



## CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

### PART I: PROJECT/PROGRAMME INFORMATION

**Title of Project/Programme:** Fiji Rewa River Catchment Adaptation Programme

**Country:** Republic of Fiji

**Thematic Focal Area:** Rural Development

**Type of Implementing Entity:** Regional Implementing Entity

**Implementing Entity:** SPREP – Secretariat of the Pacific Regional Environment Programme

**Executing Entities:** Ministry of Public Works, Meteorological Services and Transport, Fiji

**Amount of Financing Requested:** 10,000,000 (in U.S Dollars Equivalent)

**Project Formulation Grant Request (available to NIEs only):** Yes  No

**Amount of Requested financing for PFG:** 150,000 (in U.S Dollars Equivalent)

**Letter of Endorsement (LOE) signed:** Yes  X  No

*NOTE: LOEs 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 concept has been submitted before
- This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

**Please note that concept note documents should not exceed 50 pages, including annexes.**

# Project/Programme Background and Context:

## Summary

Fiji faces significant climate change challenges, including rising sea levels, extreme weather events, flooding, and saltwater intrusion, threatening livelihoods, infrastructure, and ecosystems. The Fiji Rewa Catchment Adaptation Programme aims to build resilience and ensure sustainable development by implementing inclusive, gender-sensitive strategies in the Rewa catchment, Fiji's largest river basin. Benefiting 8,428 people across four provinces, the project integrates climate resilience with green, grey, and blue infrastructure and sustainable livelihoods. Its three key components are climate-proofing grey infrastructure, ecosystem restoration, and strengthening institutions to address flooding. The project also prioritizes economic opportunities for women and youth, and supports training and community participation, aligning with Fiji's National Adaptation Plan for long-term climate resilience.

## Overview of Fiji Islands and its climate vulnerabilities

Fiji, an archipelago of 332 islands, is a Pacific economic hub but highly vulnerable to external shocks, particularly climate change. Situated approximately at 17.7134° south and 178.0650° east, the archipelago consists of two main islands, Viti Levu and Vanua Levu. Fiji is divided into four administrative divisions, including the Central, Northern, Eastern and Western Divisions (World Bank, 2023)<sup>1</sup>. The population of Fiji is 933,154 (Fiji Bureau of Statistics, 2023<sup>2</sup>), with the majority comprising Indigenous Fijians (56.8%) and Indo-Fijians (37.5%), along with smaller communities of Rotumans, Chinese, and Europeans. Classified as a middle-income country, Fiji's Gross Domestic Product (GDP) was USD 5.49 billion in 2023 (International Monetary Fund (IMF), 2024<sup>3</sup>). The economy is primarily driven by the services sector, which includes tourism, transportation, and financial services (Fiji Bureau of Statistics, 2023).

Climate change has significantly impacted Fiji with a sea level rise of approximately 210-240 millimetres since 1880 (Weber, 2024)<sup>4</sup> and an annual increase of about 3 millimetres per year. This rise has resulted in coastal erosion, flooding, and saltwater intrusion, which adversely affect agriculture and freshwater supplies. Additionally, average maximum temperature has increased by nearly 1°C since 1950, with a current rate of about 0.16°C per year (Shiiba et al., 2023)<sup>5</sup>. Rainfall patterns have also become more variable, with an average of 250-400 mm per month during the wet season and 80-150 mm per month during the dry season. Periods of drought are common during El Niño events, further stressing water resources (World Bank, 2023).

These climatic changes have led to increased risks of tropical cyclones, floods, siltation in rivers and landslides, which have significant socioeconomic impacts on the country. The Fijian government and local communities are working on adaptation measures, but the challenges remain substantial. Fiji has implemented several policies and frameworks to address development and climate change, focusing on sustainability and resilience. The National Climate Change Policy (NCCP) aims to protect Fiji's development priorities from climate change risks, while the Climate Change Act 2021 provides a legal framework for climate action (Fiji Ministry of Economy, 2019)<sup>6</sup>. The Green Growth Framework (GGF) promotes sustainable development (Fiji Ministry of Strategic

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<sup>1</sup> World Bank. (2023). Climate Vulnerability and Fiji's Geography. Climate Change Knowledge Portal. Retrieved from <https://climateknowledgeportal.worldbank.org/country/fiji/vulnerability>

<sup>2</sup> Fiji Bureau of Statistics. (2023). Population and Demographic Indicators. Retrieved from Fiji Bureau of Statistics.

<sup>3</sup> International Monetary Fund (IMF). (2024). Republic of Fiji: 2024 Article IV Consultation—Press Release; Staff Report; and Statement by the Executive Director for Fiji (IMF Country Report No. 24/159).

<sup>4</sup> Weber, E. H. (2024). Climate Change and Human Health in Fiji: Policies and Equity. In *Global Perspectives on Health Geography* (pp. 33–47). SpringerLink

<sup>5</sup> Shiiba, N., Singh, P., Charan, D., Raj, K., Stuart, J., Pratap, A., & Maekawa, M. (2023). Climate change and coastal resiliency of Suva, Fiji: a holistic approach for measuring climate risk using the climate and ocean risk vulnerability index (CORVI). *Mitigation and Adaptation Strategies for Global Change*, 28(9), 9656

<sup>6</sup> Fiji Ministry of Economy. (2019). Republic of Fiji National Climate Change Policy 2018 - 2030. Suva, Fiji: Ministry of Economy.

Planning, National Development and Statistics, 2014)<sup>7</sup>, while the National Adaptation Plan (NAP) enhances resilience to climate impacts (Government of Fiji, 2018)<sup>8</sup>.

## Rewa Catchment

Fiji consists of high volcanic islands with barrier reefs, atolls, sand cays, and raised coral islands, featuring numerous well-watered rivers and streams, including five large rivers (the Rewa, Navua, Sigatoka, Nadi and Ba rivers) on Viti Levu and several short rivers including the 55km long Dreketi River in Viti Levu (SPREP, 2016<sup>9</sup>).

The Rewa River, Fiji's longest and widest river, originates from Tomanivi, the highest peak (1,260m asl) in Fiji, and flows southeast for 145 kilometres from the central highlands to a delta at Laucala Bay near Suva. The Rewa River's tributaries are the Waidina, Waimanu, Wainimala and Wainibuka rivers, which all contribute to its extensive drainage basin and help sustain the rich agricultural lands of Fiji's Rewa Delta. The combined catchment area is approximately 3,059km<sup>2</sup>, and the tributaries areas are Wainibuka River with an area of 919km<sup>2</sup>, Wainimala River (980km<sup>2</sup>), Waidina River (546km<sup>2</sup>) and Waimanu River with an estimated area of 200km<sup>2</sup> and the lower Rewa tributaries 415km<sup>2</sup> (Water Authority of Fiji, 2023)<sup>10</sup>.

The Rewa Catchment supports commercial forestry, cattle, pasture, and vegetable farming, and provides critical drinking water for Suva and Nausori. It includes key hubs like Nausori Town and Airport, and several Fijian villages, making it economically and culturally significant. The densely populated area is highly vulnerable to climate change, facing sea level rise, storm surges, and king tides, requiring adaptation measures. Issues like siltation, poor catchment management, erosion, and aging infrastructure exacerbate flooding risks. Protecting this area is crucial for economic stability and growth, given its importance to Fiji's major economic hubs, Suva and Nausori. For this project, we have selected 40 villages within Rewa Catchment, out of a total of around 117 villages. The villages were selected using purposive selection and the total population of the 40 villages selected in Rewa Catchment is 8,428 (4,331 male, 4,013 female) (Table 1).

The catchment's terrain has an average slope of about 14 degrees. Its landscape transitions from narrow floodplains bordered by well-rounded hills in the middle catchment to a broad river plain downstream. Near its lower reaches, the river meanders and eventually forms a delta. The Rewa Catchment has an average stream gradient of 18.9 m/km, which is relatively steep. This steep gradient significantly impacts the flow regime, particularly in the upper catchment, where flash floods are common. In contrast, slower riverine floods occur along the floodplain closer to the river's mouth (Dept. of Meteorology, 2024<sup>11</sup>).

*Table 1 Village and population data for Rewa Catchment*

No#	Catchment	Selected Villages	Male	Female	Total
1	Rewa	21	2,446	2,375	4,821
2	Wainibuka	11	807	715	1,522
3	Wainimala	3	682	677	1,359

<sup>7</sup> Fiji Ministry of Strategic Planning, National Development and Statistics. (2014). Green Growth Framework for Fiji: Restoring the balance in development that is sustainable for our future. Suva, Fiji: Government of Fiji.

<sup>8</sup> Government of Fiji. (2018). Republic of Fiji National Adaptation Plan: A pathway towards climate resilience. Suva, Fiji: Ministry of Economy.

<sup>9</sup> SPREP. 2016. State of conservation in Fiji : country report 2013. Online publication available at <https://www.sprep.org/attachments/Publications/BEM/soco-fiji.pdf?form=MG0AV3> Accessed on 4 Jan 2025.

<sup>10</sup> Water Authority of Fiji. (2023). Rewa River Water Supply Scheme to Address Intermittent Supply. Retrieved from <https://waterauthority.com.fj/rewa-river-water-supply-scheme-to-address-intermittent-supply/>

<sup>11</sup> Dept. of Meteorology. 2024. Unpublished data. Government of Fiji.

4	Waimanu	1	80	50	130
5	Waidina	4	316	280	596
<b>Total</b>		<b>40</b>	<b>4,331</b>	<b>4,097</b>	<b>8,428</b>

Source of data: Provincial Council Offices of Rewa, Tailevu, Naitasiri and Ra.

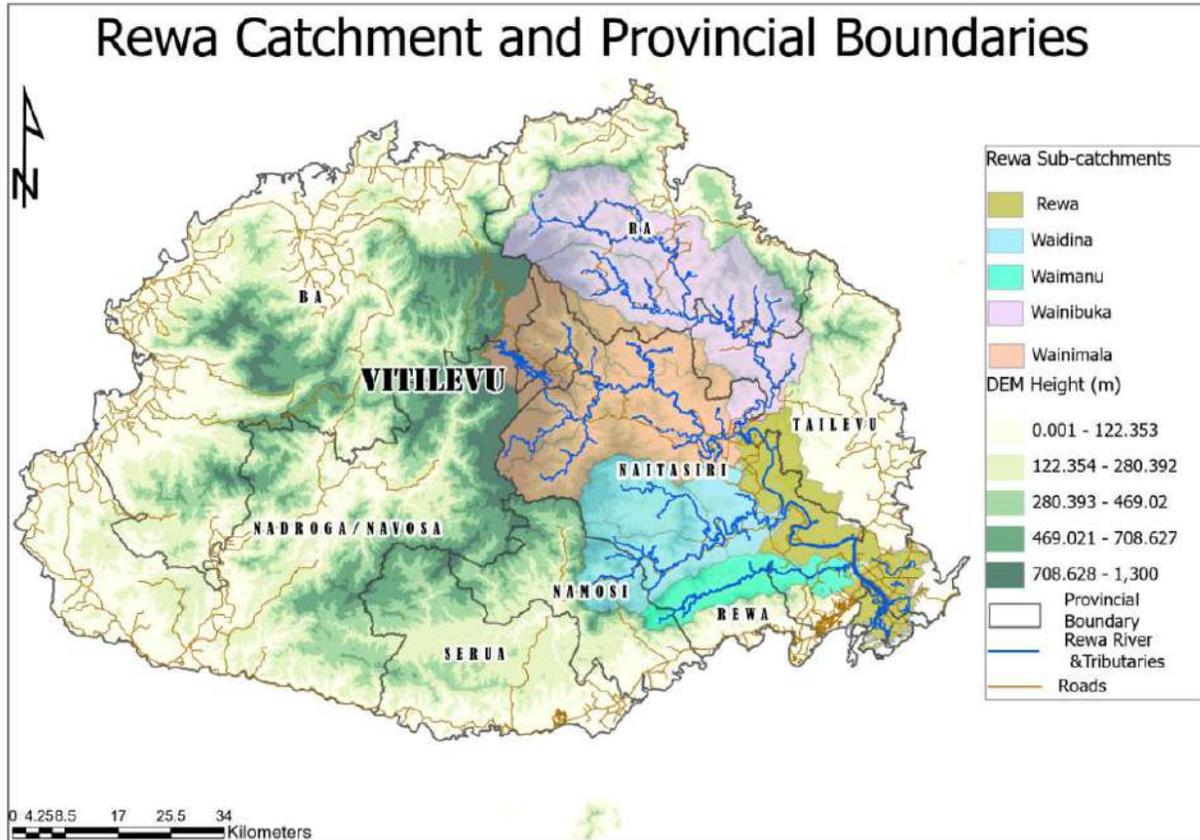


Figure 1 Map showing Rewa River Catchment and Provincial boundaries in Viti Levu

### Provinces in Rewa Catchment

The Rewa River Catchment comprises of the provinces Ra, Ba, Naitasiri, Tailevu, Namosi and Rewa. Provinces of Ba and Namosi are not included in this project because their area within the catchment is not significant, and therefore project focuses on Ra, Naitasiri, Tailevu and Rewa Provinces only. Here is a summary of socio-economic status of these provinces.

#### The Province of Ra

The Province of Ra, in the north-east of Fiji's Western Division, comprises of 93 villages and 20 districts (Tikinas<sup>12</sup>) with a population of 30,416 (7,229 males and 6,158 females) covering an area of 134,100 hectares

<sup>12</sup> Tikinas are districts comprising of many villages.

with 4,537 households (Fiji Bureau of Statistics, 2018)<sup>13</sup>. The major livelihood activity is subsistence farming and local markets where weekly sale of produce such as sugarcane, cassava, taro (Dalo), plantain (vudi), vegetables (taro leaves, *Abelmoschus manihot*, Duruka (Fijian asparagus)), and fruits (bananas, citrus, pineapples, pawpaw) takes place (Ibid, 2018). In 2016, villages in Ra were devastated by Category 5 Tropical Cyclone Winston which destroyed 327 buildings with total cost of damages amounting to FJD\$526M and total loss of production (agriculture, fisheries and forest) stood at FJD\$142million with an estimated recovery period of 5-10 years (Government of Fiji, 2016)<sup>14</sup>. Flooding and prolonged heavy rain contributes to landslides and sediments washed into the waterways and farm areas (Institute of Applied Science, 2016)<sup>15</sup>. A study on the 2012 flooding (January and March flooding) in Ba and Ra determined the cost of damages of flooding from one catchment in Ra estimated at FJD \$20.6million (Daigneault et al., 2014)<sup>16</sup>. Given the figure presented above and the fact that poverty rates in the rural western division was recorded at 42.7% (Fiji Bureau of Statistics, 2021)<sup>17</sup> makes the Ra community one of the most vulnerable in Fiji.

### **The Province of Naitasiri**

The Province of Naitasiri located in the Central Division, consists of ninety-one (91) villages and sixteen (16) districts (Tikinas) covering a land area of 166,200 hectares. The province has a population of 14,644 people, (8,174 males, 6,470 females) with a total household count of 4,335 (Fiji Bureau of Statistics, 2018). The people of Naitasiri rely on subsistence farming for their sustenance as well as a source of livelihood through the weekly sale of produce at the market. Apart from Kava (*Piper methysticum*), Cassava, Taro (Dalo) and Plantain (Vudi) are farmed (Ministry of Agriculture and Waterways, 2020)<sup>18</sup>. Vegetables such as taro leaves (rourou), *Abelmoschus manihot* (Bele), wild fern (Ota) and Duruka (Fijian asparagus) as well as fruits such as Banana, pawpaw, pineapple and mangoes are also grown. Villages of Naitasiri face the impacts of sea level rise as the saltwater moves inland during periods of heavy rain and exacerbates flooding and riverbank erosion. In early 2014, severe flooding in the Central Division of Fiji resulted in damages amounting to FJD\$11.5million with FJD\$10million being the bill for damages to the road network affecting access and mobility of rural communities in the Division. Crop loss from the 5 provinces in the Central Division amounted to over FJD\$1million with Naitasiri province being severely affected with crop damage of up to FJD\$584,491 (The Fiji Times, 2014)<sup>19</sup>.

### **The Province of Tailevu**

Tailevu is located on the south-eastern fringe of Viti Levu with 141 villages located within its 22 Tikinas (districts). Tailevu is the fifth largest province in Fiji with a population of 64,552, with 68.5% (44,232) living in a rural setting. The province has 12,974 hectares of arable land, approximately 23% of its total land area. Tailevu boasts different geography with mountainous, coastal, river and flat lands, and is home to two of the largest river systems in the country – the Rewa and Wainibuka rivers. It also hosts one of the main inter-island jetties on Viti Levu at Natovi, and smaller boat landings in Bau and Nakelo. Nausori International Airport also sits in Tailevu (Fiji Bureau of Statistics, 2018). The province has individual Integrated Village Development Plan (IVDP) for every village and a Provincial Strategic Plan covering 2022-2050. The sustainable development of the 141 villages in the 22 Tikinas is the core of this strategic plan and “Environment and Climate Change” is part of it. The Strategic Plan states that climate change and disaster is a threat to biodiversity, food security and home environments. The Village Profile and field observations reveals that saltwater intrusion into farms threatens crops and improper

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<sup>13</sup> Fiji Bureau of Statistics. (2018). 2017 Population and Housing Census: Administrative Report and General Tables. Suva, Fiji: Fiji Bureau of Statistics. Retrieved from <https://sdd.spc.int/collection/2017-population-and-housing-census-fiji-republic>

<sup>14</sup> Government of Fiji (2016). Fiji Post-Disaster Needs Assessment: Tropical Cyclone Winston, February 20, 2016

<sup>15</sup> Institute of Applied Science (2016). RESCCUE Climate Change Impacts in Ra and Kadavu Province. March 2016.

<sup>16</sup> Daigneault, Adam J. & Brown, Pike. (2014). Costs and Benefits of Ecosystem-based Adaptation for Flood Risk Reduction in Fiji. (2014). accessed at <https://ideas.repec.org/p/ags/aaea14/169398.html> on 8 Jan 2025.

<sup>17</sup> Fiji Bureau of Statistics (2021), 2019-20 Household Income and Expenditure Survey Main Report. August 2021.

<sup>18</sup> Ministry of Agriculture and Waterways. (2020). Fiji Agriculture Census 2020: Key Findings. Suva, Fiji: Ministry of Agriculture and Waterways.

<sup>19</sup> The Fiji Times (2014): \$11.5M Flood Bill, The Fiji Times, 12 March, 2014. Accessed at <https://www.fijitimes.com/fj/11-5m-flood-bill/> on 08/01/2025

waste management is an issue. The Strategic Plan emphasizes reviving traditional conservation practices, like the “tabu” system (no-take zones or prohibited fishing areas) to sustainably manage land, river, and ocean resources.. These areas are temporarily closed to fishing and other extractive activities to allow marine life to replenish and thrive. Climate and disaster resilience are key, with replanting mangroves along the coastline being a priority to protect both people and marine life (Govt. of Fiji, 2022)<sup>20</sup>.

### **The Province of Rewa**

The Province of Rewa consists of fifty-five (55) villages and nine (9) Tikinas (districts) covering a land area of 27,200 hectares and fourteen (14) Qoliqoli<sup>21</sup> area, namely, Sawau, Kulu, Nukunitabua, Naduruvesi, Nacurumoce, Raviravi, Suva, Nakurulevu, Navakavu, Vuninokonoko, Bativudi, Toga, Noco and Buregasaga. There are seven (7) Traditional Tabu Vakavanua Qoiliqoli areas and nil gazetted Marine Protected Areas (MPA). The Province of Rewa consists of 26,350 people (3,796 males and 12,554 females) with just over 2,666 households.

