheries and aquaculture, when the secondary elements such as processing and trading are included.<sup>126</sup> Furthermore, when it comes to participation in aquaculture value chains—including for fish, shrimp, seaweed and crab—women's involvement is even higher than in capture fisheries.<sup>127</sup> However, women's involvement in and contributions to the aquaculture and fisheries sectors do not automatically mirror that of men's. This can help explain why, historically and until very recently, women's roles have been largely invisible or marginalized and "documentation of their contributions remains isolated as case studies, rarely appearing in the official statistics, due to most countries

<sup>123</sup> [Assessment of the Role of Women in Fisheries in Nauru](#)

<sup>124</sup> SPC (1998) An Assessment of the Role of Women in Fisheries in the Republic of Nauru

<sup>125</sup> <https://portals.iucn.org/library/sites/library/files/documents/2016-067.pdf>

<sup>126</sup> "On Gender Mainstreaming Strategies and Tools in Fisheries Development Projects: RFLP Gender Strategy and Lessons from the Asia-Pacific Region" accessed at: <https://data.vietnam.opendevelopmentmekong.net/en/dataset/on-gender-mainstreaming-strategies-and-tools-in-fisheries-development-projects-rflp-gender-strategy/resource/677b0f02-8849-4088-837c-25713f7119f9>

<sup>127</sup> <https://www.worldfishcenter.org/pages/why-gender-equality-matters-fisheries-aquaculture/>

not collecting sex-disaggregated data on fisheries related matters.”<sup>128</sup>

In the Pacific, women play a significant role specifically regarding inshore fishing activities such as reef gleaning for invertebrates, the preparation of food gathered during fishing activities for sale and other post-harvest activities along the fisheries value chain, including marketing.<sup>129</sup> Reports note that women are responsible for a significant amount of inshore fisheries’ catches mainly for subsistence purposes to ensure food security. And yet, gender equality considerations are lacking in coastal fisheries management plans and other coastal fisheries governance instruments.<sup>130</sup> Some of the most prevalent issues include:

- **Gender imbalance of unpaid and lucrative, profitable work:** women are more likely to be engaged in fisheries and aquaculture work that is unpaid, or unofficial such as collecting bait, fixing nets, processing, and near- or in-shore fishing. As such, the income returns for their work is lower than men’s, when men are involved in paid labor. When women are involved in more profitable nodes of fisheries and aquaculture value chains, they are often accompanied by men as line fishing is still considered in many ways to be a “man’s domain”.
- **Socio-cultural constraints:** Systems of traditional obligation and women’s position and role within familial structures make it very difficult for them to control any income or profit they may make. In the Pacific, women have lower rates of entrepreneurship which suggests that women may be making lower income returns from entrepreneurship in fisheries and aquaculture as well.<sup>131</sup> Women also face problems of having to give away fish to meet customary obligations and can therefore have difficulties with making loan repayments if they took out a loan in order to support their fishing and aquaculture activities.<sup>132</sup>
- **Limited access to finance:** Across the Pacific region, there are few financial support schemes for seafarers/ fishing vessel crew, or processing plant workers. Generally speaking, there is a lack of financial services across the Pacific region, particularly savings facilities and a credit for market vendors.<sup>133</sup> However, while this is a consistent issue for both women and men, women are less likely than men to apply and be approved for loans from the bank for fishing and aquaculture-related activities. In addition, since women are often left responsible for raising the family, they have to either seek alternative means of raising income, or take out higher interest loans.<sup>134</sup>

## 4.2 Summary of Community Consultations

A community consultation was held on 16 November 2022, at the University of the South Pacific, Nauru Campus, Yaren District. As part of these consultations a specific working group was held to discuss issues related to gender and social inclusion. A total of 17 people participated in the consultations (6 women and 11 men)– participants included representatives from the NFMRA, as representatives from community, youth organizations, and fisheries associations.