Integrated Village Development Profile (IVDP) formed the baseline for the development issues, priorities and development and investments needs. The main source of food is subsistence farming of root crops and vegetables, fisheries, municipal markets and processed food from retail shops. The main sources of income are employment and remittances, supplemented by subsistence farming of Dalo (taro) & yaqona *Piper methysticum*, fishing, harvesting of crustaceans such as mana (mud lobster), qari (crab), tuba, moci (prawns) and molluscs such as kaikoso, kai, sici, dio (thus both freshwater & marine), canteen operations, small business operations and ecotourism. Some villages in the Tikina of Rewa, Sawau and Raviravi still use the river as their source of water supply whilst villages on the island of Beqa are powered by generators and solar energy source (Fiji Bureau.of Statistics, 2018).

Annex III provides the map of Rewa Catchment showing the various sub catchments and provinces. Next, the specific flood vulnerabilities are described as this project focuses on addressing flood risk in Rewa Catchment. Climate change is exacerbating flood risk in Fiji through several mechanisms. Rising sea levels lead to higher coastal erosion and more frequent coastal flooding, particularly in low-lying areas. Increased rainfall intensity results in higher runoff and river flows, raising the likelihood of riverine flooding. More intense tropical cyclones bring powerful storm surges that inundate coastal areas. Rapid urbanization reduces natural flood absorption areas, making urban regions more susceptible to flooding. Furthermore, the underreporting of smaller-scale flood events underestimates the true scale of flood risk. These factors combined make Fiji highly vulnerable to climate change and related disasters.

### **Climate and Flood Analysis**

The Rewa Catchment falls under the Koppen-Geiger climate classification of hot and humid tropical rainforest. This means its coolest month has an average temperature of 18°C or higher, and the driest month receives at least 60 mm of rainfall. The catchment experiences a mean annual precipitation of 3,932 mm, with approximately 80% of this rainfall occurring between November and April during Fiji's hot and wet season. The lower catchment, represented by data from Nausori Airport Station, receives an average annual rainfall of 2,968 mm, while the upper catchment, based on data from Monasavu Station, receives 4,896 mm annually. Although rainfall decreases during the drier months (May to October), the catchment maintains a significant amount of precipitation throughout the year compared to catchments on the leeward side of the mountains. The average temperature across the catchment is approximately 23.6°C, with cooler conditions prevailing in the interior

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<sup>20</sup> Govt. of Fiji. (2022). Tailevu Strategic Plan 2022- 2050, Tailevu Provincial Council, Nausori, Fiji.

<sup>21</sup> The term "Qoliqoli" refers to traditional fishing grounds or marine areas in Fiji. It encompasses not just the seabed, but also the waters, sand, reefs, mangrove swamps, rivers, and streams associated with these areas. Qoliqoli rights are deeply rooted in Fijian culture and are tied to the customary ownership and usage rights of indigenous Fijians.

(upper) areas. Seasonal temperature variation is minimal, though the cooler months are from May to October, and warmer months are from November to April (Dept. of Meteorology, 2024<sup>22</sup>).

With five main rainfall stations within its sub-basins, the following is the rainfall characteristics and statistical data for Rewa Catchment. Major rainfall can be observed between October and March which correlates with the rainy and cyclone season in Fiji (Ibid, 2024). The catchment is vulnerable to flooding and in the past decade from 2011 to 2021, there have been 49 recorded flood events as observed at operating telemetry stations during high to extreme rainfall events directly correlating to river stage. From the total recorded events, 33 flood events were categorized as extreme where water level or river stage rose beyond warning thresholds with major impacts in terms of flooding of residential and low-lying areas and destruction of infrastructure and agricultural lands. According to SPC (2020<sup>23</sup>), flood events analysis between the years 1964-2014 reveals that impacts have been significant, with loss of life and economic losses running to millions of US Dollars.

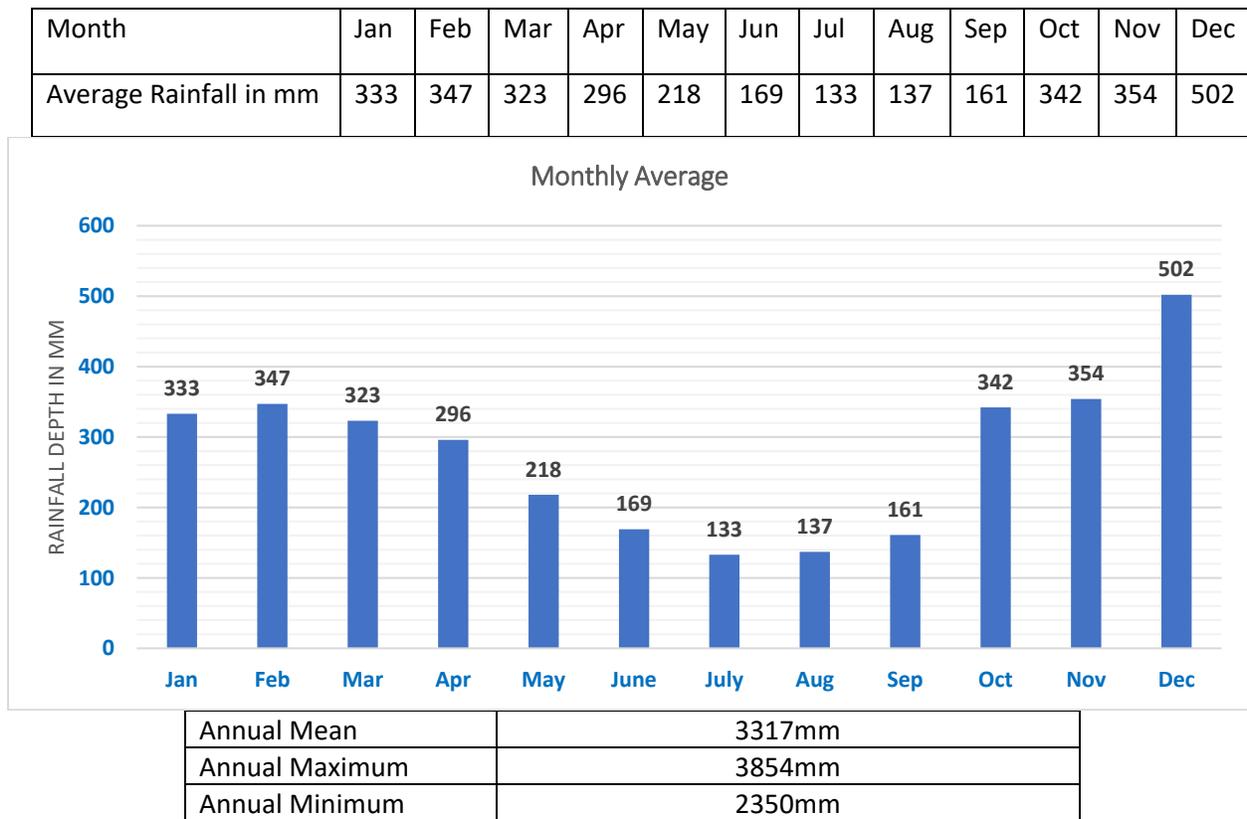


Figure 2 Rainfall average for Rewa Catchment

The following figure below provides data on major and minor flood peak values recorded at different telemetry stations within Rewa catchment during heavy rainfall events within the Rewa basin and its subbasins for the past decade. Highlighted red are extreme events that exceeded warning threshold that resulted in major flooding of low-lying and flood prone areas with major impacts. Early warning thresholds were established for Flood forecasting and early warning mechanisms to be utilized for severe rainfall and floods events (Dept. of Meteorology, 2024).

<sup>22</sup> Department of Meteorology. (2024). Unpublished data. Ministry of Public Works, Meteorological Services and Transport.

<sup>23</sup> Pacific Community (SPC). (2020). Pacific Damage and Loss (PDalo) Factsheet. Retrieved from Pacific Data Hub: <https://pacific-data.sprep.org/dataset/pacific-damage-and-loss-pDalo-factsheet>

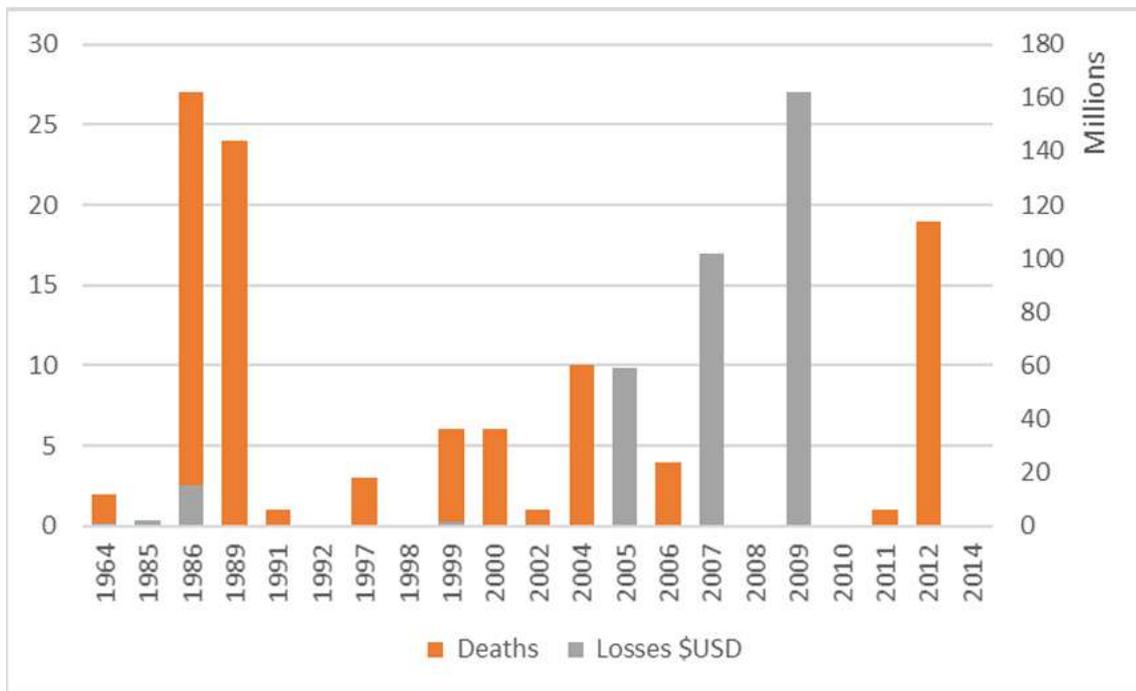


Figure 3 Impact of floods in Fiji (deaths and economic losses) between 1964-2014)

Increased rainfall and storm surges have led to more frequent and severe flooding in this area. Communities are faced with impacts of rising sea level which is inundating low-lying areas and disrupting livelihoods. Changes in sediment supply and increased wave action has accelerated erosion, threatening infrastructure and habitats. The high population density in deltas means that climate change impacts can lead to significant social and humanitarian issues, loss of livelihoods, and health risks. Anecdotal evidence from site visits done during Concept Note preparation indicate that communities used to grow rice in their farms 30 years ago and can no longer grow rice due to saltwater intrusion. The Village Headman of Matanimoli Village in Rewa Catchment said that the community including school children have to walk far distances to catch a bus as the buses do not come to the road near their village due to frequent flooding. Damaged and malfunctioning floodgates in the area is leading to increased flood risk, while siltation is affecting water supply infrastructure. Addressing these challenges is crucial for ensuring the well-being and resilience of these communities.

Table 2 Flood events in Rewa Catchment (2011-2021)

Tropical Cyclone season	No of Flood Events	Early Warning Thresholds	Extreme Events
2011-2012	<b>12m Nayavu - Dec 12, 2011</b> <b>5.11m at Nabukaluka -17 Nov 2011</b> 4.3m at Nabukaluka-30 Mar 2012 6.8m & 6.6m at Navolau- 20 Nov & 1 Dec 2011 <b>9.3m at Nayavu – 23 Jan, 13.5 on 24 Jan 2012</b> <b>13.3m on 30 Mar 2012</b> <b>15.6m on 1 Apr 2012</b>	<b>Alert Threshold:</b> Nabukaluka:4m Navolau: 6m Nayavu: 5m <b>Warning Threshold:</b> Nabukaluka:5m Navolau: 8m Nayavu: 8m	6
2012-2013	4.6m at Nabukaluka- 2 Oct 2012 4.6m on 19 Oct 2012 <b>6.0m on 17 Dec 2012</b> 4.5m on 6 Jan 2013 <b>9.1m at Navolau – 25 Jan 2012</b>		4

	<b>13.4m at Navolau 1 Apr 2012</b> 3.7m on 20 Feb 2013, 3.6m on 2 Mar 2013 <b>17.6m on 18 Dec 2012</b>		
2013-2014	<b>5.5m at Nabukaluka- 29 Nov 2013</b> <b>8.3m on the 6<sup>th</sup> of Feb 2014</b> <b>14.7m at Navolau – 18 Dec 2012</b> <b>7.9m at Navolau – 18 May 2014</b>		<b>4</b>
2014-2015	No significant flood incidence		
2015-2016	<b>5.1m m at Nabukaluka- 22 Dec 2015</b> <b>5.48m – 21 Feb 2015</b> <b>8.2m at Nayavu – 1 Jan 2016</b> <b>15.4m on 21 Feb 2016</b>		<b>4</b>
2016-2017	<b>6.1m at Nabukaluka- 18 Dec 2016,</b> <b>6.0m at Nabukaluka – 19 Dec 2016</b> <b>11.4m at Nayavu – 18 Dec 2016</b> <b>14.9m on 19 Dec 2016</b>		<b>4</b>
2017-2018	3.9m at Nabukaluka- 25 Oct 2017 & <b>5.3m 18 Oct 2018</b> 4.2m at Nabukaluka -1 Apr & 4.45m on 10 Apr 2018 <b>10.2m at Navolau – 15 Jan 2018</b>		<b>2</b>
2018-2019	<b>Nairukuruku -2018 (&gt;7m) 15 Jan</b> Nairukuruku – 21-27 Apr 2019 (4.5m) 3.9m at Nabukaluka – 29 Mar 2018 <b>5.57m at Korovou – 30 Jan 2019</b> <b>6.1m – 23 Apr 2019</b> 6.8m at Nayavu on 20 Apr 2019 <b>9.0m on 22 Apr, 11.5m on 27 Apr 2019</b>	<b>Alert Threshold:</b> Korovou: 2.5 Nairukuruku:4m <b>Warning Threshold:</b> Korovou: 3.5m Nairukuruku:5m	<b>4</b>
2019-2020	Nayavu - <b>9.2m 25 Dec 2019, 6.8m 8 Apr 2020</b> 5.1m at Nabukaluka- 21 Apr 2019, 4.6m n 26 Apr 2019 <b>10.6m at Navolau – 28 Dec 2019</b>		<b>3</b>
<b>2020-2021</b>	<b>5.36m at Korovou – 17 Dec 2020</b> <b>6.27m at Korovou – 30 Jan 2021</b>		<b>2</b>

## Gender specific climate and flood risks

Gender-related climate risks in Fiji are significantly influenced by existing social inequalities and gender roles, which systematically disadvantage women and girls, making them more vulnerable to the impacts of climate change and disasters. According to the Asian Development Bank (ADB)'s 2022 report<sup>24</sup>, the lower levels of education, care responsibilities, and limited access to resources among women and girls exacerbate their vulnerabilities. The labour force participation rate among females is 39.1%, while among males it is 77.3% for 2023. This significant gap indicates lower economic participation of women compared to men (ILO,2024).<sup>25</sup>

The Toksave Pacific Gender Climate Change Hub (2023)<sup>26</sup> highlights several key issues in Fiji: women and girls often have lower levels of education compared to men, limiting their opportunities and ability to adapt to climate change. Women are also underrepresented in leadership roles and decision-making processes, which affects their ability to influence policies and actions related to climate change. Additionally, gender-based violence

<sup>24</sup> Asian Development Bank (ADB). (2022). Women's Resilience in Fiji: How Laws and Policies Promote Gender Equality in Climate Change and Disaster Risk Management. Retrieved from Asian Development Bank.

<sup>25</sup> International Labour Organization. (2024). ILO Modelled Estimates and Projections database (ILOEST). Retrieved from ILOSTAT

<sup>26</sup> Toksave Pacific Gender Climate Change Hub. (2023). The Climate Crisis in Fiji: The Grim Realities and Available Opportunities for Gender and Climate Justice. Retrieved from Toksave Pacific Gender Resource. Online publication available at <https://toksavepacificgender.net/>

remains a significant issue and is exacerbated by climate change and natural disasters. Health risks are also higher for women and girls due to climate change, including increased rates of diseases and limited access to healthcare. Economically, women often have limited access to resources and opportunities, making them more vulnerable to the impacts of climate change. Furthermore, women are more likely to be affected by environmental degradation and natural disasters due to their roles in agriculture and resource management.

Gender gaps are stark, for example, only 60% of women in Fiji have completed secondary education compared to 70% of men. Women hold only 20% of leadership positions in climate-related organizations, and reports of gender-based violence increase by 30% during and after natural disasters. Women are 1.5 times more likely to suffer from climate-related health issues than men, and their participation in the labour force is 10% lower than that of men. Additionally, 80% of women in rural areas are involved in agriculture, making them highly vulnerable to climate impacts. Therefore, supporting women in sustainable agriculture and resource management practices is vital for building a more resilient and gender-equal society in Fiji (Toksava Pacific Gender Climate Change Hub, 2023). The Fiji National Climate Change Policy 2018 – 2030 (Fiji Ministry of Economy, 2019)<sup>27</sup> emphasizes a gender-responsive approach to climate change. In this proposed project we specifically target women, youth, and marginalized groups as beneficiaries for capacity building activities for livelihoods enhancement, as well as in the ecosystem conservation activities.

### **Problem Analysis**

The Rewa Catchment is affected by flooding which is exacerbated by climate change induced sea level rise, storm surges and increasing intensity of cyclones. This is causing siltation in rivers, erosion of riverbanks, flooding of farmlands and saltwater intrusion into farmlands. Most of the flood control infrastructure such as floodgates, flap gates, levees, spillways, channels and culverts are aged and need repair. Climate change is thus affecting food and water security affecting people in the Catchment. The poorest and most vulnerable of communities are affected the most. There is limited awareness of climate impacts and their causes at the community level and there are significant limitations in knowledge and action on sustainable adaptation solutions both at community level and across government extension structures. There is also limited data for decision making as there are inadequate flood monitoring networks in the catchment.

The livelihoods of communities in the catchment are dependent on natural resources including forests, mangroves and farmlands. Climate change impacts interact with unsustainable extraction of natural resources leading to increasing vulnerability of communities. There is need for awareness raising amongst communities to address climate impacts but also to follow sustainable practices. Buffer zones along riverbanks are not being followed, with farming done right to the edge of the river, causing erosion, which is further compounded by climate induced storm surges and heavy rains leading to more erosion. Farmers are planting against contours, leading to increasing erosion and runoff during heavy rains, which is increasing in intensity due to climate change. Sea level rise induced saltwater intrusion is affecting farming and many communities have abandoned growing certain crops which they used to (e.g. rice) due to soil salinity. These disproportionately affecting women, who tend to be the anchors of economic activity and community life.

### **Barrier Analysis**

Fiji faces several barriers in implementing climate change adaptation projects. These include a lack of awareness on adaptation measures, insufficient coordination among sub-national entities for catchment management, and a lack of technical capacity at the local level. Additionally, there is inadequate financing for flood control measures, limited community engagement in planning and lack of coordination between Government structures and communities on maintenance of flood control structures. The barriers are summarised in table below.

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<sup>27</sup> Fiji Ministry of Economy. (2019). Republic of Fiji National Climate Change Policy 2018 - 2030. Suva, Fiji: Ministry of Economy

Table 3 Barrier Analysis including adaptation needs and barrier description

Adaptation need/gap	Barrier	Barrier Description
Inadequate awareness on climate change adaptation measures	B1	Fiji's communities face challenges in climate adaptation due to limited knowledge, capacity, and information dissemination, particularly in rural areas. Media prioritizes immediate news over long-term issues, and climate change education isn't fully integrated into the national curriculum.
Lack of coordination amongst sub-national entities for catchment management	B2	The silo approach has hindered coordination among sub-national entities, leading to overlapping responsibilities and management gaps. Limited funding, technical expertise, and manpower also impede effective coordination. Change in Ministry portfolios have contributed to grey areas and weak coordination.
Lack of technical capacity at sub-national level and community level	B3	Previous government policies setting the retirement age at 55 years led to a significant loss of experienced technical capacity and institutional memory. Furthermore, due to out-migration of highly skilled staff there is currently poor technical capacity in sub-national institutions. Additionally, communities have weak capacity in sustainable natural resources management and livelihoods options that builds resilience.
Lack of data for informed decision making including hydrological observation data	B4	Generally, there is inadequate data on climate impacts, flood risks, exposure risks and vulnerability of critical infrastructure to climate impacts, such as extreme weather events and sea-level rise. There is limited data on the effectiveness of current adaptation measures for infrastructure, making it difficult to plan and implement more resilient solutions. There is limited observation data on surface water flows at Fiji Meteorological and Hydrological Service (FMHS).
Inadequate financing for flood control measures and ecosystem conservation	B5	Fiji faces significant funding challenges for flood control measures due to frequent natural disasters and competing development needs, with 3-4 cyclones annually causing over USD 1.4 billion in damages over the past decade (ADB, 2023). Limited funding has led to temporary solutions like river dredging in the Rewa Catchment. Despite increasing the conservation budget to FJD\$31.4 million for 2024-2025, the funds are insufficient for comprehensive reforestation, biodiversity protection, and climate adaptation, essential for mitigating climate change impacts. These financial constraints hinder large-scale conservation initiatives and necessary infrastructure improvements, critical for protecting Fiji's ecosystems and biodiversity.
Limited community engagement in planning	B6	Due to limited community engagement, most projects have taken a top-down approach, often resulting in challenges such as lack of community ownership of projects, mismatch priorities, resistance to implementation, and sustainability issues. Fiji's unique cultural diversity, geographical isolation of some communities, and traditional governance structures add extra layers of complexity to fostering effective community engagement. Addressing these specificities requires tailored approaches that respect and incorporate local customs and practices while enhancing communication and trust between communities and development agencies.

## Adaptation Needs

The climate and flood analysis, gender-specific risks, problem analysis, and barrier analysis highlight the challenges faced by communities in Rewa Catchment. The challenges are interlinked and hence solutions need to be holistic. Therefore, this project has three interlinked components, which target solutions for infrastructure upgrades, sustainable livelihoods and ecosystems conservation and, institutional strengthening. The barriers that each activity aims to address are referenced using numbering for barriers provided in Table 3 (B1 to B6).

Table 4 Components in the project

Outcome 1: A more resilient and adaptive infrastructure system that protects livelihoods and promotes sustainable development in the face of climate change	Outcome 2: Improved ecosystem health, and economic resilience of communities in Rewa Catchment	Outcome 3: Sub-National Institutions strengthened to incorporate adaptation into their planning, monitoring and reporting processes
<b>Component 1: Climate proofing of infrastructure through Nature Based Solutions</b>	<b>Component 2: Ecosystem Conservation and Livelihoods Enhancement</b>	<b>Component 3: Capacity Building &amp; Institutional Strengthening</b>
Activity 1.1 Conduct an assessment of areas prone to flooding including existing infrastructure. B4	Activity 2.1 Conduct 21 awareness raising and capacity building sessions in communities for sustainable utilization of mangroves. B1	Activity 3.1 Conduct 8 trainings for sub-national institutions on integration of adaptation planning into River Sub-Catchment Management Plans. B1
Activity 1.2 Repair 4 prioritized floodgates/flap gates to reduce flood risk B5	Activity 2.2 Provide tools, implements and seedlings to one existing mangrove and tree nurseries of Ministry of Fisheries and Forestry. B5	Activity 3.2 Conduct 8 awareness sessions to Turaga ni Koros <sup>28</sup> and community members on monitoring and reporting of climate impacts on infrastructure B6
Activity 1.3 Upgrade 25km of existing levee system, spillways, culverts & channels and improve drainage networks to reduce flood risk. B5	Activity 2.3 Document community-led initiatives rooted in indigenous knowledge on climate adaptation. B4	Activity 3.3 Conduct 100 Talanoa sessions at community level with Government, traditional leaders and stakeholders & establish a Divisional Yaubula <sup>29</sup> Working Group. B2, B6
Activity 1.4 Implement 50km of riverbank stabilization and rehabilitation for erosion control through planting of riparian vegetation. B5	Activity 2.4 Conduct 10 trainings for women and youth groups in sustainable mangrove aquaculture and value chain. B1	Activity 3.4 Develop a webpage and knowledge products (including videos) which are youth friendly for disseminating about the project outcomes. B1
Activity 1.5 Install 6 new and repair 4 existing telemetry stations for enhanced weather and flood monitoring. B4	Activity 2.5 Conduct 20 trainings in climate smart agriculture and sustainable land management practices for farmers. B1	Activity 3.5 Conduct 5 national workshops at inception stage, mid project and end of project for dissemination of outputs and outcomes. B1
	Activity 2.6 Conduct 5 trainings for women's groups and persons living with disabilities on NTFP and value chain for income generation. B1	

<sup>28</sup> Turaga ni Koros are Village, and this position is usually elected or appointed by the villagers and plays a crucial role in the local governance structure. The Turaga ni Koro acts as a kind of administrator overseeing the day-to-day functions of the village and delegating duties as necessary. For important decisions, the Turaga ni Koro consults with the chief, the Turaga ni Yavusa (head of the clan), and various Turaga ni Mataqali (heads of sub-clans) to ensure smooth village operations.

<sup>29</sup> A Yaubula Committee in Fiji is typically a local governance or community-based committee focused on environmental management and conservation efforts. These committees often work on initiatives related to sustainable forest management, mangrove conservation, and climate change adaptation projects. They play a crucial role in engaging and educating local communities about environmental stewardship and ensuring that conservation efforts are aligned with local needs and practices.



Figure 4 Forty villages within Rewa Catchment which were selected as beneficiaries to this project

## Targeted beneficiaries

The proposed project aims to support the Government of Fiji in implementing adaptation measures to address flooding, enhance ecosystem health and livelihoods, and strengthen institutions for climate adaptation. The project area is the Rewa River Catchment, covering 3,059 sq.km, approximately 17% of Viti Levu Island. Interventions will target 40 vulnerable communities in four provinces (Ra, Naitasiri, Tailevu, and Rewa) across the upper, middle, and lower catchment areas to enhance their resilience to climate impacts. These communities are indigenous i-Taukei villages with historical connections to the land, selected for their diverse ecosystems, high vulnerability to flooding, readiness to collaborate, established committees for project implementation, and prior engagement with NGOs. This strategic selection aims to ensure effective and sustainable adaptation efforts.

## Site selection process

To ensure a comprehensive and effective climate adaptation project, we used purposive sampling from discussions with Government entities to select 40 villages (from 117) in the Rewa River catchment in Fiji. This systematic approach allowed us to evaluate and prioritize the villages based on several key criteria. We assessed the ecosystem variety within each village, ensuring our project would encompass diverse ecosystems (upper, middle, and lower catchment areas), enhancing our overall conservation impact. We prioritized villages most at risk to maximize the benefits of our interventions. We evaluated the readiness of the community to work with us, ensuring selected villages were enthusiastic and prepared to actively participate in the project. We identified villages with committees already established to aid in the implementation of climate adaptation strategies, facilitating smoother project execution. By selecting villages that had previous engagements with NGOs, we leveraged established relationships and trust, enhancing the likelihood of project success and sustainability. Through this meticulous process, we identified 40 villages well-positioned to benefit from and contribute to our climate adaptation project, ensuring a strategic and impactful approach to building resilience against climate change.

## Consultation Process

The Ministry of Public Works, Meteorological Services and Transport (MPWMST) requested the Ministry of Environment and Climate Change (MECC) to apply for the Adaptation Fund to support flood-prone communities in the Rewa Catchment. The MECC approved this request and set up an interministerial Technical Working Group (TWG) to develop the concept note for a \$10 million proposal. The TWG, comprising various ministries and the South Pacific Regional Environment Programme (SPREP), drafted the project components based on national and sub-national reports and priorities.

The TWG selected 40 villages in the Rewa Delta for the project, considering varied topography and vulnerabilities. Eight villages were identified for scoping visits from December 5 to 16, 2024, to understand the impacts of climate change, community needs, and specific vulnerabilities. Meetings were held with Provincial Councils, Turaga-Ni-Koros, Agriculture Officers, Women's Groups, and communities. Field observations on flood hazards were made, and the scoping study report is provided in Annex IV.

During the full proposal development stage, all 40 villages will partake in the following consultation process:

1. MPWMST, SPREP and relevant line ministries technical team will travel to the communities to discuss the project requirements with the community and assess the area's vulnerability to flooding and identify beneficiaries for trainings on livelihoods enhancement activities.
2. All community leaders (Turaga ni Koro or chairman) agree to participate in the project and submit consent letters.
3. Before project implementation, the MPWMST technical team will conduct another round of consultations. All community members will participate in these meetings, where the MPWMST technical team will outline the project approach, the community's role, the expected outcomes, and all relevant safeguards to protect the community.

Given that all 40 villages in this proposal are highly vulnerable, indigenous i-Taukei communities, consultations will be conducted in both English and the local i-Taukei language. This approach ensures that all information is transparent and accessible to the marginalized communities benefiting from this project. The full funding proposal will include minutes from these consultations and all required consent forms, building on the initial screening consultations conducted to date.

## Project Objectives

The overall goal of the project is to enhance inclusive resilience and adaptive capacity in targeted communities in the Rewa River Catchment through infrastructure upgrades, livelihoods enhancement and institutional strengthening.

Specifically, the project objectives are divided into three components as follows:

Component 1- Objective is to climate proof flood control infrastructure through repairs and upgrades and reduce riverbank erosion using nature-based solutions

Component 2- Objective is to promote conservation of ecosystems with forests and mangroves and enhance livelihoods through trainings on sustainable fisheries and farming,

Component 3- Objective is to build institutional capacity for effective climate adaptation and flood control management through facilitating discussions between Government and communities, conducting trainings and awareness raising.

Through the first component, the outcome of a more resilient and adaptive infrastructure system that protects livelihoods and promotes sustainable development in the face of climate change will be achieved. Through the second component, the outcome of improved ecosystem health, and economic resilience of communities in Rewa Catchment will be achieved. Through the third component, Sub-National Institutions will be strengthened to incorporate adaptation into their planning, monitoring and reporting processes, as the outcome. The project will take an inclusive approach and include women, men, youth and marginalized groups.

## Project / Project Components and Financing

Table 5 Project Components and their financing

Project Outcomes	Expected Concrete Outputs	Amount USD
Outcome 1- A more resilient and adaptive infrastructure system that protects livelihoods & promotes sustainable development	Output 1.1 Assessment report on areas prone to flooding including existing levees, channels, spillways and culverts in the project area	1.1 USD 120,000
	Output 1.2 Four prioritized Floodgates and flap gates repaired	1.2 USD 700,000
	Output 1.3 Twenty-five kilometres of Levee system upgraded with repairs done to spillways, culverts and channels & road drainage networks improved to reduce flood risk	1.3 USD 4,100,000
	Output 1.4 Fifty kilometres of riverbank stabilized, and riparian zone rehabilitated with planting of riparian vegetation for erosion control	1.4 USD 960,000
	Output 1.5 Six new & four existing telemetry stations installed for weather & flood monitoring	1.5 USD 200,000 (Total USD 6,080,000)
Outcome 2: Improved ecosystem health, and economic	Output 2.1 Twenty-one awareness raising and capacity building sessions <sup>30</sup> done in communities for sustainable utilization of mangroves	2.1 USD 75,000
	Output 2.2 One existing mangrove and tree nursery supported with tools & implements	2.2 USD 100,000

<sup>30</sup> In 21 villages located in the Rewa Delta

resilience of communities in Rewa Catchment	Output 2.3 One book developed which document community led initiatives rooted in Indigenous knowledge for climate adaptation	2.3 USD 50,000
	Output 2.4 Ten trainings conducted for women and youth groups on sustainable mangrove aquaculture and value chain	2.4 USD 100,000
	Output 2.5 Twenty trainings in Climate Smart Agriculture & value chain (30% women, 20% youth)	2.5 USD 250,000
	Output 2.6 Five trainings conducted for women and PLWD on NTFP and value chain	2.6 USD 168,470 (Total USD 743,470)
Outcome 3: Sub-National Institutions strengthened to incorporate adaptation into their planning, monitoring and reporting processes	Output 3.1 Eight <sup>31</sup> trainings conducted for sub-national institutions on integration of adaptation planning into River Sub Catchment Management Plans	3.1 USD 160,000
	Output 3.2 Eight <sup>32</sup> awareness sessions conducted for Turaga Ni Koros (Village Headmen) and community members on monitoring and reporting of climate impacts on flood control	3.2 USD 100,000
	Output 3.3 100 Talanoa (discussion) sessions conducted over 5 years at community level with Government, traditional leaders and various relevant stakeholders and establish a Divisional Yaubula Working Group for improved management of flood control & monitoring assets.	3.3 USD 800,000
	Output 3.4 One webpage developed, server procured and five knowledge products including videos which are youth friendly for dissemination of the project outcomes	3.4 USD 150,000
	Output 3.5 Five National workshops conducted for inception and dissemination of project.	3.5 USD 250,000 (Total USD 1,460,000)
Project Execution cost (9.495% of Total Project Cost)		USD 869,030
Total Project Cost		USD 9,152,500
Project Cycle Management Fee charged by the Implementing Entity (8.475% of Total Project Cost)		USD 847,500
<b>Amount of Financing Requested</b>		<b>USD 10,000,000</b>

## Projected Calendar

Table 6 Calendar of the project

Milestones	Expected Dates
Start of Project/Programme Implementation	January 2026
Mid-term Review	May 2028
Project/Programme Closing	December 2030
Terminal Evaluation	February 2031

## PART II: PROJECT / PROGRAMME JUSTIFICATION

<sup>31</sup> Two trainings per Province.

<sup>32</sup> Trainings by Tikinas (districts) and where possible neighbouring Tikinas will be combined for the training.

**A. 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.**

The proposed climate change adaptation project encompasses three critical components. The proposed climate change adaptation project includes three key components: climate-proofing infrastructure through nature-based solutions, ecosystem conservation and livelihoods enhancement, and capacity building and strengthening institutions. By combining infrastructure improvements, ecosystem restoration, livelihood diversification, and institutional capacity building, the project aims to reduce flood risks, protect vital ecosystems, and empower communities with the knowledge and skills needed to adapt to climate change. This comprehensive strategy ensures a resilient and sustainable future for communities, fostering collaboration and collective action to address the challenges posed by a changing climate.

**Component 1**

Activities under Component 1 aim to create a resilient and adaptive infrastructure system that protects livelihoods and promotes sustainable development in the face of climate change. By assessing flood-prone areas, repairing four prioritized floodgates and flap gates, upgrading 25 kilometres of levee systems, spillways, culverts, and channels, and improving road drainage networks, the project will significantly reduce flood risks. Stabilizing 50 kilometres of riverbanks and rehabilitating riparian zones with vegetation will enhance erosion control and protect vital ecosystems. Installing six new and repairing four existing telemetry stations will provide enhanced data for weather and flood monitoring, enabling timely and informed decision-making. These activities will result in concrete outputs that contribute to a more resilient infrastructure system, mitigate flood risks, enhance biodiversity, and improve the overall adaptive capacity of the community.

COMPONENT 1	
Outcome 1- A more resilient and adaptive infrastructure system that protects livelihoods and promotes sustainable development in the face of climate change	
Activity 1.1 Conduct an assessment of areas prone to flooding including existing levees, culverts, channels and spillways in the project area.	Output 1.1 Assessment report on areas prone to flooding including existing levees, channels, spillways and culverts in the project area
Activity 1.2 Repair 4 prioritized floodgates/flap gates to reduce flood risk	Output 1.2 Four prioritized Floodgates and flap gates repaired
Activity 1.3 Upgrade existing levee system, spillways, culverts and channels and improve road drainage networks to reduce flood risk.	Output 1.3 Twenty-five kilometres of Levee system upgraded with repairs done to spillways, culverts and channels and road drainage networks improved to reduce flood risk
Activity 1.4 Implement riverbank stabilization and erosion control through planting of riparian vegetation.	Output 1.4 Fifty kilometres of riverbank stabilized, and riparian zone rehabilitated with planting of riparian vegetation for erosion control
Activity 1.5 Install 6 new and repair 4 existing telemetry stations for enhanced weather and flood monitoring.	Output 1.5 Six new and four existing telemetry stations installed to enhance data for weather and flood monitoring

*Figure 5 Component 1 Outcomes, Outputs and Activities*

Activity 1.1 will undertake an assessment of flood risks in the catchment through studies on the existing flood management infrastructure such as levees, spillways, channels, culverts and draw on lessons learnt from past

studies by Department of Waterways on floodgates and flap gates. This is necessary as most infrastructure was built during the 1990s and no recent assessment was done. An assessment that is planned by Department of Waterways for the floodgates and flap gates, for early 2025. Activity 1.1 will provide valuable information that will help target interventions for drainage improvements covered under activity 1.3. It addresses the barrier of lack of finance to address flooding through upgrade of drainage infrastructure.

Activity 1.2 is on repair of four existing floodgates/flap gates in Rewa Province. The rationale for this is explained below. In the 1990s, the Ministry of Land, Water, and Resource Management (LWRM) constructed 40 floodgates, including flap gates, in flood-prone areas like Rewa and Tailevu South to protect communities and infrastructure from flooding and saltwater intrusion. These structures have been vital in managing flood risks and enhancing regional resilience. However, due to funding constraints, regular maintenance and upgrades have been neglected, leading to the degradation of these flood mitigation assets.

Out of the 40 floodgates in the Rewa delta, the Ministry of Agriculture and Waterways has already repaired 19 floodgates and flap gates. An additional 17 will be repaired by a project which was recently approved by Global Environment Facility under the Special Climate Change Fund (SCCF), while the remaining 4 floodgates and flap gates are set to be repaired by this proposed project through funding from the Adaptation Fund.

Activity 1.2 will address the barrier of lack of finance for flood risk reduction through providing finance to repair floodgates and flap gates. The Ministry of Agriculture and Waterways has selected four floodgates and flap gates for significant repair and upgrading under this project. The upgrades will include replacing four wooden doors/gates with steel ones, replacing mild steel upper brackets, fabricating stainless-steel bottom brackets and ferrules, repairing damaged concrete with epoxy, and replacing rubber seals. This project will involve women, youth, and persons with disabilities in the design, monitoring, and maintenance of infrastructure. The locations of the floodgates are provided in the table below.

*Table 7 Location of floodgates/flap gates included in the project for repair*

No	Site	Coordinates	Province	Repair needed
1	Navilaca	178°36'34.15"E, 18°6'13.43" S	Rewa	Upgrade door to steel flap gate door, provide erosion control through planting of riparian vegetation.
2	Narocake	178°36'38.45"E, 18°5'55.39" S		
3	Suva Lailai	178°34'52.17"E, 18°6'6.21" S		
4	Nakuruwai	178°36'10.67"E, 18°5'42.04" S		

Based on the recommendations from the assessment done under Activity 1.1, levees, will be upgraded, culverts, channels and spillways will be repaired and thereby drainage in the area improved, through Activity 1.3. A Public Private Partnership (PPP) arrangement will be explored for Ararata Settlement which has three culverts that need repair. As the users of the farm are commercial farmers, hence a PPP will be discussed in this project with the farmers. For remaining areas where subsistence farmers use the land, direct intervention of repairing structures including culverts, spillways, levees, channels will be done. This addresses the barrier of lack of finance for flood control measures through supporting upgrade of this flood control infrastructure.