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<sup>128</sup> Ibid

<sup>129</sup> Gender & Fisheries Desk Review, 2019. Accessed at: [https://www.peump.dev/sites/default/files/2020-08/Final%20Draft%20Gender%20Fisheries%20Review%20of%20Literature-Reviewed\\_Oct19.pdf](https://www.peump.dev/sites/default/files/2020-08/Final%20Draft%20Gender%20Fisheries%20Review%20of%20Literature-Reviewed_Oct19.pdf)

<sup>130</sup> Ibid

<sup>131</sup> On Gender Mainstreaming Strategies and Tools in Fisheries Development Projects: RFLP Gender Strategy and Lessons from the Asia-Pacific Region” accessed at: <https://data.vietnam.opendevelopmentmekong.net/en/dataset/on-gender-mainstreaming-strategies-and-tools-in-fisheries-development-projects-rflp-gender-strategy/resource/677b0f02-8849-4088-837c-25713f7119f9>

<sup>132</sup> Gender & Fisheries Desk Review, 2019. Accessed at: [https://www.peump.dev/sites/default/files/2020-08/Final%20Draft%20Gender%20Fisheries%20Review%20of%20Literature-Reviewed\\_Oct19.pdfm](https://www.peump.dev/sites/default/files/2020-08/Final%20Draft%20Gender%20Fisheries%20Review%20of%20Literature-Reviewed_Oct19.pdfm)

<sup>133</sup> Ibid.

<sup>134</sup> Ibid.



*Photo: Community Consultation, University of the South Pacific, 16 November 2022. Source: Mr. Tyrone Deiye, National Consultant*

The consultation was divided into four working groups with the fourth focusing on gender considerations and E&S risks for the proposed project. Questions presented to the group included the following:

#### *General Gender Considerations*

1. How are men and women involved in decision making at the community level?
2. What are key methods that should be considered to ensure women and other vulnerable groups are involved in project activities?
3. Are there any barriers and opportunities based on gender, age, disabilities in relation to mobility as well as in access to services (for example ability to travel, ability to access coastal resources or partake in fishing/aquaculture)?
4. What is the nature and extent of women run businesses, cooperatives and women's groups?
5. What are the key NGOs in-country that should be included as part of the project?
6. Are there specific women's groups who should be part of the implementation and can be consulted further during the project preparation phase?

#### *Coastal Fisheries and Aquaculture*

1. Are there differences between women and men regarding access to and control overfishing rights and access to the coast?
2. Are there areas where women can be supported to more actively participate in the fisheries sector?
3. In the fisheries sector are women involved in processing and post-processing?
4. Are there opportunities for women to improve their economic returns (livelihoods) within the processing and post-processing area?

Specific questions about Output 2.3 and the mini-grant facility were also asked, in particular focusing on whether there were women-led community fisheries that could be targeted for such grants.

#### *Summary Response*

The group discussed and agreed that culturally it is women who prepare the post-harvest from their husbands or sons catches and they also preserve the catch for as well as plan their daily intake of fish. There was also consensus that both men and women "have easy access to the marine and coast" and that "there is no disparity between women and men regarding access and control overfishing rights and access to the coast."

In terms of methods that should be considered to ensure women and other vulnerable groups are involved in project activities, it was noted that it is important that any outreach or awareness activities should ensure women and vulnerable groups be actively invited and that there should be a consultation committee that is led by community member groups.

In terms of opportunities for women within the context of the project, the discussion centered on the need for

capacity building and funding assistance for women to process their products including providing tools to process and produce value added goods such as processed cured fish, dried fish and other preservation methods that are marketable.

Key NGOs in-country that should be included as part of the project included:

- EcoNauru
- Women's Empowerment Group
- Youth Groups: Naoero Amo and Nauru National Youth Group; and
- Kirira – a group active in conservation measures for their coastal resources.

Inputs from the consultation confirmed that women and women's groups should be actively targeted through the mini-grant facility to allow for access to needed finance and that Activity 2.2.2. the upgrade of Anibare Community Fish Market will be beneficial to women as the main group involved in post-harvest activity. All outreach and awareness campaigns will also actively seek out and recruit women and women's groups to ensure inclusion. Specific activities to be taken are detailed in the gender action plan (section 5 below).