Activity 1.4 will address erosion of riverbanks which are also affecting communities through flooding of their farms. will reduce flood risk for communities in the area affected. Data is critical to decisions making and, in this regard, Activity 1.5 is essential as it will install 6 new telemetry stations and repair 4 existing ones. This will directly address the barrier of lack of data and the rationale for this is provided below.

Initially, five hydrometric stations were installed in the Rewa catchment through the Pacific Hydrological Cycle Observing System (HYCOS) Project in 2008. These stations, located in the main Rewa river and its four tributaries, were later upgraded to communicate via the Iridium satellite network for real-time data transmission to the Fiji Meteorological Service (FMS). Despite this, the quality of hydrological data remains poor due to limited resources for maintenance and quality assurance, vandalism, and access issues. The sparse network of hydro-meteorological stations and limited staff hinder effective flood monitoring and forecasting. To address this, the

project proposes installing six new telemetry stations and repairing four existing ones to improve rainfall and flow data collection, enhancing flood monitoring and early warning systems in the Rewa catchment.

Table 8 Proposed telemetry stations in Rewa Catchment

No	Station Name	Catchment	Equipment Type	Location (Latitude/ Longitude)	Upstream Catchment Area	Total Catchment Area
1	Nabukaluka- Existing station to be repaired	Waidina	Water level /rainfall	17 58'15"/ 178 19' 17"	250km <sup>2</sup>	550km <sup>2</sup>
2	Namosi Secondary School	Waidina	Rainfall	18 02'18"/ 178 08' 14"	150km <sup>2</sup>	550km <sup>2</sup>
3	Waivaka	Waidina	Water Level	18 02' 03"/ 178 10' 39"	150km <sup>2</sup>	550km <sup>2</sup>
4	Nairukuruku -Existing station to be repaired	Wainimala	Water Level/Rainfall	17 49'03"/ 178 17'10"	130km <sup>2</sup>	980km <sup>2</sup>
5	Nabukunivatu Secondary School	Wainimala	Rainfall	17 49' 39"/ 178 07'03"	130km <sup>2</sup>	980km <sup>2</sup>
6	Laselevu	Wainimala	Water Level	17 45'13"/ 178 07'41"	530km <sup>2</sup>	980km <sup>2</sup>
7	Wailoa -Existing but need to be repaired	Wainimala	Rainfall	17 44'21"/ 178 06'38"	190km <sup>2</sup>	980km <sup>2</sup>
8	Nakorovu	Wainibuka	Rainfall	17 42'50"/ 178 22'25"	340km <sup>2</sup>	920km <sup>2</sup>
9	Wailotua- Wailotua ck	Wainibuka	Water Level	17 45' 31"/ 178 24' 01"	31km <sup>2</sup>	920km <sup>2</sup>
10	Nayavu- Existing station to be repaired	Wainibuka	Water level/rainfall	17 42'08"/ 178 22'09"	710km <sup>2</sup>	920km <sup>2</sup>

## Component 2

Component 2 aims to improve ecosystem health and enhance the economic resilience of communities in the Rewa Catchment. The project will conduct awareness-raising and capacity-building sessions to promote the sustainable utilization of mangroves, crucial for natural flood control. It will support existing mangrove and tree nurseries of the Ministry of Forestry with tools, implements, and seedlings, ensuring resources for reforestation and conservation projects. Additionally, documenting community-led initiatives rooted in Indigenous knowledge will preserve valuable traditional practices effective in climate adaptation.

COMPONENT 2	
Outcome 2: Improved ecosystem health, and economic resilience of communities in Rewa Catchment	
Activity 2.1 Conduct awareness raising and capacity building sessions in communities for sustainable utilization of mangroves. B1	Output 2.1 Twenty-one awareness raising and capacity building sessions done in communities for sustainable utilization of mangroves
Activity 2.2 Provide tools, implements and seedlings to existing mangrove and tree nurseries of Ministry of Fisheries and Forestry. B5	Output 2.2 One existing mangrove and one tree nursery of Ministry of Fisheries and Forestry supported with tools implements and seedlings
Activity 2.3 Document community-led initiatives rooted in indigenous knowledge on climate adaptation. B1	Output 2.3 One book developed which document community led initiatives rooted in Indigenous knowledge for climate adaptation
Activity 2.4 Conduct training for women and youth groups in sustainable mangrove aquaculture and value chain. B1	Output 2.4 Ten trainings conducted for women and youth groups on sustainable mangrove aquaculture and value chain

Activity 2.5 Conduct training in climate smart agriculture and sustainable land management practices for farmers. B1	Output 2.5 Twenty trainings conducted in Climate Smart Agriculture and value chain for farmers (30% women, 20% youth)
Activity 2.6 Conduct training for women's groups and persons living with disabilities on Non-Timber Forest Products and value chain for income generation. B1	Output 2.6 Five trainings conducted for women's groups and persons living with disabilities on Non-Timber Forest Products and value chain

Figure 6 Component 2 Outcomes, Outputs and Activities

Communities in the upper catchment rely on forests for natural resources and it supports their livelihoods. While communities in the Delta rely on mangroves for their livelihoods and food. Activity 2.1 will create awareness on sustainable utilization of mangroves, so that over extraction of firewood does not threaten the health of these ecosystems. Mangroves provide a buffer against storm surges, are natural flood control mechanisms and are important habitat for aquatic species and birds. The activity addresses the barrier of lack of awareness B1. Mangrove conservation and sustainable utilization of mangroves is included in Activity 2.1 and Activity 2.2 provides support to Ministry of Fisheries and Forestry's mangrove nurseries. This addresses the barrier of lack of finance for ecosystem restoration, particularly mangroves which are nature's flood control mechanisms. Mangroves provide natural barriers against coastal erosion and flooding, enhance biodiversity, and support carbon sequestration. They also offer sustainable livelihood opportunities for communities, such as fishing and ecotourism, fostering economic resilience. By protecting and sustainably managing mangroves, the project enhances climate resilience, supports local economies, and promotes long-term environmental sustainability.

Fiji signed the Ramsar Convention in 2006 (Ramsar Convention on Wetlands, 2024)<sup>33</sup> and launched its Wetlands Directory in February 2024. Mangrove Forest in Fiji consists of about 4% of Fiji's entire forest (Ministry of Fisheries and Forestry, 2024)<sup>34</sup>. The delta is a vast expanse of prime mangrove forest with a vegetation cover of about 35,393ha (Tuiwawa et al. 2013)<sup>35</sup> and an extent that measures more than 45,000ha (Ministry of Fisheries and Forestry, 2024). The Rapid Biodiversity Assessment of the delta, under the Fiji Mangrove Ecosystems for Climate Change Adaptation & Livelihoods (MESCAL) further identified six vegetation types: Mangrove forest and shrub, Coastal strand and beach vegetation, Freshwater wetland swamps, Lowland rainforest, Non-forest and Water body; and 18 forest/habitat type that make up the entire Rewa delta, namely: Acrostichum swamp, Back of the mangrove forest, Bruguiera forest, Human habitation area, Mixed mangrove forest, Rhizophora forest, Salt marsh, Coastal forest, Freshwater wetlands, Anthropogenic secondary forest, Lowland secondary forest, Agriculture area, Roads, Coral reefs, Deepwater, Intertidal mudflats, and Rivers. (Tuiwawa et al. 2013). Further, the delta is also an important roosting ground for many migratory and land birds, including the nursery ground for a diverse range of marine and brackish water species (Naikatini, 2013; Copeland et al. 2013; Batibasaga et al. 2013). The delta remains the largest and most extensive mangrove stand in Fiji.

Activity 2.2 will complement Activity 2.1 through supporting Government mangrove nurseries, so that communities can be supported in mangrove restoration activities. Activity 2.3 is on documenting indigenous knowledge related to climate change adaptation. Documenting community-led initiatives rooted in indigenous knowledge on climate adaptation is important for our project because it ensures that local, traditional practices are recognized and integrated into climate adaptation strategies. This approach enhances the resilience of communities by combining the strengths of indigenous knowledge with modern scientific methods, fostering sustainable and culturally relevant solutions. It also empowers communities by valuing their expertise and promoting ownership of climate adaptation efforts, ultimately leading to more effective and long-lasting outcomes. This activity addresses the lack of data as articulated in barrier B4.

<sup>33</sup> Ramsar The Convention on Wetlands. (2024). Fiji. Online publication available at [Fiji | The Convention on Wetlands, The Convention on Wetlands](#)

<sup>34</sup> Ministry of Fisheries and Forestry. (2024). Press Release. Online publication available at <https://www.forestry.gov.fj/pressdetail.php?id=72>

<sup>35</sup> Tuiwawa, M., Pene, S. and Tuiwawa, S. (Eds.) (2013). A Rapid Biodiversity Assessment, Socio- economics Study and Archaeological Survey of the Rewa River Mangroves, Viti Levu, Fiji. IUCN Oceania, Suva, Fiji.

Activity 2.4 builds on Activities 2.1 and 2.2, as it supports sustainable utilization of mangroves for livelihoods improvement. Livelihoods improvement helps with climate adaptation by enhancing the economic resilience of communities, enabling them to better withstand and recover from climate impacts. Improved livelihoods provide economic stability, enabling communities to invest in adaptive measures, infrastructure, and technologies, while increasing access to resources and knowledge for effective climate adaptation and long-term resilience. This addresses the barrier of lack of awareness (B1).

Activities 2.5 and 2.6 also focuses on livelihoods and directly addresses barrier B1 which is lack of awareness in climate change adaptation methods. Training women and youth groups in sustainable mangrove aquaculture and value chains, as well as educating farmers in Climate Smart Agriculture, will diversify livelihoods and enhance community resilience to climate change. Additionally, providing training for women's groups and persons living with disabilities on Non-Timber Forest Products (NTFP) and value chains will create inclusive economic opportunities which will incentivize forest conservation, as NTFPs can thrive in health forests. Maintaining healthy ecosystems are necessary for communities who are dependent on them for their livelihoods. Training in value chains is essential for farmers and fishers as it enhances efficiency, productivity, and market access, while enabling value addition and sustainable practices. This leads to increased income, economic resilience, and long-term sustainability of their livelihoods. The training materials will be gender sensitive and we will ensure that training sessions are accessible for women, youth, and persons with disabilities.

Climate-smart agriculture (CSA) in Fiji has evolved significantly since the early 2010s, focusing on sustainable practices to address the impacts of climate change. Key initiatives include crop diversification, agroforestry, and water management. Despite challenges such as inconsistent production and supply, there has been a growing uptake of CSA practices like contour farming, organic agriculture, and the use of resilient crop varieties. Upscaling CSA in Fiji is essential to mitigate the increasing impacts of climate change on agriculture. The government's 10-year strategic plan aims to develop and promote CSA, diversify crops and livestock, build capacity, and provide policy support. By implementing integrated strategies and fostering collaborations, Fiji seeks to build more resilient, inclusive, and sustainable agrifood systems. This upscaling effort is crucial for ensuring food security, enhancing economic stability, and mitigating climate change impacts in the long term.

Fiji's forest ecosystems are governed by the Convention on Biological Diversity (CBD), which aims to conserve biodiversity, promote sustainable use of its components, and ensure fair sharing of benefits arising from genetic resources. Fiji's forests cover approximately 52.6% of the landmass, estimated at 1.8 million hectares. These forests are categorized into preserved, protected, and multiple-use forests, with over 80% of native forests communally owned. Activity 2.2 supports forest conservation and Activity 2.6 provides training to communities on utilization of non-timber forest products. Fiji's forest ecosystems are governed by the Convention on Biological Diversity (CBD), which aims to conserve biodiversity, promote sustainable use of its components, and ensure fair sharing of benefits arising from genetic resources (CBD, nd)<sup>36</sup>. Fiji's forests cover approximately 52.6% of the landmass, estimated at 1.8 million hectares. These forests are categorized into preserved, protected, and multiple-use forests, with over 80% of native forests communally owned (Ministry of Forestry, nd)<sup>37</sup>. However, Fiji's biodiversity faces threats from deforestation and timber exploitation. Therefore, this project includes awareness raising on forest conservation and capacity building in non-timber forest products as a livelihood's enhancement activity.

### Component 3

Component 3 aims to strengthen sub-national institutions by incorporating climate adaptation into their planning, monitoring, and reporting processes. By conducting training sessions and awareness programs for local leaders

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<sup>36</sup> Convention on Biological Diversity. (n.d.). Fiji - Country Profile. Retrieved from <https://www.cbd.int/countries/profile/default.shtml?country=fj>

<sup>37</sup> Ministry of Forestry. (n.d.). Press Release: Forest Conservation with Fiji's Forestry ER Program. Retrieved from <https://www.forestry.gov.fj/pressdetail.php?id=120>

and community members, the project will enhance the capacity to identify and mitigate climate risks effectively. Establishing collaborative working groups and facilitating Talanoa sessions will foster a unified approach to managing flood control assets and other climate impacts. Additionally, creating youth-friendly knowledge products and conducting national workshops will ensure widespread dissemination of project outcomes, promoting informed decision-making and sustained climate resilience efforts across all levels of governance.

COMPONENT 3	
Outcome 3: Sub-National Institutions strengthened to incorporate adaptation into their planning, monitoring and reporting processes	
Activity 3.1 Conduct trainings for sub-national institutions on integration of adaptation planning into River Sub-Catchment Management Plans. B1	Output 3.1 Eight trainings conducted for sub-national institutions on integration of adaptation planning into River Sub Catchment Management Plans
Activity 3.2 Conduct awareness sessions to Turaga ni Koros and community members on monitoring and reporting of climate impacts on infrastructure including from flooding. B6	Output 3.2 Eight awareness sessions conducted for Turaga Ni Koros (Village Headmen) and community members on monitoring and reporting of climate impacts on flood control assets to protect community and public utilities infrastructure.
Activity 3.3 Conduct Talanoa sessions at community level with Government, traditional leaders and various relevant stakeholders and establish a Divisional Yaubula Working Group to address climate change impacts. B2, B6	Output 3.3 100 Talanoa (discussion) sessions conducted over 5 years at community level with Government, traditional leaders and various relevant stakeholders and establish a Divisional Yaubula Working Group for improved management of flood control & monitoring assets.
Activity 3.4 Develop a webpage and knowledge products (including videos) which are youth friendly for disseminating about the project outcomes. B1	Output 3.4 One webpage developed, server procured and five knowledge products including videos which are youth friendly for dissemination of the project outcomes
Activity 3.5 Conduct national workshops at inception stage, mid project and end of project for dissemination of outputs and outcomes. B1	Output 3.5 Five national workshops conducted for inception and dissemination of project.

Figure 7 Component 3 Outcomes, Outputs and Activities

Activity 3.1 aims to address the lack of awareness (B1) on climate adaptation measures by conducting trainings for sub-national institutions on integrating adaptation planning into River Sub-Catchment Management Plans. This will enhance local capacity for climate resilience by equipping these institutions with the necessary skills and knowledge to incorporate climate change projections and risk reduction strategies into their management plans. As a result, local communities will be better prepared to handle climate-induced hazards such as flooding and cyclones, contributing to more sustainable and resilient development. This also supports the implementation of Fiji's National Adaptation Plan (NAP).

The Office of the Commissioner Central is at the divisional level, and which serves the provinces of Naitasiri, Rewa and Tailevu, oversees projects by various line ministries such as Agriculture, Waterways, Forestry, Fisheries, Environment, Climate Change, Public Works, Metrology Services, and Rural Development. The village hierarchy, including the Yaubula committee at village level, led by the Turaga ni Koro, assesses and reports on issues like flooding and agricultural needs, which are then compiled at the Tikina level (district) and directed to the national level, bypassing the divisional level (Provinces). This often delays progress due to competing priorities and funding constraints. The proposed training aims to enhance sub-national institutions to incorporate adaptation into their planning, monitoring, and reporting processes.

Activity 3.2 addresses the barrier of weak community engagement in flood risk management. Awareness sessions for Turaga ni Koro (village leaders) and community members on monitoring and reporting climate impacts on infrastructure, including flooding will enhance local capacity for climate resilience. By educating these key community figures, they can better identify, monitor, and report climate-related damages, ensuring timely and effective responses to protect infrastructure and livelihoods.

Activity 3.3 tackles the barriers of lack of finance and weak community engagement in flood risk management by organizing Talanoa sessions at the community level with government officials, traditional leaders, and stakeholders. These sessions foster inclusive and transparent dialogue about climate change impacts, building mutual trust, sharing experiences, and developing collective solutions. Currently, Yaubula committees exist at Village and Tikina levels. Through Talanoa sessions, Yaubula Committees will be established at the Divisional level, enhancing the capacity of committees at both the village and Tikina levels to work together and improve coordination with the divisional level. This will accelerate development by resolving issues at the divisional level and only escalating high-level matters to the national level. The project will ensure women, youth, and marginalized groups have safe spaces for them to voice their perspectives. This will address barriers of lack of coordination (B1) and lack of community engagement (B6).

Activity 3.4 involves developing a customized, user-friendly, and scalable Content Management System (CMS) for the Climate Change Portal in Ministry of Environment and Climate Change. The CMS will feature a dynamic website with in-house management capabilities. It will include a full-stack development using the latest web technologies and integration of interactive features to enhance user engagement. The package will also provide comprehensive training for Ministry staff on using the CMS, with two workshops for skill enhancement. Additionally, it covers the procurement of a dedicated server and provide 5 years of technical support, updates, and security patches. Furthermore, it includes development of knowledge products which can range from banners to brochures to booklets. Hence this activity addresses barrier B1 of lack of awareness.

Activity 3.5 will be national workshops which will help with dissemination of project outputs and will address the barrier of lack of awareness (B1) on adaptation matters in Fiji.

### **Project Monitoring, Evaluation and Learning**

The project will develop a monitoring and evaluation (M&E) framework which will be integral to The project aims to develop a comprehensive monitoring and evaluation (M&E) framework to ensure the success and sustainability of initiatives. It will use a combination of qualitative and quantitative methods to track progress, document floodgate repairs, levee upgrades, mangrove conservation efforts, and capacity-building sessions. The M&E process will involve continuous monitoring of key performance indicators, community feedback, and field surveys. The project will promote learning and adaptive management, facilitating Talanoa sessions, workshops, and capacity-building activities for stakeholders. It will also incorporate gender considerations, focusing on women, youth, and persons living with disabilities. The project will also ensure that awareness and capacity-building sessions are accessible and relevant to diverse community members. Learning and adaptive management will be core aspects of the M&E framework, promoting a culture of continuous improvement and knowledge sharing. The project will facilitate Talanoa sessions, workshops, and capacity-building activities where stakeholders, including community members, traditional leaders, and government officials, can share experiences and lessons learned. These interactive platforms will enable the identification of best practices, foster community ownership, and enhance the resilience of flood control and climate adaptation measures. Additionally, the development of youth-friendly knowledge products and a dedicated project website will ensure that valuable insights and outcomes are effectively disseminated, fostering broader awareness and engagement in climate adaptation efforts.

## Theory of Change

The theory of change for the Fiji Climate Adaptation Project posits that by climate-proofing infrastructure, restoring ecosystems, and building capacities for alternative livelihoods, the project can reduce the vulnerability of communities to climate-induced floods. Transformative change in this proposed project is happening through a multi-faceted and inclusive approach that tackles the root causes of vulnerability and promotes systemic shifts.

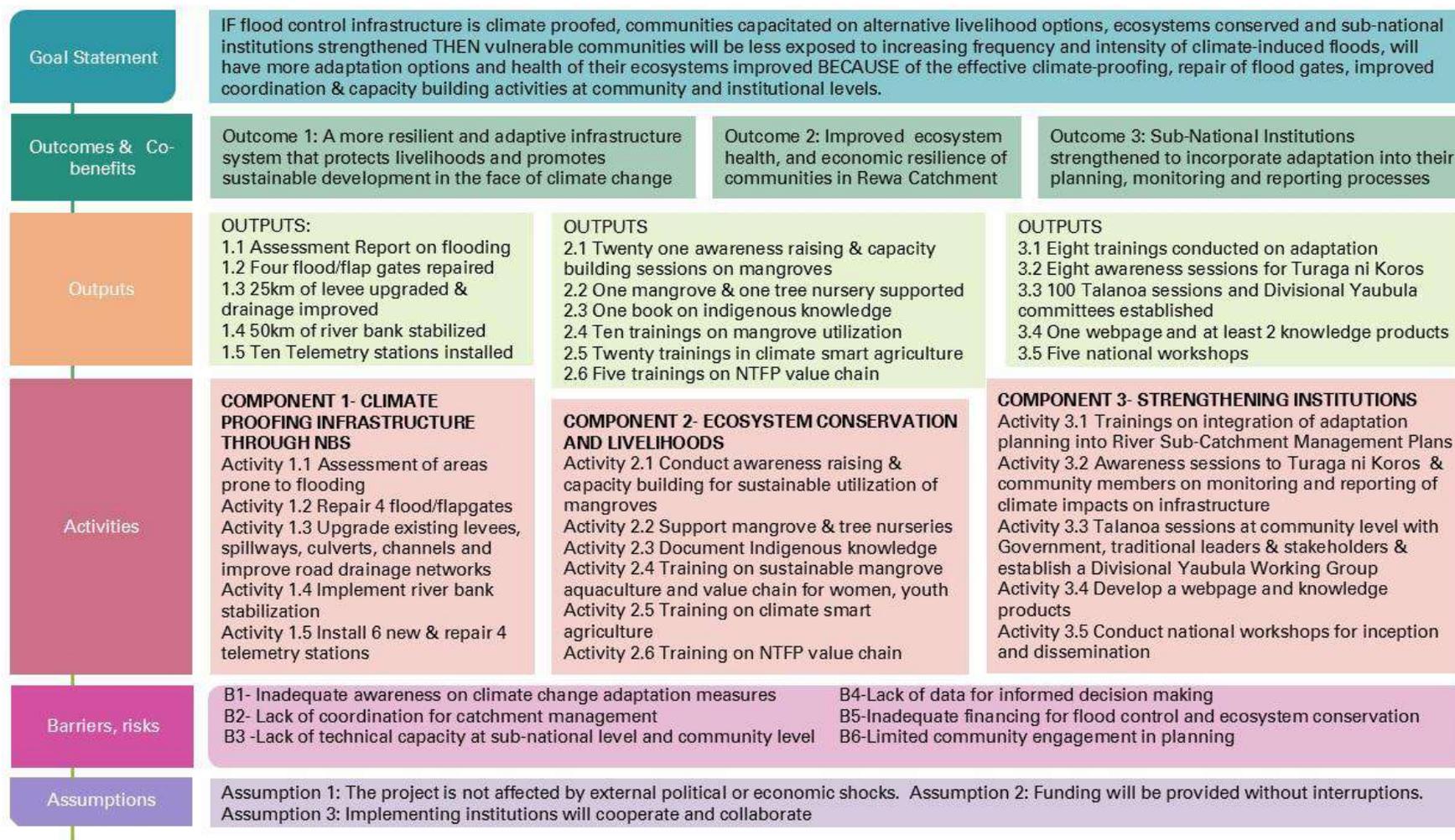


Figure 8 Log frame for the project

**B. 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.**

The main benefit of the Fiji Rewa River Catchment Adaptation Programme seeks to enhance the community resilience to infrastructure, biodiversity and livelihood insecurity caused by droughts, floods and saltwater intrusion induced by sea-level rise, and changing rainfall patterns through four components:

Component 1 and 2 seeks to overcome technical and financial barriers:

- to scale up retrofitted and new climate resilient, gender responsive, community led and demand driven climate proofing infrastructure through nature-based solutions (Component 1)
- to scale up climate resilient, gender responsive, community led ecosystem conservations throughout the Rewa river systems (Component 2)
- to scale up climate resilient, gender responsive, community led livelihoods enhancement to assist women and youth groups (Component 2)

Component 3 seeks to overcome the institutional and financial barriers to plan, coordinate, finance and monitor climate resilient water systems programmes to buffer against frequent climate induced water insecurity.

The successful implementation of this proposed project will provide many co-benefits in terms of economic, social and environmental aspects.

**Economic Benefits:** The project aims to provide future returns for targeted communities through improved drainage systems, ecosystem services, and sources of livelihoods. By deploying efficient, low-cost, and easy-to-operate climate-proofed assets and services, the project will not strain community financial resources. Reliable climate-proof infrastructure will reduce high opportunity costs associated with saltwater intrusion and flooding, allowing communities to focus on economic activities like crop and livestock production. Improved ecosystem conservation will ensure provisional ecosystem services are available for communities. Increased household income will enhance access to social and public services, such as education and health. The project empowers communities through sustainable practices and capacity-building initiatives, creating new economic opportunities and promoting gender equality and social inclusion. Overall, the project aims to create a resilient and sustainable economic framework for the communities involved.

**Social benefits including Gender and Social Inclusion, Health and Wellbeing:** The project aims to deliver significant social benefits, focusing on gender equality and inclusivity. By incorporating gender-disaggregated data and community feedback, it addresses the unique vulnerabilities and capacities of women, men, youth, persons living with disabilities (PLWDs), indigenous people, and marginalized groups. The project sets clear, measurable targets for the participation of these groups in activities like climate-smart agriculture training and NTFP capacity-building sessions, ensuring their active involvement and benefit from livelihood improvement initiatives. It directly addresses flooding through drainage infrastructure repairs, with gender co-benefits including improved health, incomes, education, and environment. Talanoa sessions and trainings will empower communities to monitor, manage, own, and protect climate-resilient assets. Improved drainage systems, conserved ecosystems, and enhanced livelihoods are expected to positively impact community health and well-being. The project integrates gender mainstreaming strategies, engaging women and youth in activities like mangrove restoration and riverbank stabilization, linking these to economic opportunities. It prioritizes income-generating activities for women, youth, and PLWDs, fostering leadership and empowerment. The project ensures compliance with environmental and social policies, promoting human rights and equitable access to benefits, and meeting International Labour Organization (ILO) standards. Gender-responsive indicators are integrated into project design and implementation to ensure equal benefits for women and men.

**Environmental Benefits:** The project offers numerous environmental benefits by focusing on nature-based solutions, ecosystem conservation, and sustainable practices. By protecting and upgrading existing drainage infrastructure, such as floodgates and levees, the project helps to reduce saltwater intrusion and flooding, which can damage ecosystems and reduce biodiversity. Improved flood management not only protects human settlements but also preserves the natural habitats of various species, contributing to overall ecosystem health. Riverbank stabilization and riparian zone rehabilitation are key components that reduce erosion, flooding, and water pollution caused by siltation. Mangrove rehabilitation and other ecosystem restoration activities enhance the resilience of coastal and riparian zones, playing a crucial role in carbon sequestration, reducing greenhouse gas emissions, and combating climate change. Furthermore, the project supports sustainable practices like Climate Smart Agriculture and Non-Timber Forest Products, promoting land use that maintains soil fertility, reduces deforestation, and preserves natural resources. Better-conserved biodiversity will foster environmental sustainability, with gender and social inclusion as cross-cutting themes, thus avoiding biodiversity loss, improving food chains, and supporting food security. By integrating these environmental conservation efforts with community livelihoods, the project ensures that ecosystems are protected and restored in a way that benefits both nature and local communities. Overall, this will facilitate the mainstreaming of environmental concerns, especially climate change, in the Rewa River interventions.

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

The project aims to strengthen the communities' resilience in the targeted areas with equitable access to a healthy biodiversity, enhanced livelihoods and improved capacity on water management systems. The intervention stated in Section A of Part II will help to deliver the outcomes with the utilization of climate proof infrastructure technologies along with built adaptive capacity towards climate change impacts from the project implementation. It is considered cost-effective where the targeted communities can improve their climate resilient capacity and also manage to maintain the water technologies with low cost but effective. In addition, The project will ensure ownership to provincial, national and community/village communities in the sites elected. The project's total investment of **USD 10 million will benefit around 8,428 direct beneficiaries** in the targeted **40 villages i.e., Adaptation cost = USD 1,187 per direct beneficiaries.**

The project demonstrates strong cost-effectiveness by leveraging nature-based solutions and community engagement to achieve significant environmental and social benefits at a relatively low cost. Nature-based solutions, such as riverbank stabilization using natural vegetation, are cost-effective for several reasons. Firstly, these solutions leverage the natural regenerative capabilities of ecosystems, reducing the need for expensive engineered structures and maintenance. For example, planting riparian vegetation (vetiver grass, juncao grass and native trees) along riverbanks helps stabilize the soil with their root systems, preventing erosion and reducing sedimentation in waterways. This natural process is more sustainable and requires fewer resources compared to constructing and maintaining artificial barriers or retaining walls.

Nature-based solutions provide multiple co-benefits beyond their primary function. For example, riverbank stabilization with vegetation reduces erosion, enhances biodiversity, improves water quality, and supports local wildlife habitats, contributing to overall ecosystem health and resilience. Engaging local communities in restoration and maintenance promotes ownership and reduces labor costs, making the approach economically viable. Investing in climate-resilient infrastructure, such as upgraded levees and floodgates, reduces long-term economic losses from flooding and saltwater intrusion. Ecosystem restoration techniques, like mangrove rehabilitation and riverbank stabilization, offer cost-effective alternatives to traditional engineering solutions. The project's focus on capacity building and livelihood enhancement ensures communities can sustain these efforts independently, maximizing return on investment. Divisional Yaubula Working Groups can continue to work beyond the project lifetime, improving sub-national management and community engagement. Overall, the project's integrated approach to climate adaptation and community development results in a high cost-benefit ratio, making it financially viable and impactful.

**D. Describe how the Project is consistent with national or sub-national sustainable development strategies, including, 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 project aligns with the Paris Agreement by contributing to the global effort to limit temperature rise to well below 2°C, with an aim to keep it to 1.5°C, by focusing on climate resilience and adaptation. It supports Fiji's commitments under the Nationally Determined Contributions (NDCs), particularly in reducing greenhouse gas emissions and enhancing adaptive capacity, and adheres to the principles of the United Nations Framework Convention on Climate Change (UNFCCC), promoting international cooperation to combat climate change. The project's emphasis on ecosystem conservation and nature-based solutions aligns with the Convention on Biological Diversity (CBD) and the United Nations Convention to Combat Desertification (UNCCD), promoting sustainable land management practices, improving land productivity, and preventing land degradation.

The project is fully aligned with Fiji's National Adaptation Plan (NAP) and enhances adaptive capacity by integrating climate adaptation into sub-catchment planning. Through ecosystem conservation, infrastructure climate-proofing, and capacity building, the project supports Fiji's National Biodiversity Strategy and Action Plan (NBSAP) and National Climate Change Policy. These initiatives prioritize community-based adaptation, resilience-building, and sustainable practices, such as supporting the Ministry of Forestry's mangrove and tree nurseries.

The project emphasizes gender mainstreaming and social inclusion, consistent with Fiji's National Gender Policy and Youth Policy, ensuring that the needs and contributions of women, youth, and marginalized groups are recognized and addressed. By fostering an enabling environment for climate-resilient technologies and promoting equitable access to resources, the project supports sustainable development and social equity. It aligns with the Strategic Development Plans and goals of the included provinces, demonstrating a strong commitment to fulfilling both international and national commitments, conventions, agreements, and targets, ultimately contributing to a more sustainable, resilient, and equitable future.

Table 9 Project alignment with NAP, SDGs and Sub-National plans

Activities	Linkage to NAP/NDC	Linkage to SDGs	Linkage to Sub National Development Plan
Activity 1.1 Conduct an assessment of areas prone to flooding including existing levees, floodgates, flap gates, culverts, channels, spillways.	NAP Action 15.D.5 Create flood risk and management action plans for all human settlements which operate at the catchment scale and involve either hybrid or nature-based solutions and payments for ecosystems services.	SDG 13 Climate Action	Climate change and its impacts such as flooding is included in Integrated Village Development Plans of Provinces Ra, Naitasiri, Tailevu and Rewa.
Activity 1.2 Repair 4 prioritised Floodgates and flap gates to reduce flood risks	NAP Action 15.D.6 Flood management activities for priority river systems, such as Nadi River, Sigatoka River, Rewa River, Labasa River	SDG 13 Climate Action	Managed by the Ministry of Agriculture and Waterways, this Drainage and Flood Protection Programme supports mitigating flood damages and minimizing destruction through river dredging, riverbank protection works, and maintenance of drainage infrastructures
Activity 1.3 Upgrade 25km of existing levee system, spillways, culverts, channels & road drainage networks	NAP Action 15.D.5 Create flood risk and management action plans for all human settlements which operate at the catchment scale and involve either hybrid or nature-based solutions and payments for ecosystems services.	SDG 13 Climate Action	Managed by the Ministry of Agriculture and Waterways, this Drainage and Flood Protection Programme supports mitigating flood damages and minimizing destruction through river dredging, riverbank protection works, and maintenance of drainage infrastructures
Activity 1.4 Implement 50km of riverbank stabilization and rehabilitation for erosion control through planting of riparian vegetation	NAP Action 16.8 Implement ecosystem-based approaches to adaptation to protect, maintain, and restore degraded habitats with active community, 111 NGO and private sector engagement in particular the restoration of critical watersheds, riparian and coastal zones.	SDG 13 Climate Action	Rewa Strategic Plan supports “Riverbank erosion management”. Integrated Village Development Plans of Ra, Naitasiri and Tailevu also supports this.
Activity 1.5 Install 6 new and repair 4 existing telemetry stations for enhanced data for weather and flood monitoring	NAP Action 7.8 Enhance meteorological prediction systems for flooding and droughts as well as a Forest Fire Watch System. NAP Action 15.D.6 Flood management activities for priority river systems, such as Nadi River, Sigatoka River, Rewa River, Labasa River.	SDG 13 Climate Action	The National Development Plan (NDP) 2025-2029 supports the establishment of telemetry stations in Fiji.
Activity 2.1 Conduct 21 awareness raising and capacity building sessions in communities for sustainable utilization of mangroves	NAP Action 12.F.6 Support the restoration, enhancement and conservation of coastal ecosystems such as mangroves, seagrasses and coral reefs, in collaboration with Forestry and Fisheries ministries, local communities and actors, community fishery reserves etc.	<b>SDG 14</b>	Mangrove conservation is prioritized in Tailevu Strategic Plan. Mangrove conservation is included in Integrated Village Development Plans of many villages in Tailevu and Rewa provinces.
Activity 2.2 Support one existing mangrove and tree nurseries of Ministry of Forestry through providing	NAP Action 12.F.6 Support the restoration, enhancement and conservation of coastal ecosystems such as mangroves, seagrasses and coral reefs, in collaboration with Forestry and Fisheries ministries, local communities	<b>SDG 14 and 15</b>	Mangrove conservation is prioritized in Tailevu Strategic Plan. Rewa Strategic Plan states “Reforestation on land and

tools, implements and seedlings	and actors, community fishery reserves and other partners such as tourism associations.		Mangroves indigenous/endemic Fiji & Rewa plants (e.g. tubers) and trees”.
Activity 2.3 Document community led initiatives rooted in Indigenous knowledge for climate adaptation	NAP Action 10.11 Enhance support and management of the continuing research, understanding and protection of traditional knowledge on vulnerabilities and potential adaptation responses through participatory research with local stakeholders. Additionally, ensure that this information is integrated and disseminated to support the design of adaptation measures within sub-national development planning processes.	<b>SDG 15</b>	Tailevu Strategic Plan states, “A sustainable depository of traditional knowledge, customs and heritage established and utilized.” and “Traditional knowledge and practices utilized as part of Provincial development interventions.”
Activity 2.4 Conduct 10 trainings for women and youth groups in sustainable mangrove aquaculture and value chain	NAP Action 12.F.7 Promote sustainable non-extractive cultured fisheries (e.g. pearls, seaweed) to reduce pressure on capture fisheries. NAP Action 12.F.10 Sustain the harvesting and production of coastal fish and invertebrates for local food security and livelihoods.	<b>SDG 2</b>	Tailevu Strategic Plan states “Awareness and advocacy on approaches and parameters of balancing economic development and conservation” for mangroves. Rewa Strategic Development Plan Priority areas include ensuring food security.
Activity 2.5 Conduct 20 trainings in Climate Smart Agriculture and value chain for farmers	12.A.6 Promote and integrate climate-smart agriculture (CSA) practices, <sup>91</sup> into farming, trainings, extension services, policies and plans (responsive to the needs of disadvantaged groups and tailored to subsistence, semi-commercial and commercial farmers) and adopt nature-based and urban solutions where possible.	<b>SDG 2 and 14</b>	Rewa Strategic Development Plan Priority areas include ensuring food security. Fiji 2020 Agriculture Sector Policy Agenda <sup>38</sup> : This policy agenda complements the National Green Growth Framework.
Activity 2.6 Conduct 5 trainings for women’s groups and persons living with disabilities on NTFPs and value chain	Not specifically mentioned in the NAP. However, all livelihood enhancement activities will help build adaptive capacity amongst communities.	<b>SDG 2 and 12</b>	Rewa Strategic Development Plan Priority areas include ensuring food security and economic security.
Activity 3.1 Conduct 8 trainings for sub-national institutions on integration of adaptation planning into River	NAP Action 9.2 Integrate contextually relevant adaptation and disaster risk reduction measures into Divisional Strategic Development Plans and Provincial Strategic Development Plans, in a participatory multi-stakeholder approach which builds upon local and traditional	<b>SDG 6, 13, 15, 11</b>	Tailevu Strategic plan states- “Streamlining of climate change mitigation and adaptation plan in district and provincial strategies.”

<sup>38</sup> Fiji Ministry of Agriculture; Bacolod, Eduardo D. (2014). Fiji 2020 Agriculture Sector Policy Agenda: Modernising agriculture. Suva, Fiji: Ministry of Agriculture.

Sub Catchment Management Plans	knowledge and ensures harmonization with other sub-national development plans and national priorities.		
Activity 3.2 Conduct 8 awareness sessions to Turaga Ni Koros and community on monitoring and reporting of climate impacts on flood control assets	15.A.8 Support community involvement in water resource management by raising awareness and strengthening the capacity of CBOs, NGOs, and government departments to disseminate information on sustainable and climate-resilient water management to communities.	<b>SDG 13</b>	Climate change and its impacts such as flooding is included in all Provincial Strategic Plans and Integrated Village Development Plans.
Activity 3.3 Conduct 100 Talanoa (discussion) sessions with Government, traditional leaders, relevant stakeholders & establish a Divisional Yaubula Working Group	NAP Action 15.A.7 Promote the development and implementation of integrated water resource management plans (IWRM) in river basin catchment areas building upon national and traditional experiences, including efforts to protect freshwater aquifers from saltwater intrusion as well as natural protected areas.	<b>SDG 13</b>	Climate change and its impacts such as flooding is included in all Provincial Strategic Plans and Integrated Village Development Plans.
Activity 3.4 Develop website & knowledge products including videos which are youth friendly for dissemination	NAP Action 15.D.6 Flood management activities for priority river systems, such as Nadi River, Sigatoka River, Rewa River, Labasa River.	<b>SDG 13</b>	-
Activity 3.5 Conduct 5 national workshops for inception and dissemination of project.	Not specifically mentioned in NAP, but necessary for every project.	-	-

**E. Describe how the Project 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.**

To ensure compliance with environmental and social protection policies and meet relevant national standards, the Ministry of Public Works and Meteorological Services, as the executing entity, provides assurances that the projects will adhere to all relevant environmental regulations and standards. They will implement measures to mitigate any potential negative environmental impacts, promote sustainable development practices, and ensure community engagement and social inclusivity throughout the project lifecycle as articulated in the table below.