### 4.3 Overall Assessment

With regards to the fisheries sector, there is a need to identify areas where women can be better supported for greater participation, more efficiency, and support their ability to achieve greater higher economic returns. It is also important that the project ensure general safety at all points along the fisheries value chain. This can include but is not limited to various post-harvesting and value adding processes, packaging and retailing. It is important to structure the mini-grant facility to ensure women's access to the facility and to support women to access finance.

For other areas of the project, it will be important for women's perspectives to be fully integrated into fisheries management and marine conservation plans and that the collection of gender-disaggregated data by NFMRA and other line ministries' is fully supported.

For the mini grants facility, each of the grant applications should incorporate: (i) gender differences in terms of needs and capacities; (ii) gender-equitable participation, especially regarding decision-making; and (iii) outcomes/benefits of each grant should be inclusive to both men and women.

### 4.4 Recommendations

Given the above analysis and assessment, the following recommendations are provided to help ensure effective gender responsive outcomes, particularly for the mini-grant component:

1. **Gender-disaggregated data Collection:** According to the UNFCCC's June 2022 report exploring "Dimensions and Examples of the Gender-Differentiated Impacts of Climate Change", sex-disaggregated data remain the most common means of assessing the gender-differentiated impacts of climate change. As such, the project should ensure all data collected through the project is disaggregated by gender is collected, reported, and made available. Collection of this data will help to track differentiated gender impacts as well as establish an initial baseline for Nauru across the fisheries sector.
2. **Sector-Specific Baseline Gender Collection:** Given the lack of gender data available in Nauru particularly in the fisheries and aquaculture sector, a targeted, comprehensive baseline data collection should be undertaken for the fisheries sector. This will help to identify specific gender-differentiated impacts of climate change for Nauru. With regards to the coastal fisheries and aquaculture sectors, the report should (i) identify areas where support to women could be enhanced to increase participation and obtain higher economic returns; (ii) detail how to ensure general safety at all points along the fisheries value chain, this can include but is not limited to various post-harvesting and value adding processes, packaging and retailing; (iii) how best to structure cooperative or associative efforts based around women and men's different needs, households needs, social and cultural obligations and labour requirements; (iv) how best to train women to support basic administrative and financial literacy to enhance access to the mini-grant facility; and (v) explore possibilities for women's perspectives to be fully integrated into national fisheries management, marine conservation and aquaculture development plans.
3. **Targeted Training for Grant Development:** Because women's professional engagement and decision-making power is quite limited, the project should offer targeted training sessions to allow women and other marginalized and disenfranchised groups the opportunity to prepare, so they might have a better



chance of writing a successful grant application. The project should provide women-only training to ensure participation.

4. **Integration of Gender-Responsive Activities into Mini-Grant Facility Design:** Women can provide critical inputs to effectively tailor mini-grant interventions to their own needs. Requirements for stakeholder and community engagement should be part of the grant application process to ensure the integration of women’s knowledge and skills through direct consultation. A screening process to ensure gender aspects have been integrated into grant applications should be undertaken.
5. **Gender Expertise for Screening and Review of Grants:** Screening and reviewing grant applications to ensure gender has been adequately incorporated into design will be needed in order to ensure gender-awareness and to provide expertise to identify key gender challenges and opportunities.
6. **Provide Leadership Opportunities for Women:** Ensure that women are actively engaged in coastal fisheries management planning as well as in the design of grant applications.

## 5. Gender Action Plan

Based on the recommendations from the gender assessment the following action plan has been developed for the project.

Table 3 Gender action by project outcome

Outcome/Output	Gender Action Plan (GAP) Activities	AF Gender Principle	Gender-Responsive Indicators
<b>Outcome 1: Strengthened institutional structures from national to community levels enable integrated climate resilience implementation in the coastal fisheries and aquaculture sectors.</b>			
Output 1.1: Capacity enhancement of national institutions to mainstream climate change resilience across the coastal fisheries and aquaculture sectors	<ul style="list-style-type: none"> <li>• Gender report and assessment on the role and needs of women involved in the coastal fisheries and aquaculture sectors (under activity 1.1.2)</li> <li>• Women and women’s groups identified as potential beneficiaries/mini-grant participants</li> </ul>	Equity	<ul style="list-style-type: none"> <li>• Gender report completed</li> <li>• Extent to which findings and data from gender report/assessment are integrated across project activities (as measured through the project evaluation)</li> <li>• # of women’s groups identified for inclusion as beneficiaries/mini-grant participants</li> </ul>
Output 1.2. Awareness raising campaigns conducted to enhance understanding of the CFA Act and NFMRA roadmap and promote grant facility	<ul style="list-style-type: none"> <li>• Women and women’s groups targeted for training (under activity 1.2.2 and activity 2.3.2)</li> <li>• Messaging specifically targets women and includes information on gendered impacts and needs under activity 1.2.2 and activity 2.3.2)</li> </ul>	Equity Representation	<ul style="list-style-type: none"> <li>• % of women trained (target 20-30%)</li> <li>• # of gender-specific messages developed</li> <li>• # of women reached</li> </ul>
<b>Outcome 2: Improved food security and nutrition through increased farmed fish supply, increased adaptive capacity and income of aquaculture operators and reduced pressure on climate-vulnerable coastal and reef ecosystems.</b>			
Output 2.2. Increased adaptive capacity of artisanal fishers and resilience of marine ecosystems in the face of climate variability and change	<ul style="list-style-type: none"> <li>• Women and women’s groups targeted for training under activity 1.2.2 and activity 2.3.2)</li> <li>• Hold a women/women group led discussion on the technical details and design specifications for the upgrade of Anibare</li> </ul>	Equity Representation Access Participation	<ul style="list-style-type: none"> <li>• % of women trained (target 20%-30%)</li> <li>• At least 1 women-only meeting held to discuss upgrade of Anibare Community Fish Market</li> </ul>

	Community Fish Market (activity 2.2.2)		
Output 2.3. Grant Facility – Provision of infrastructure and equipment to enable the sustained production of milkfish for increased domestic food supply and income	<ul style="list-style-type: none"> <li>Mini-grant facility includes quota of at least 30% women and/or women’s organizations to receive grants (under activity 2.3.1)<sup>135</sup></li> <li>Mini-grant facility includes screening process to ensure funded grants are gender responsive under activity 2.3.1)</li> </ul>	Equity Access Participation	<ul style="list-style-type: none"> <li>% of women or women’s organizations selected as mini-grant recipients</li> <li>Gender screening conducted for all applications to mini-grant facility</li> </ul>
<b>Outcome 3: Increased resilience of ecosystems and adaptive capacity of communities through availability of data and knowledge sharing mechanisms for adaptation planning and environmental protection</b>			
Output 3.1. Establishment of a knowledge management strategy (KMS) to sustain climate-resilient practices in environmental and natural resource management	Women targeted to participate as part of the environmental and marine surveillance groups (under activity 3.1.2)	Equity Participation	% of women participating in environmental and marine surveillance groups (target 20-30%)
Output 3.2. Learning and dissemination of project results	<ul style="list-style-type: none"> <li>Gender-disaggregated results produced</li> <li>Gender-dimensions of the project evaluated</li> </ul>	Equity Participation	# of gender-specific reports (or reports with gender-specific data) produced and disseminated

## 6. Mini-Grant Facility Gender Integration

As part of the project’s mini-grant facility (Activity 2.2.1) that is included to address the barrier of the unavailability of finance products, especially microfinance, to new and existing aquaculture operators in Nauru. This financing mechanism will award grants of up to USD 25,000-50,000 and will be open to existing and new aquaculture operators as well as community fisheries management committees.