Table 10 Project components and linkages to relevant national standards and policies

Project Components	Codes / Standards	Implementation including support for Nature based solutions / Monitoring, Reporting and Evaluation
Activity 1.2 Repair 4 prioritized Floodgates and flap gates to reduce flood risks	The Ministry of Agriculture and Waterways have adopted and have been using Australia and New Zealand Standards for structures constructed from concrete and steel. These comprehensive guidelines, developed by Standards Australia and Standards New Zealand, ensure the quality, safety, and performance of materials in construction projects. For this activity, where concrete is used to repair floodgates/flap gates, key standards include AS 3600 for the design of concrete structures, AS 1379 for the supply of concrete, and the AS 1012 series for testing methods. For steel, important standards are AS/NZS 3678 for structural steel, AS/NZS 3679 for hot-rolled steel sections, and AS/NZS 4600 for the design of cold-formed steel structures.	<p><b>Implementation</b></p> <p>The structural refurbishment of Flap gates and Flood gates project will be implemented by the Ministry of Agriculture and Waterways. The Ministry will employ nature-based solutions such as vetiver grass planting around the flap gates and flap gates.</p> <p><b>M &amp; E and Reporting</b></p> <p>The project will be managed and monitored by the Project management unit team within the Ministry of Public Works, Meteorological Services and Transport, Dept. of Waterways will provide weekly update of project progress and milestones.</p>
Activity 1.4 Upgrade 25km Levee system, spillways, culverts and channels and improve road drainage networks to reduce flood risk	<p>Fiji National Building Codes (which are under review) (Ministry of Public Works Meteorological Services and Transport, 2024<sup>39</sup>) are used for upgrade of levees, spillways, culverts and channels.</p> <p>The Department of Waterways uses the International Commission on Large Dams (ICOLD) guidelines, U.S. Army Corps of Engineers (USACE) EM 1110-2-1913 guidelines, National Engineering Handbook Section 16 and Drainage of Agriculture Land and Chapter 9. Drainage of Tidal Lands. (SCS, USA Soil Conservation Service). Fiji has adopted such international standards, when national standards are not available.</p> <p>American Association of State Highway and Transportation Officials (AASHTO) guidelines are used for spillways control overflow and prevent overtopping of reservoirs, levees, or dams, adhering to specific standards and guidelines. Capacity design is based on the Probable Maximum Flood (PMF) or a specific design storm.</p>	<p><b>Implementation</b></p> <p>The upgrading of Levee, Channels and Spillway project will be implemented by the Ministry of Waterways and Agriculture. The Ministry will employ nature-based solutions for Levees stabilizations.</p> <p>The Fiji Roads Authority will implement the road maintenance and drainage project and will report directly to the Project Management Unit within the Ministry of Public Works and Meteorological Services.</p> <p><b>M &amp; E and Reporting</b></p> <p>The project will be managed and monitored by the Project management unit team within the Ministry of Public Works and Metrology services. The Ministry of Waterways and Agriculture will provide weekly update of project progress and milestones.</p> <p>The Department of Waterways and the Fiji Roads Authority will submit weekly reports to PMU.</p>

<sup>39</sup> Ministry of Public Works, Meteorological Services and Transport. (2025). Fiji Building Codes. Online publication available at <https://www.mims.gov.fj/wp-content/uploads/2024/02/FNBC-2024-amended-02.02.2024.pdf>

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

The proposed project does not duplicate any projects but complements the following projects.

### **BOLD Response project**

Funded by the International Climate Initiative of the Federal Republic of Germany, the Building Our Pacific Loss and Damage Response Project (BOLD Response) is one of the first loss and damage focused projects in the Pacific and was launched on 4 April 2024. Fiji is amongst the Pacific countries where the project will be implemented. Other countries include the Republic of Marshall Islands, Samoa, Tuvalu and Vanuatu. There is no duplication in this project with our proposed project. The BOLD Response project will be implemented in Vunidogola Village on the island of Vanua Levu and Tukuraki Village, which has experienced extreme weather events. Both these areas are not overlapping with our proposed project. The components of the BOLD Response Project include to develop loss and damage estimates/projections to establish a basis for policymaking and access to finance. Community-Based non-economic loss and damage (NELD) methodology will be developed, and institutional and policy strengthening will be done to integrate loss and damage into national climate change policies and ensure alignment with disaster response, relief, and recovery.

### **Climate Adaptation in the Rewa Delta**

The project "Climate Adaptation in The Rewa Delta" (CARE) was developed by MPWMST with Asian Development Bank as the Global Environment Facility (GEF) agency. The Concept Note for this project was approved for Special Climate Change Fund (SCCF) in the 68th GEF Council meeting held in December 2024 and full proposal is being developed. There are similarities between the CARE project, and this proposed project as they both builds adaptive capacity of communities in vulnerable areas in Rewa and Tailevu provinces. Under the CARE project, 17 floodgates/flap gates will be repaired. These are different floodgates/flap gates to the 4 proposed in our project and hence does not duplicate this project. There is similarity in the area for both projects as they are both located in Viti Levu Island. While CARE project covers Rewa and Tailevu provinces, this proposed project covers the entire Rewa Catchment covering provinces Ra, Naitasiri, Rewa and Tailevu. The CARE project will enhance the Savura raw water intake through the construction of a cascade weir and installation of a Coanda screen to prevent siltation and debris build-up. It will also do a hydrological study of Rewa River and develop the Suva-Nausori Water Supply Master Plan. These are not overlapping with our proposed project but complements it and will provide valuable information to implement our project.

### **Ridge to Reef project**

Fiji's Ridge to Reef (R2R) project implemented from 2015 to 2020 has provided valuable lessons as we designed this proposed project. R2R aimed to preserve biodiversity, improve ecosystem services, sequester carbon, enhance climate resilience, and sustain livelihoods through integrated management of priority water catchments on Fiji's two main islands. The project focused on reducing the negative impacts of land-based activities on marine protected areas by implementing integrated catchment management plans, protecting mangroves, adopting sustainable land use practices, and restoring riparian zones and forests. The key lessons learned from this project was that effective community involvement was crucial for achieving landscape-level watershed management and restoring livelihoods, addressing environmental issues in a holistic manner. These lessons highlight the importance of a comprehensive and inclusive approach to environmental conservation and resource management. These lessons were incorporated into our proposal and therefore we take an "integrated approach" where hard infrastructure measures, scientific data collection, innovation and capacity building measures are included in the project. There will also be knowledge exchange and dissemination in this proposal, inspired by the R2R project.

### **Safeguarding Marine and Terrestrial Biodiversity (SAMBIO)**

The SAMBIO Project which was launched in 2024 as a 5-year project is funded by the Global Environment Facility, focused on establishing new marine and terrestrial protected areas within key biodiversity regions in Fiji. Its goal was to enhance Fiji's protected area network and improve the management of critical biodiversity areas in forests and coastal ecosystems. The geographic scope for the SAMBIO project covers the following sites The greater Tomainivi, Nakauvadra Range (Viti Levu, Fiji's Ra Province), Nakorotubu, Greater Delaikoro Protected Area (Vanua Levu), The Natewa-Tunuloa Peninsula (Vanua Levu), Kadavu, Ringgold Islands, and Lau

Seascape. The proposed project in Rewa Catchment does not duplicate the existing SAMBIO project but complements the existing project through establishment of Mangrove nurseries promoting sustainable utilization of mangroves and enhancing biodiversity conservation). Although the proposed project covers activities within the Ra province similar to the SAMBIO but there is no duplication of activities. The SAMBIO complements the climate resilience project through biodiversity conservation and establishment of marine and terrestrial protected areas.

### **International Tropical Timber Organization (ITTO) project**

The ITTO project in Fiji focuses on the community-based restoration and sustainable management of vulnerable forests in the Rewa Delta on Viti Levu. The project's objectives include rehabilitating degraded mangrove areas, promoting sustainable livelihoods, and enhancing local capacity for mangrove management. Located in the Rewa Delta, the project targets communities in the provinces of Rewa and Tailevu, specifically the villages of Natila, Waicoka, Nasilai, and Muanaira. Major outputs include the establishment of demonstration sites for mangrove rehabilitation, the development of a national guideline on mangrove use and management, and the creation of sustainable livelihood options for local communities. This project does not duplicate with our proposed project as the villages covered under this is different from our project. The ITTO project complements our proposed project as it also focuses on mangrove restoration and lessons learnt from ITTO project's mangrove restoration sites can help our interventions to be more impactful.

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

An Inception Workshop will be conducted for this project, to inform stakeholders and media about the objectives of the project. Throughout the duration of the project, information will be disseminated to the general public through a webpage. The webpage about the project will be created on Fiji's Climate Change Portal [Fiji Climate Change Portal \(FCCP\) and National Designated Authority \(NDA\) Portal](#).

The Fiji Climate Change Portal is a comprehensive online resource dedicated to addressing climate change in Fiji. It provides access to key policy documents, showcases ongoing and completed climate change projects, and highlights Fiji's efforts to access climate finance. The portal features sector-specific working groups, details innovative financial instruments like Fiji's Sustainable Development Bond Framework, and includes a GIS platform with decision-support tools. It aims to enhance transparency, facilitate knowledge sharing, and promote collaboration among stakeholders to effectively tackle climate change challenges in Fiji. The Climate Change portal is a key resource for climate change information in Fiji, so it attracts a significant number of visitors, including government officials, researchers, and the general public interested in climate change initiatives. This portal receives around 19,000 new users each year and had 209,000 event views (hits or clicks on the website), with top users being from Fiji, Australia, USA and UK. Based on the above, the Fiji Climate Change Portal is the apt portal for disseminating about the lessons learnt from this project. Assessment report will be done under Component 1 where flood risks to public infrastructure such as levees, spillways, channels, culverts, floodgates and flap gates will be documented. This report will be useful for sub-national entities for decision making with regard to infrastructure upgrades.

Knowledge products which are youth friendly will be developed to share with communities about climate change adaptation and flood risk mitigation. These knowledge products will be disseminated at sub-national levels through line ministries. The Talanoa sessions which will be held (component 3) at community level is an opportunity for Government officials and Community members to share their experiences, challenges, and develop solutions related to ecosystem conservation and livelihood enhancement. Indigenous knowledge will be documented into a book, which will be disseminated widely. Developing a book on indigenous knowledge helps preserve traditional practices and enhances climate adaptation by utilizing sustainable techniques refined over generations. It empowers local communities, fosters cultural pride, and serves as an educational resource, informing policies and promoting sustainable development.

An important component of the project is the livelihoods enhancement component which includes trainings provides to women groups, youth groups and farmers on sustainable natural resource use and climate smart

technologies for income generation. The training materials developed for this can be used for future training and reference. At the end of the project, a national dissemination workshop will be held to share the lessons learnt and outputs from the project. The webpage developed will be hosted by Ministry of Environment and Climate Change beyond the project lifetime, continuing to disseminate results from the project.

**F. 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.**

An Interministerial Technical Working Group (TWG) has been established to oversee the development of this proposal. The TWG includes representatives from various ministries, such as the Ministry of Environment and Climate Change (MECC), Ministry of Public Works, Meteorological Services and Transport, Ministry of Rural, Maritime and Disaster Management, Ministry of Agriculture and Waterways, Ministry of i-Taukei Affairs, Ministry of Fisheries and Forests, Maritime Safety Authority of Fiji, Ministry of Land and Mineral Resources, and SPREP. With stakeholder engagement and technical analysis, 40 villages situated along the Rewa Catchment were selected to be included in the project proposal. Among these, eight villages were specifically chosen for scoping visits, representing the upper, middle, and lower catchment areas. Meetings were held with the Provincial Councils, Turaga-Ni-Koro's (Village Headmen), Agriculture Officers, and community members to gain a deeper understanding of the issues which helped shape this proposal. The following table indicates the scoping visits conducted and numbers of people consulted.

*Table 11 Participants met during Scoping visits to selected village*

<b>Date of Consultation</b>	<b>Village / Tikina and Province Name</b>	<b>Male Participants</b>	<b>Female Participants</b>	<b>Total Participants</b>
Thursday - 05 December 2024	Delailasakau Village Tikina: Nawaidina	12	6	18
Friday 06 December 2024	Upper Waimanu Tributary, Ararata Community and Lower Waidina Tributary – Muainaweni,	A site visit was conducted to assess the damage to the crossings and culverts, although no consultation took place. This visit was crucial in understanding the extent of the damage and determining the necessary repairs.		
Monday 09 December 2024	Matanimoli Village, Tikina Noco, Rewa	17	3	20
	Vuci Village Tikina Tokatoka, Tailevu	14	17	31
Tuesday 10 December 2024	Burebasaga Village, Tikina Burebasaga, Rewa and Vanualevu Village Tikina Tokatoka, Tailevu	14	4	18
	A consultation was held in Burebasaga village, followed by a site visit to Vanualevu Village to assess the impacts of saltwater intrusion into farmlands. During the visit, the adaptive measures that villagers have undertaken to increase their capacity to cope with climate change were also evaluated.			
Wednesday 11 December 2024	Serea Village, Tikina Soloira, Naitasiri, Naluwai & Waidracia village Tikina Rara, Naitasiri	11	5	16
	A consultation was held in the village of Serea, attended by the Turaga ni Koro of Naluwai and Waidracia. Following the consultation, site visits were conducted to assess riverbank erosion and drainage issues. These visits were essential for understanding the extent of the problems and planning the necessary interventions to address them effectively.			

Thursday 12 December 2024	Raviravi Village, Tikina Natokaimalo, Ra	14	19	33
	Nalalawa Village, Tikina Rokovuaka, Ra	12	8	20
	<b>Total</b>	<b>26</b>	<b>27</b>	<b>53</b>
Friday 13 December 2024	Tavuya Village, Tikina Rewa of the Province Rewa	16	8	24
Monday 16 December 2024	Vunisei Village Tikina Toga, Rewa	8	6	14

Details of scoping visits are provided in Annex IV.

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

### Baseline

The Fiji government faces significant challenges in securing funding for climate adaptation projects due to high poverty rates and vulnerability to natural hazards. Frequent cyclones and floods cause considerable economic harm, especially to the agriculture and fisheries sectors. Limited financial resources make it difficult for Fiji to cover the costs of comprehensive climate adaptation projects, such as infrastructure upgrades and ecosystem conservation. Many flood management systems are outdated and insufficiently maintained, while competing priorities for social and health needs prevent adequate allocation for necessary upgrades. External funding is crucial to bridge the financial gap and ensure the implementation of effective and sustainable climate adaptation projects.

Without the required funding, several adverse outcomes could occur. Lack of infrastructure upgrades and repairs will lead to heightened flood risks, causing more frequent and severe flooding events that damage homes, infrastructure, and agricultural lands. Insufficient support for ecosystem conservation efforts like mangrove restoration and riverbank stabilization will result in continued environmental degradation, exacerbating erosion, loss of biodiversity, and reduced natural flood defences. Communities will face significant economic losses, disrupted livelihoods, and increased costs for emergency response and recovery. Vulnerable groups, including women, youth, and persons with disabilities, will be disproportionately affected without training and capacity-building initiatives. The inability to strengthen sub-national institutions and community organizations will hinder effective adaptation planning and implementation, leading to fragmented responses and a lack of coordinated efforts to address climate risks. In summary, without necessary funding, the project's goals of enhancing resilience, protecting ecosystems, and supporting vulnerable communities will be compromised, with escalating risks and impacts of climate change undermining sustainable development efforts.

### Alternative

When the Adaptation Fund provides the necessary funding, the project will assess flood-prone areas, repair and upgrade critical infrastructure, and enhance weather and flood monitoring through new telemetry stations and undertake riverbank stabilization. This will reduce flood risks in farms and protect community's assets. Ecosystem conservation and livelihoods enhancement efforts will promote sustainable use of mangroves and support reforestation, while training programs will empower women, youth, and marginalized groups with skills in climate-smart agriculture, NTFPs and sustainable practices. Capacity building and institutional strengthening will involve training sub-national institutions and community members on adaptation planning and monitoring climate impacts. Talanoa sessions will foster dialogue between government, traditional leaders, and stakeholders, leading to collaborative management of flood control assets. A dedicated website and knowledge products will disseminate project outcomes, and national workshops will share progress and lessons learned. Fiji requests funds for urgent adaptation activities to transition to enhanced climate adaptation for communities in the Rewa Catchment.

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

The project's sustainability is ensured through comprehensive training and capacity-building programs that equip community members with essential skills and knowledge to continue activities independently after the project concludes. By promoting diversified livelihoods and providing tools and resources, the project enhances economic resilience and financial stability. Talanoa sessions will facilitate ongoing government-community dialogue, monitor progress, and foster continuous learning and adaptation, ensuring the project's effectiveness and responsiveness to changing needs. Village-level tracking systems, such as livelihood tracking and floodgate maintenance logs, will document activities and provide valuable data for ongoing management and improvement of flood control assets and livelihood initiatives.

Economic and community development is a crucial aspect of the project, with women's and youth groups receiving training and business skills support to enable sustainable financial and operational management. The project connects farmers to markets through the Ministry of Agriculture, facilitating sustainable agricultural practices and market access. Empowering youth and village headmen to assist with flood control asset maintenance ensures ongoing upkeep and integration into community routines. This collaboration between the community and government will guarantee the sustainability of these practices.

Environmental sustainability is achieved by focusing on conserving critical ecosystems like mangroves and forests. The project promotes sustainable mangrove utilization, supports nurseries, and implements riverbank stabilization. Weather monitoring through telemetry stations enhances real-time data collection and informed decision-making, preparing communities for extreme weather events. Reforestation efforts will continue under the Forestry's 30 Million Trees Initiative, ensuring long-term conservation. Project outcomes will be shared through a climate change portal, ensuring continued accessibility and benefits beyond the project's lifetime. Ensuring community ownership from the planning stage fosters resilient communities and guarantees enduring environmental, social, and economic resilience.

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

The project has been screened against the AF Environmental and Social Safeguard principles and ranked accordingly as: Minor risk – aligned with IFC Category C rating: activities with minimal or no adverse environmental or social risks and/or impacts. As per the AF “Guidance document for Implementing Entities on compliance with the Adaptation Fund Environmental and Social Policy” any principle assessed as minor risk, require no further actions beyond on-going risk monitoring. As per the initial screening of the Project against the principles, no major risks were identified with three principles identified as minor risk. Consequently, the Project is ranked as minor risk/ESS Category C. The risk analysis is provided in table below.

*Table 12 Risk analysis of environmental and social risks*

Checklist of environmental and social principles	Further assessment required for compliance	Potential impacts/risks and mitigation measures
<i>Compliance with the Law</i>	No further actions required beyond ongoing risk monitoring.	<b>Minor Risk-</b> There is minor risk, with that labour and working conditions may not be adhered to during repairs of floodgates, flap gates, levees, culverts, spillways and channels. However, these are minor repairs and not large civil works requiring EIAs. The probability of occurrence of this risk is also low, as the minor repairs will be done by Government Agencies which are Department of Waterways and Fiji Roads Authority.