The various entities involved in the governance of the project are all ultimately responsible for the inclusion of gender considerations into grants however each will have unique and complementary roles and responsibilities related specifically to the Grant Facility as summarized below:

- **The PMU** The PMU will issue calls for Expressions of Interest and support prospective applicants in the development of their project idea and applications. Additionally, the PMU will pre-screen sub-grant applications to determine project eligibility prior to sending to the Evaluation and Approval Panel (EAP). The GESS officer will ensure that gender assessments are conducted and gender considerations integrated into grant proposals. The process for the gender screening is included below.
- **Grant Facility Evaluation and Approval Panel (EAP):** The EAP will comprise a representatives from the PMU, a SPC’s FAME division, SPC’s Procurement Department, an environmental, social and gender expert, and a national expert from NFMRA. The EAP will carry out the full screening, technical and financial review of sub-grant applications to provide recommendations to the Grant Facility Board.
- **Designated Authority (DA) Approval of Grant Recipients:** upon finalisation of the recommendations from the EAP they will be sent to the DA who will review the projects and recommendations in detail. The DA will then formalise a decision for the grant approvals. This will trigger formalisation of the award and necessary contracting.

SPC’s Climate Finance Unit, in partnership with the Department for Environmental Management and Agriculture (DEMA, as the AF’s Designated Authority) will establish the Evaluation and Approval Panel (EAP) during the first six months of implementation. SPC and the DA will identify representatives for the EAP from relevant

<sup>135</sup> 30% direct women beneficiaries represents approximately 30 individual sub-grants and 3 community sub-grants

organisations and the PMU will act as secretariat to EAP, organising meetings around Expression of Interest calls as appropriate. As the Implementing Entity, SPC will provide supervision through quality assurance, oversight and reporting functions of grants through implementation. This will include carrying out regular supervision missions to ensure that all ESS requirements as well as gender integration, reporting obligations and fiduciary aspects are met with compliance through implementation of the project.

- **Gender and Environment and Social Safeguard (GESS) Officer:** The project will hire a GESS officer to support the implementation of gender integration into grant proposals. The GESS Officer will be in charge of carrying out a Gender screening and clearance of grants through the mini-grant facility.

### 6.1 Gender Screening, review and clearance process

The mini-grant facility includes a gender screening, review and clearance process that is part of the overall grant review process. The process includes the following steps:

1. Through the EOI grant applications will be requested to fill out a gender assessment form.
2. A screening of the gender assessment for each grant application will be undertaken by the project's GESS Officer. The GESS officer will confirm gender specific indicators are integrated into the grant logframe. The GESS may work with applicants to improve the gender aspects of the project
3. GESS provides clearance on the gender assessment and provides to the EAP
4. Signed grant agreements will include provisions to report annually on gender-specific indicators as well as provide sex-disaggregated data when applicable
5. **Monitoring:** The PMU and M&E Officer with support from the GESS Officer will monitor the grant's gender indicators through the annual reporting process.
6. **Evaluation:** The mid-term review as well as the terminal evaluation will provide an evaluation of the effectiveness of the overall gender integration for the mini-grant facility.

Figure 1 below presents an overview of the E&S screening and review process for the mini-grant facility. The indicative screening templates are provided below.

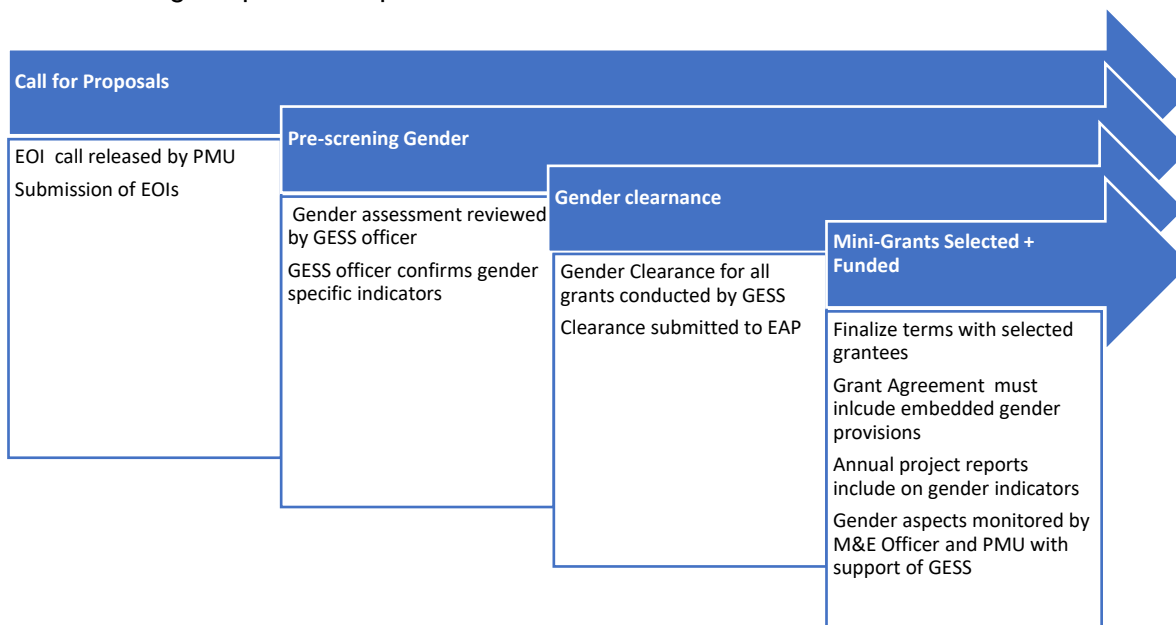


Figure 1. Gender Screening and Review Process for Mini-Grant Facility

### Templates for Mini-Grant Facility

Grant proponents will be requested to complete a gender assessment (table 4 below). The gender assessment will be validated and refined as necessary prior to the launch of the Mini-Grant Facility. The GESS officer will provide any edits and inputs and submit to the Grant Facility EAP for final approval.

Table 4. Gender Assessment Form

Question	Response	Reference to proposal
<b>Gender Considerations</b>		
Have women/gender focused groups, NGOs/CSO's or gender units in partner organizations been consulted in the project development?		
Will women/gender focused groups, NGOs/CSO's or gender units in partner organizations be involved in project implementation (if yes, please list)? Included as beneficiaries (if yes please provide % or number)?		
Does the project include strategies to reach out to the underrepresented groups that would benefit from the project?		
Does the project ensure that gender-specific obstacles to participation are identified and solutions designed, so that both women and men can access and participate in project activities in an equal manner?		
Are outcomes, outputs and activities designed to meet the different needs and priorities of women and men, boys and girls?		
Does the results framework include gender responsive indicators, targets and a baseline to monitor gender equality and women's empowerment results (if yes, please list)?		

After submission of the proposal the GESS Officer will provide a clearance to the EAP through a standardized Gender clearance form that includes see table 5 below for an indicative form to be used. The final clearance form will be refined/modified as needed by the GESS and submitted to the Grant Facility EAP for final approval

Table 5. Gender Assessment Clearance Form

<b>Key Mini-grant Information</b>			
Grant Name			
Estimated Project Duration	Start:	Completion:	Months:
Total Grant Amount:			
Grantee (Requesting Organization)			
Any other partners (in delivery)			
Key Partners (in delivery)			
Type of organization (i.e. non-profit, community association)			
Gender Assessment provided?	<i>Provide date</i>		
Have gender-specific indicators been included?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
List gender-specific indicators as well as indicators that can be disaggregated by sex	<i>Indicator List</i>		
GESS Review of	<i>Provide Brief Overview</i>		

assessment	
Gender Assessment Clearance decision:	<i>Please tick one</i> <input type="checkbox"/> <i>Cleared</i> <input type="checkbox"/> <i>Conditionally cleared</i> <input type="checkbox"/> <i>Clearance rejected</i>
For mini-grants cleared or conditionally cleared, define any additional work required	<i>Describe additional work required</i>
Justification for the clearance decision	<i>Please describe the basis for the clearance decision.</i>