		<p><b>Mitigation measures</b> -The proposed project has been designed in compliance to relevant Fiji laws, regulations, policies and standards. All activities comply with legal framework for agriculture, water and environmental protection. During full proposal stage, an Environmental and Social Management Plan (ESMP) will be prepared.</p>
<i>Access and Equity</i>	No further actions required beyond ongoing risk monitoring.	<p><b>Minor risk</b>- There is minor risk that some community members may be excluded if not properly consulted and included in the project implementation.</p> <p><b>Mitigation measures</b> -Community engagement through Talanoas and extensive consultation will help mitigate this risk. The project's ESMP, to be developed in the proposal phase, will include management measures to ensure fair access, transparency, and equity throughout implementation, clearly stating there will be neither discrimination nor favouritism in accessing project benefits. The Project Steering Committee will provide oversight to the project to ensure risks are mitigated.</p>
<i>Marginalized and Vulnerable Groups</i>	No further actions required beyond ongoing risk monitoring.	<p><b>Minor risk</b>-There is minor risk that marginalised groups may get left out of the project if not consulted and if their needs are not captured.</p> <p><b>Mitigation measures</b> -Women, youth, persons living with disabilities and marginalised groups will be consulted at full proposal stage to ensure access and equity. The project site selection and interventions have been designed to assist marginalised /vulnerable groups to better cope with climate variability. Frequent community consultations and activity screening will help to monitor and mitigate potential risks.</p>
<i>Human Rights</i>	No further actions required beyond ongoing risk monitoring.	<p><b>Minor risk</b>-The risk is minor because there is no forced relocation or unsafe living conditions that could arise from this project. On the contrary this project will ease living conditions through reducing flooding and improving livelihoods. Hence the risk is categorised as minor and unlikely to occur.</p> <p><b>Mitigation measures</b> -The project does not violate the freedom of the people in the intervention zones because it respects their fundamental rights. The project has been designed to ensure compliance with applicable domestic and international laws, provide fair and equitable access to benefits, and avoid imposing disproportionate adverse impacts on marginalised and vulnerable groups. It will respect and promote human rights, ensure both women and men can participate fully and receive equitable social and economic benefits, and meet ILO labour standards.</p>
<i>Gender Equality and Women's Empowerment</i>	No further actions required beyond ongoing risk monitoring.	<p><b>Minor risk</b>- There is a minor risk that in some cases women are not fully participating to make decisions.</p> <p><b>Mitigation measures</b> -Project interventions will strengthen institutional frameworks by reviewing policies to address gender, youth, and social inclusion considerations and ensuring that women, youth, and marginalized groups are present in community dialogues and consultation sessions. The project will develop a Gender Action Plan in the full proposal stage and ensure compliance of all activities to the National Gender Policy (Ministry for Social Welfare, Women and Poverty Alleviation. (2014)<sup>40</sup>.</p>
<i>Core Labour Rights</i>	No further actions required beyond	<p><b>Minor risk</b>-There is minor risk that during the repair of floodgates, flap gates, culverts, channels, spillways and levees, some labour rights may be ignored. This risk is minor and occurrence unlikely.</p>

<sup>40</sup> Ministry for Social Welfare, Women and Poverty Alleviation. (2014). Fiji National Gender Policy. Online publication accessible at <https://www.fiji.gov.fj/getattachment/db294b55-f2ca-4d44-bc81-f832e73cab6c/NATIONAL-GENDER-POLICY-AWARENESS.aspx>

	ongoing risk monitoring.	<b>Mitigation measures-</b> Occupational Health and Safety (OHS) measures will be strictly adhered to for the activities of the project. An OHS plan can be developed and the Government agencies responsible for the minor repairs and construction will follow ILO standards and guidelines as well as comply with Fiji's national regulations and laws. There are no activities in this project that will cause unhealthy working conditions and regular monitoring and evaluation will be done to ensure labour rights are adhered to.
<i>Indigenous Peoples</i>	No further actions required beyond ongoing risk monitoring.	<b>Minor risk</b> -This risk is minor as the entire population of direct beneficiaries (8,428), excluding 170 people in the Ararata farming settlement are indigenous iTaukei communities. Therefore, this project majorly benefits indigenous communities.  <b>Mitigation measures-</b> All consultations will be conducted in both English and the local iTaukei language and indigenous communities will be consulted and included in the project planning. Decision making is done with Turaga ni Koros (Village Headmen) and indigenous leaders and hence there is no risk of any negative impacts to indigenous peoples, on the contrary this project is designed to enhance their adaptive capacity. The project will comply with AF requirements and Fiji national laws and regular monitoring and evaluation will be done to ensure adherence to this principle.
<i>Involuntary Resettlement</i>	No further assessment required.	Not applicable. This project does not include resettlement.
<i>Protection of Natural Habitats</i>	No further actions required beyond ongoing risk monitoring.	<b>Minor risk-</b> The risk is categorised as minor because where flood control infrastructure is repaired, i.e. raising levels of levees through brining soil, some soil is brought in. Further, repairs of culverts, channels, spillways, flood gates and flap gates need to be done following regulations to ensure no disturbances to natural habitats.  <b>Mitigation measures</b> -The project is undertaking only minor repairs and no civil works which require EIAs. Care will be taken to adhere to necessary regulations and no detrimental damage to natural habitats. The project enhanced natural habitats through planting riparian vegetation for activities such as riverbank stabilization. Trainings will be given to communities to conserve mangroves and forests, in addition to supporting nurseries for tree planting. Improved flood management not only protects human settlements but also preserves the natural habitats of various species, contributing to overall ecosystem health. Regular monitoring of the repairs and riverbank stabilization activities will be done.
<i>Conservation of Biological Diversity</i>	No further actions required beyond ongoing risk monitoring.	<b>Minor risk-</b> It is minor risk as the project sites are outside protected areas and planting of species approved by Ministry of Fisheries and Forestry will ensure no invasive alien species are introduced. The project offers numerous environmental benefits by focusing on nature-based solutions, ecosystem conservation, and sustainable practices.  <b>Mitigation measures-</b> The planting of plant species approved by Ministry of Fisheries and Forestry will ensure no invasive alien species are introduced. Training is given to communities for sustainable utilization of mangroves and forests. Monitoring of activities will be done.
<i>Climate Change</i>	No further actions required beyond ongoing risk monitoring.	<b>Minor risk-</b> Project activities, such as the use of vehicles powered by fossil fuels, may produce minor greenhouse gas emissions. However, these emissions are expected to be minimal.  <b>Mitigation measures-</b> The project focuses on enhancing inclusive resilience and adaptive capacity in targeted communities in the Rewa River Catchment through infrastructure upgrades, livelihoods enhancement, institutional

		strengthening and ecosystem-based adaptation measures that will address climate change impacts and where possible mitigate emissions.
<i>Pollution Prevention and Resource Efficiency</i>	No further actions required beyond ongoing risk monitoring.	<b>Minor risk-</b> The project is anticipated to result in only minor and negligible pollutant releases, primarily from emissions generated by equipment like vehicles. <b>Mitigation measures-</b> The repairs of flood control infrastructure will be done through strict monitoring of pollution to ensure soil and water are not polluted. National regulations and ESS standards will be adhered to. A comprehensive M&E framework will be developed to ensure that this principle is adhered to.
<i>Public Health</i>	No further actions required.	Not applicable. There are no activities in this project that can pose a public health risk.
<i>Physical and Cultural Heritage</i>	No further actions needed.	Not applicable. There are no activities which can impact any heritage sites in the project.
<i>Lands and Soil Conservation</i>	No further actions required beyond ongoing risk monitoring.	<b>Minor risk-</b> There is minor risk of temporary soil runoff when repairs to flood control infrastructure is done. <b>Mitigation measures -</b> During repairs of flood control structures, ESMPs will be developed and quality assurance carried out by specialists to avoid soil erosion. After repairs are done, riparian vegetation and erosion reducing plants such as vetiver will be planted. Riverbank stabilization will be done through planting of riparian vegetation such as vetiver, juncao grass and native trees. Project interventions are outside protected areas. The project supports rehabilitation of critical habitats such as forests and mangroves through supporting nurseries of Ministry of Forestry and Fisheries.

## PART III: IMPLEMENTATION ARRANGEMENTS

(This section is not required for a concept note.)

- A. Describe the arrangements for project / Project implementation.
- B. Describe the measures for financial and project / Project risk management.
- C. Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.
- D. 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.
- E. 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.
- F. Demonstrate how the project / Project aligns with the Results Framework of the Adaptation Fund
- G. 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.
- H. Include a disbursement schedule with time-bound milestones.

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

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

<p><b>Dr.Sivendra Michael</b> Permanent Secretary, Fiji Ministry of Environment and Climate Change Focal Point – Adaptation Fund</p>	<p>Signature: </p> <p>Date: 17/01/2025</p>
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- B. Implementing Entity certification. Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/Project contact person's name, telephone number and email address

<p>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 and subject to the approval by the Adaptation Fund Board, <b><u>commit to implementing the project/Project in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund</u></b> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/Project.</p>	
<p><b>Mr. Sefanaia Nawadra</b> Director General Secretariat of the Pacific Regional Environment Programme (SPREP)</p>	<p>Signature: </p> <p>Date: 20 / 01 / 2025</p>
<p>Project Contact Person: Rupeni Mario SPREP primary focal point – Adaptation Fund</p>	<p>Email: rupenim@sprep.org Telephone: +685 21929 (ext. 277)</p>

# ANNEX I – Letter of Endorsement from Fiji Government



## MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE

Levels 1 & 2, Bali Tower, 318 Toorak Road  
P. O. Box 2109  
Government Buildings, Suva, Fiji

TELEPHONE NO: (679) 3311699

14 January 2025

By Email: [Secretariat@Adaptation-Fund.org](mailto:Secretariat@Adaptation-Fund.org)

Mr. Mikko Ollikainen  
Head of the Adaptation Fund  
Secretariat of the Adaptation Fund  
1899 Pennsylvania Avenue NW  
Washington DC 20433  
USA

Dear Mr. Ollikainen

**Re: Endorsement for Fiji Rewa River Catchment Adaptation Programme**

The Ministry of Environment and Climate Change (MECC), as the Designated Authority to the Adaptation Fund in Fiji confirms that the above national project proposal is in accordance with the Fijian Government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Fiji.

The outcome of the proposal complements key areas of Fiji's Climate Change Act, Fiji's National Development Plan, the National Climate Change Policy, National Adaptation Plan and Fiji's Updated Nationally Determined Contributions.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Ministry of Public Works and executed by the Secretariat of the Pacific Regional Environment Programme (SPREP).

Please note that this Letter of Endorsement ('LOE') applies to the Concept Note only. We will issue a subsequent LOE to the accredited entity for the implementation of the project upon receipt of a full Funding Proposal. This will also be subject to a comprehensive review from the Fiji Climate Finance Sectorial Working Group.

Should you require any further information or clarifications, please contact the Principal Climate Change Officer - Finance, Mr. Ravneeth Dewan via email on [ravneeth.dewan@environment.gov.fj](mailto:ravneeth.dewan@environment.gov.fj) or telephone +679 8921476.

Yours sincerely,

.....  
Hon. Mosese Bulitavu

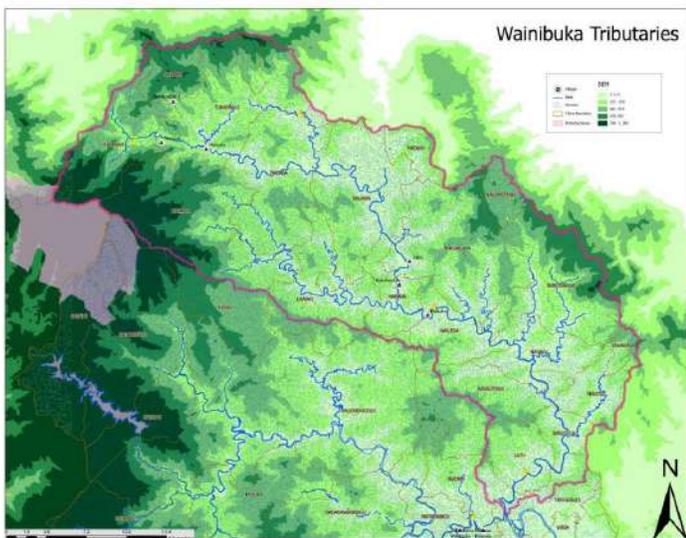
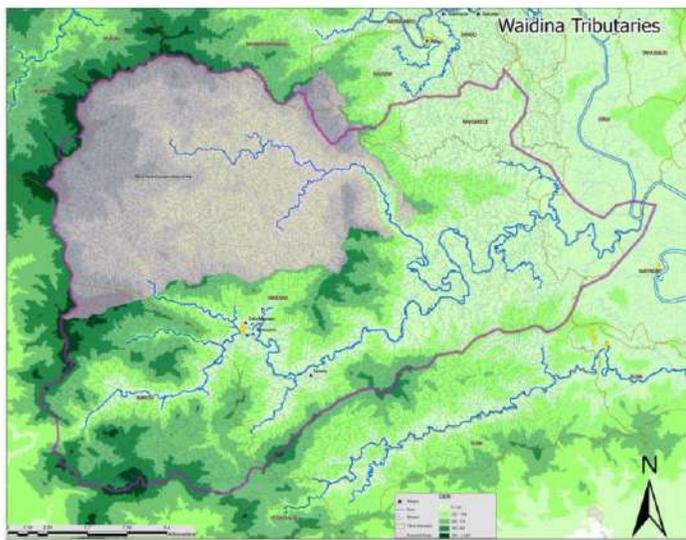
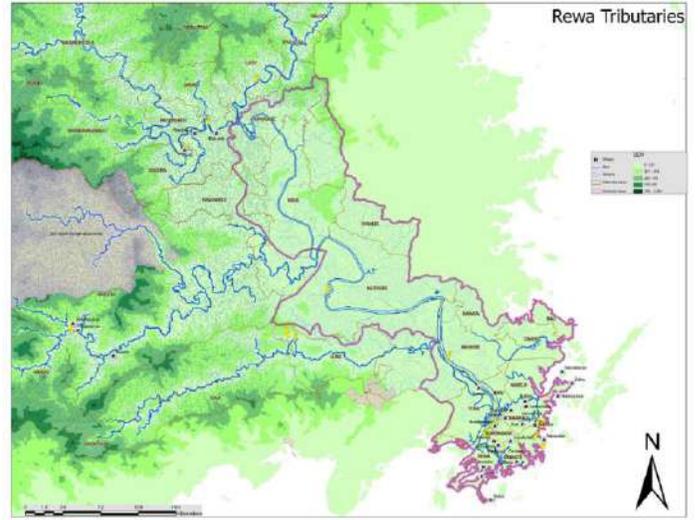
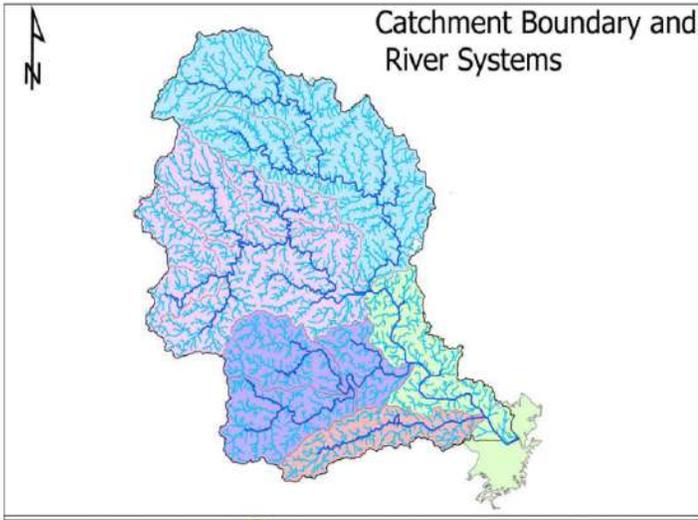
**Minister**

**Ministry of Environment and Climate Change**

## ANNEX II List of villages/beneficiaries

No#	Province	Villages	Coordinates	Tikina	Population	Male	Female
1	Tailevu	Vuci	18°04'59"S 178°35'30"E	Tokatoka	272	125	147
2		Vanualevu	18°06'01"S 178°34'23"E		63	38	25
3		Nakaile	18°04'34"S 178°34'33"E		324	162	162
4		Draubuta	18°04'12"S 178°34'50"E		565	283	282
5		Lomainasau	18°04'00"S 178°35'34"E		309	163	146
6		Nabitu	18°03'51"S 178°35'45"E		317	158	159
7		Vanuadina	18°04'40"S 178°35'23"E		275	145	130
8	Naitasiri	Naseavou	18°00'25"S 178°12'42"E	Waidina	130	79	51
9		Delailasakau	17°59'57"S 178°12'40"E		158	86	72
10		Nasirotu	18°01'17"S 178°14'41"E		155	62	93
11		Nasele	18°01'21"S 178°14'24"E		153	89	64
12		Ararata Farming Settlement	17°59'51"S 178°25'38"E	130	80	50	
13		Naluwai	17°49'50"S 178°19'40"E	Rara	357	193	164
14		Waidracia	17°49'49"S 178°18'41"E		204	111	93
15	Serea	17°50'53"S 178°18'05"E	Soloira	798	378	420	
16	Rewa	Navaka	18°04'57"S 178°36'14"E	Noco	176	96	80
17		Nakuruwai	18°05'37"S 178°36'01"E		60	27	33
18		Matanimoli	18°04'57"S 178°36'14"E		179	86	93
19		Narocake	18°05'49"S 178°36'58"E		195	114	81
20		Nalase	18°06'39"S 178°36'07"E	106	52	54	
21		Vunisei	18°06'39"S 178°36'07"E	Dreketi	163	78	85
22		Nadoria	18°06'48"S 178°35'59"E		141	63	78
23	Suvalailai	18°06'26"S 178°35'26"E	Burebasaga	44	21	30	
24	Waivou	18°05'56"S 178°34'05"E		307	170	137	
25	Naivisara	18°05'38"S 178°36'19"E		106	58	48	
26	Tailevu	Nabulini	17°39'36"S 178°17'18"E	Wainibuka	162	88	74
27		Navesau	17°39'24"S 178°16'40"E		176	92	84
28	Ra	Tobu	17°38'16"S 178°15'48"E	Nababa	186	98	88
29		Navuniyaumunu	17°30'03"S 178°07'37"E	Tokaimalo	102	56	46
30		Nabalabala	17°30'08"S 178°10'50"E		79	49	30
31		Navavai	17°31'34"S 178°06'20"E		19	13	6
32		RaviRavi	17°31'31"S 178°06'27"E		170	86	84
33		Vunisea	17°29'25"S 178°08'54"E		91	48	43
34		Narauyaba	17°31'23"S 178°06'25"E	54	37	17	
35	Nalatawa	17°37'53"S 178°15'46"E	Nalawa	252	132	120	
36	Rokovuaka	17°37'17"S 178°16'27"E	Rewa	231	108	123	
37	Vunuku	18°07'35"S 178°33'33"E		141	67	74	
38	Rewa	Tavuya	18°02'27"S 178°32'16"E	Toga	249	126	123
39		Vunisei	18°03'12"S 178°33'19"E		281	147	134
40		Navatuyaba	18°03'55"S 178°33'21"E		541	267	274
<b>Total</b>					<b>8,428</b>	<b>4,331</b>	<b>4,097</b>

**ANNEX III -Maps**



## ANNEX IV - Scoping Report

The “Fiji Rewa Catchment Adaptation Programme” will directly benefit 40 villages in the Rewa River Catchment, covering provinces of Ra, Naitasiri, Tailevu and Rewa. Between 5-16 December 2024, visits were made to selected villages as a scoping exercise. The visits collected information regarding, village profile, vulnerabilities to flooding, ecological characteristics, presence of women and youth groups and any NGOs that the village has benefitted from. The map that indicates the sites visited is provided below followed by a table that provides information compiled per village.

Table 13 Details of villages visited during scoping exercise

Num	Village name and profile	Vulnerabilities as articulated by community members	Ecological characteristics	Organization (women and youth groups, NGOs)	Training needs requested
1	<p>Burebasaga Tikina with villages Suvalailai, Waivou and Naivisara Coordinates: 18°06'26"S 178°35'26"E</p> <p>Total population for 3 villages 340 people with 51 Households. Livelihoods are from farming. Crops include Taro, coconuts, Vegetables (Kumala), Sweet Potatoes. Dairy farms which use Juncao Grass for feed to animals.</p>	<p>The community is facing significant environmental challenges. The rising water table and riverbank erosion have led to a loss of land, while poor drainage and damaged floodgates have caused frequent flooding, especially during cyclones. This has made it impossible to grow crops like sugarcane, cassava, and yams.</p> <p>Additionally, the river's current has driven away crabs, prawns, and mussels, forcing women to travel long distances to collect these aquatic species. They must row for two hours, passing two villages, and carefully time their journey with the tides to ensure they can navigate the boat. This arduous process highlights the severe impact of environmental changes on their livelihoods.</p>	<p>The community has lost an estimated 2-3 acres of land and several coconut trees that were growing by the river, due to riverbank erosion.</p> <p>The dredging of rivers has led to a decline in the abundance of prawns, crabs, and mussels. Additionally, stagnant floodwaters have created breeding grounds for mosquitoes.</p>	<p>The Nacokoni Women's Group, established in 2009, engages in mat making and tie-dye activities. There is also a Sub-Committee focused on erosion control using Vetiver grass. The youth group participates in village clean-ups and sports.</p> <p>Several NGOs have provided support, including Rugby League, ADRA (which supports the agricultural value chain by making flour from cassava), and the Government of China, which has funded mushroom planting activities.</p>	<p>The community is seeking training in food processing and producing high-quality flour for export. Additionally, the youth are interested in agricultural training, specifically Tua Tua farming, which involves raised beds to combat saltwater intrusion. These training sessions should be conducted within the village and include school dropouts, providing informal education opportunities.</p>
2	<p>Vuci village in Tikina Tokatoka Coordinates: 18°04'59"S 178°35'30"E</p> <p>Village present at the meeting were from Vuci,</p>	<p>Severe flooding from the Yakaivuci River has significantly impacted homes, roads, and agriculture. The new culvert needs reassessment as it fails to channel water correctly, and the existing 2-barrel floodgates require maintenance. Solid waste management and grey water disposal are major</p>	<p>The community has experienced a decline in fish, crabs, and prawns due to pollution, temperature changes, and saltwater intrusion. High tides</p>	<p>The Naivirourou Women's Club, which has 54 registered members, is actively engaged in various activities. The youth group was previously active, but now 50% of the youths are in Australia</p>	<p>Village requested training on Climate Smart Agriculture and restocking for abundant fruits/vegetables.</p>

	<p>Vanuadina, Nabitu, Nakaile, Draubuta, Lomainasau, Vanualevu. Their combined population is 1.962.</p> <p>Farmers are men that cultivate Dalo and cassava only. Women collect shrimps and crabs from mangroves.</p>	<p>issues, contributing to waterlogging, reducing usable land, and causing crop damage and infrastructure challenges. Improving drainage systems is crucial. Pregnant women face increased vulnerability, unable to travel to clinics during floods. Communities have started adapting by building houses on stilts. Waterlogging has led to the loss of arable land, reducing crops like yams and rice.</p>	<p>have limited the collection of juvenile shrimps. Additionally, the size of coconuts has decreased, impacting copra production. Stagnant water in the village has forced villagers to travel farther to catch crabs. Mangroves have also declined due to land reclamation for development.</p>	<p>through an employment scheme.</p> <p>Several NGOs have provided support, including UN-Habitat, which worked on water supply projects, and Habitat Fiji, which helped rebuild homes after Cyclone Winston.</p>	
3	<p>Serea Coordinates: 17°50'53"S 178°18'05"E</p> <p>Serea comprises of 3 sub-villages. Population is 153 for Navatukia with 34 Households (HHs) and in Vaikalou village there are 25-30HHs, in Vunidawa there are 27 HHs +40HHs in settlement (67 in total). Including population of Navatukia settlement which has more than 50 people.</p> <p>Taro, Banana, Cassava, Ginger, dairy farming and kumquat cropping is source of livelihood.</p>	<p>The village primarily relies on Dalo/Taro crops for income. However, farmland erosion is severely impacting livelihoods and income. Significant soil loss has led to some Mataqali losing land while others gain, causing potential village disputes and longstanding boundary issues dating back to the 1970s. Flooding further complicates matters, necessitating drainage improvements within the village and around roads, as the school is also affected by floods. Increased rainfall intensity has rendered existing drains and 1950s-built culverts inadequate, causing road flooding during heavy rains. Houses are perilously close to the river, some just 10 meters away, potentially requiring village relocation. Additionally, there are cases of Leptospirosis from dairy farms, though no dengue cases have been reported.</p>	<p>Riverbank erosion is posing a significant threat to village assets, with the community worried that it could erode half of the village. Nearby gravel extraction is worsening the situation. The river, once deep and home to large fish, has become shallow due to siltation. Tragically, two people recently drowned in the river.</p>	<p>The Health and Education Committees serve three neighbouring villages jointly. Each village has its own Women's Committee, and there is an additional Women's Committee at the Tikina level.</p> <p>The Jobs for Nature initiative, supported by the World Bank, involves women's groups from three villages in solid waste management, footpath construction, poultry farming, and kumquat planting. The Ministry of Women and Poverty Alleviation has provided support to these women's groups by offering sewing training and supplying a freezer and grass cutter.</p>	<p>Specific training needs in areas such as disaster preparedness, solid waste management, agricultural best practices, and health and accessibility improvements.</p>

4	<p>Matanimoli village in Tikina Noco comprising of villages Nabudrau, Nakuruwai, Narocake, Taci, Navaka, Naqarani, Nacuru, Naivilaca, Matanimoli, Nakauwara. For this project we will cover Navaka, Nakuruwai, Matanimoli, Nalasa, Narocake</p> <p>Coordinates: 18°04'57"S 178°36'14"E</p> <p>Total population is 1,415 for all villages listed.</p> <p>Livelihoods fishing and farming.</p>	<p>Matanimoli Village faces severe road inundation during heavy rains, which is worsened by high tides. Built on wetland areas by a dredger, the village now experiences salt intrusion on agricultural lands, leading to low crop yields. The existing floodgate exacerbates flooding and needs repair. Villagers prefer constructing a seawall over raising the levee to protect against river erosion and secure the village hall/evacuation centre. Increased siltation has reduced river depth, necessitating a culvert retrofit, road level raising, and improved drainage. Mangroves are cleared for firewood, and existing village drains need redesigning and maintenance. Although women are traditionally restricted from farming, children travel to school by truck, avoiding disruptions during floods.</p>	<p>The village is facing more frequent flash flooding, worsened by high tides, which leads to stagnant water and siltation affecting house foundations and septic tanks. Saltwater intrusion has forced the relocation of crops like Dalo, Vudi, Via, and cassava, and rice is no longer cultivated. Flooding has caused over FJD50,000 in infrastructure repairs, impacting more than 40 houses and four village halls. Stagnant water is also increasing the prevalence of waterborne diseases such as dengue and malaria.</p>	<p>The Matanimoli Youth Club, founded in 2023, boasts over 60 male members aged 17 to 38. They undertake self-funded projects such as footpath construction and the installation of 10 solar lights. Their long-term goal is to establish a village dispensary, which requires bedding and first aid resources.</p> <p>The Matanimoli Women's Group, established in 2007, has over 52 members. They are involved in traditional handicrafts and converting Via plants into flour, for which they need machines and mixers. Their long-term projects include creating a library for children and painting the village hall.</p> <p>ADRA is assisting the community with food processing, including making flour from Taro and breadfruit, as well as producing chips. These products will be showcased in markets.</p>	<p>The village requires training in solid waste management due to its limited land mass, as well as an introduction to Juncao technology. They are also interested in Taro planting, particularly in swampy areas. Additionally, the village needs training on Non-Timber Forest Products (NTFP) value chains, including honey, mushrooms, and coconut oil, to support livelihoods as marine resources decline.</p>
5	<p>Nalalava</p> <p>Coordinates: 17°37'53"S 178°15'46"E</p> <p>Population is 254, with 54 households. The community cultivates</p>	<p>The village has experienced severe flooding during Cyclones Kina (1992), Winston (2016), and in 2018, necessitating the use of the community hall as an evacuation center. However, residents must move uphill when it</p>	<p>The community has reported that the river's water level has risen significantly, leading to frequent flooding. Heavy rains</p>	<p>The village has established committees for business, education, women, youth, church, social welfare, conservation/environment, and health (Yaubula). The</p>	<p>They want training in sewing, tie and dye, flower arrangements to sell along road.</p>

	<p>watermelon, ginger, cucumber, banana, turmeric, and voi voi. Fishing is a common activity, and they have beehives but lack a honey extraction machine, relying on someone from Barotu to extract the honey. On one occasion, the person didn't arrive on time, resulting in the loss of the queen bee and honey.</p>	<p>floods. They lack a dispensary, forcing the nurse to manage without a proper place for medicines during floods. A new lower-level bridge exacerbates flooding issues. During floods, older residents need to be carried to safety. The village also faces occasional water shortages and plans to construct a large tank, funded by household contributions. The community has five beehives and protective gear but needs its own honey extraction machine.</p>	<p>cause landslides, and the rising water levels of the Wainibuka River also contribute to village flooding.</p>	<p>Nalalawa Women's Club, which has 42 members, was established long ago and registered in 2024, and they have a bank account.</p> <p>The Jobs for Nature project has helped by digging drains, reducing stagnant water, and preventing dengue. UN Habitat has supported the community with post-cyclone recovery efforts.</p>	
6	<p>RaviRavi. Coordinates: 17°29'25"S 178°08'54"E Tikina Tokaimalo (has 11 villages- Nailawa, Matevikai, Balabala, Vunisea, Nayaulevu, Manyava, Vuniamunu, Naivutu, RaviRavi, Navavai, Nayawe). This project will only cover Navuniyaumunu, Nabalabala, Navavai, Narauyabe 1 and Narauyabe 2 and Vunisea.</p> <p>Population for Naivutu is and for Raviravi is 170+ with 32 and 39 households respectively. Livelihoods are farming and fishing. Men cultivate Kawa, pine, turmeric, and vegetables, while women plant Voi Voi to make</p>	<p>The village urgently needs climate-proofing for roads and culverts to address frequent flash flooding and mobility issues, which impact education. Landslides and Cyclone Winston in 2016 caused significant damage to infrastructure, water supply, and the ecosystem. Since 2018, the government has provided support for housing, water, food, and roads. Changing climatic patterns have led to altered rainfall and the disappearance of some bird species. Children's education is disrupted during floods, and pregnant women face challenges due to road crossings. Women experience knee pain from the cold and rain.</p> <p>Disabled villagers receive support during floods, and children missed three school days due to flooding in 2024.</p>	<p>The mountainous area experiences heavy rain, causing runoff and flash flooding. Farming on steep slopes is done against contours. Aquatic species have declined since a major flood in April 2004, resulting in murky water and the absence of fish, prawns, and eels. Reforestation has led to increased rainfall and riverbank flooding, preventing planting in those areas and leading to the spread of invasive species like African Tulip. Vetiver grass is widely used. Increased rainfall prompted the Ministry of Health to</p>	<p>The women's groups in RaviRavi and Naivutu villages, funded by the "Friends" NGO, had their beekeeping projects disrupted by Cyclone Winston but have the potential for revival. They are trained in disaster management and fire safety. Under the Jobs for Nature initiative, each village has a women's club that plants fruit trees and cleans drains. Youth groups engage in farming, and girls are learning to make mats. Conservation International has supported reforestation and provided training in seedling management, resulting in improved biodiversity and the return of bird populations. The community, trained in</p>	<p>The community needs training on buffer zones, contour planting, beekeeping, and adding value to cocoa and coconut. They also require financial management and business skills training for women and youth groups, as well as training in cooking, sewing, baking, and screen printing. Additionally, there is potential for eco-tourism development, leveraging local attractions like trails, waterfalls, and unique rock formations.</p>

	<p>mats and fans for the Women's Expo and also farm edible ferns for the market. The river has introduced Tilapia and abundant Matalevu fish, which the community catches and eats daily.</p>		<p>advise against village crop planting due to mosquitoes, leading to the use of alternative planting sites.</p>	<p>ecosystem management, has ceased burning practices, restored trees, and improved river water levels and soil health, allowing crop planting in previously unsuitable areas. Freshwater species like prawns have also returned.</p>	
7	<p>Tavuya Coordinates: 18°02'27"S 178°32'16"E Population is 264 with 56 households. In Tavuya, men collect crabs while women collect small prawns. They sell rourou (Taro leaves) and moci, a Rewa delta delicacy. Women handle crop farming in the village, manage a nursery, grow vegetables like capsicum, cucumber, and cabbage, but face challenges due to lack of male support and land ownership issues.</p>	<p>Flooding in Tavuya is generally limited to the river's edge during cyclones, with major flooding recorded during Cyclones Kina and Winston. However, it is usually not a concern due to the protective mangroves. The village has experienced higher rainfall intensity compared to the past. Stagnant water buildup from heavy rainfall and poor drainage caused a dengue outbreak, resulting in one death in 2020 and another in 2021, though others have recovered.</p>	<p>The village's beekeeping business has stopped due to a lack of initiative. Moci (juvenile shrimp) collection is limited during high tide, and previously deeper areas of the riverbank have become shallow, affecting moci collection.</p>	<p>The village has established committees for women, youth, men, health, kindergarten, and yaubula. The Tavuya Women's Club, a registered group with a bank account, consists of four women's groups that cook and sell food weekly to fund the community kitchen. They also engage in handicrafts every Wednesday. The youth group, with 18 members, assists with village development but is not registered. No NGOs have worked with the village. The village has applied "Jobs for Nature" initiative.</p>	<p>Require training on flower crafting, financial management, bookkeeping.</p>
8	<p>Delailasekau Coordinates: 17°59'57"S 178°12'40"E Population data: Total 158. 86 male, 72 Female. Livelihoods depend on farming. Crops include Dalo, banana, Yaqona ginger.</p>	<p>The village experienced flooding almost 20 years ago, prompting a request to the government for relocation. Although a site has been identified, no confirmation has been received from the government, so individual relocation is not permitted. Crossing rivers is an issue as farms are located outside the river. The Ministry of Waterways and Agriculture intends to divert the river.</p>	<p>Riverbank erosion is a significant issue for the village, leading to the loss of vegetation. Juncao is being used to stabilize the riverbank and as animal feed.</p>	<p>Youth group exists for "Jobs for nature" initiative. No intervention of any NGOs, however the village has been developing proposals to access funding from Government.</p>	<p>Training needed for alternative livelihoods as their crops are affected flooding.</p>

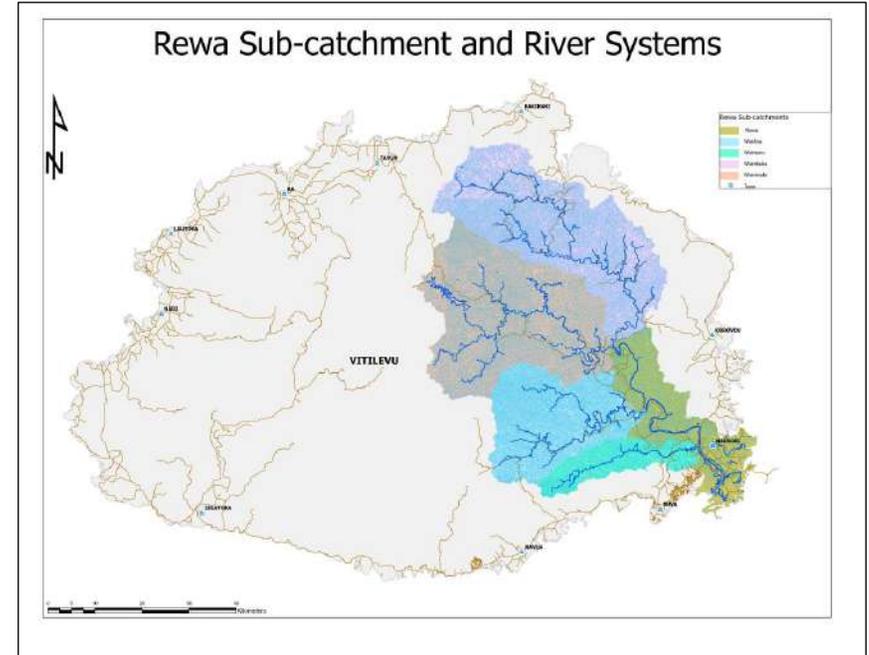
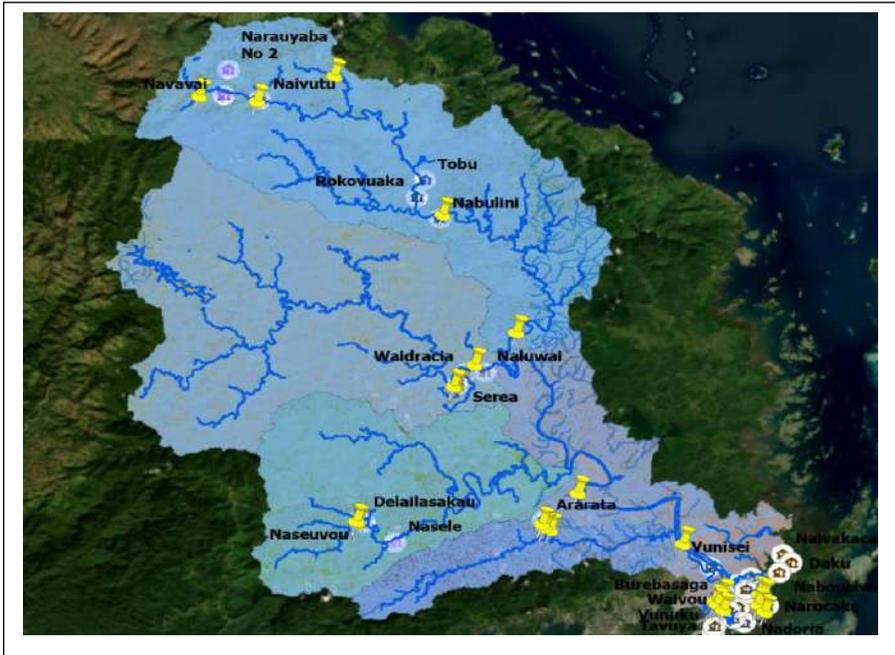


Figure 9 Left- Sites visited during scoping exercise. Right- map of Rewa Catchment within Viti Levu



Figure 10 Upper Wainimala River: Serea Village which is experiencing riverbank erosion affecting houses close to riverbank



Figure 13 Matanimoli and Navaka village have floodgates that was built in 1990s and need repair to protect the village against flooding



Figure 11 Lower Wainimala River: Naluwai Village. Riverbank erosion is affecting farmlands through loss of arable land



Figure 14 Timber support struts built by youth of Tavuya village to access the village during high tide to ensure safety and allow for free movement during flooding



Figure 12 Vuci village and the existing 2-barrel flood gate which needs repair through replacement of steel gates.



Figure 15 Evidence of salt water intrusion in Tavuya village through proliferation of Mangrove Ferns (*Acrostichum speciosum*) which is visible in brown colour in image