

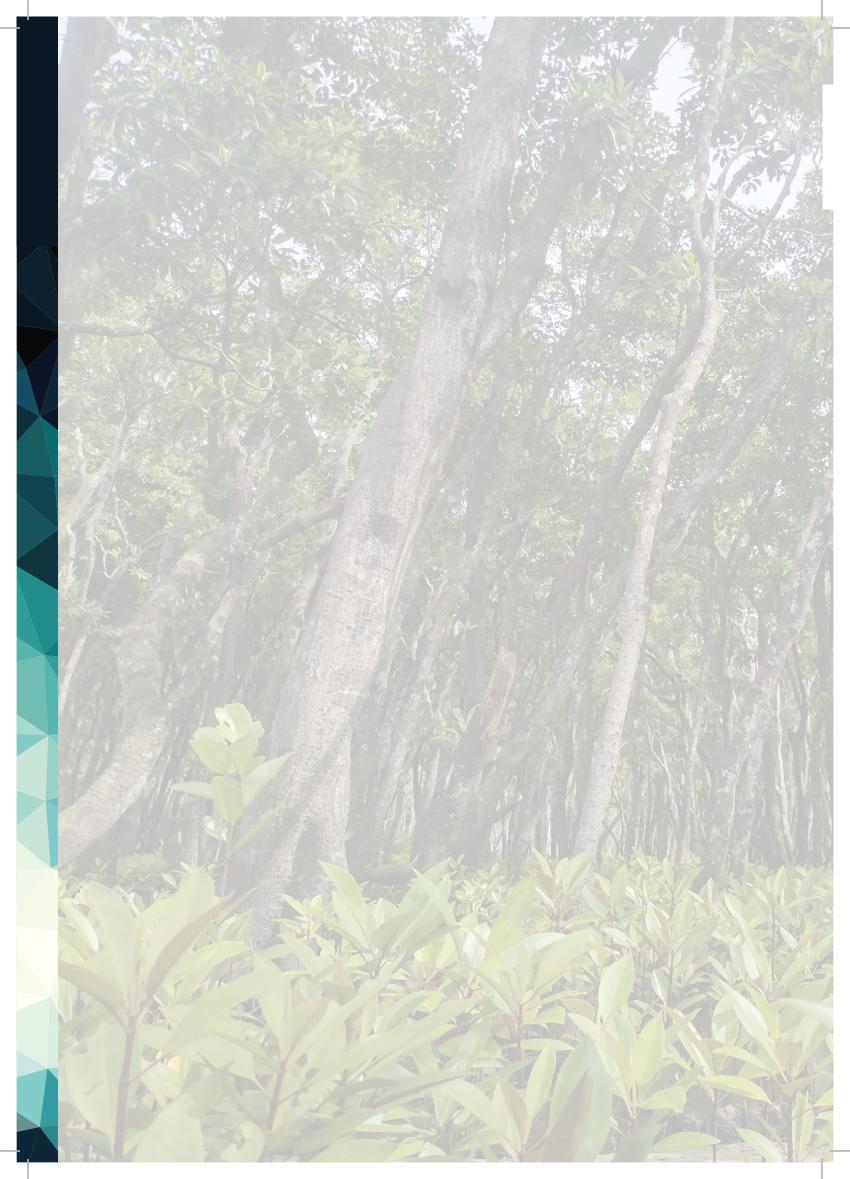




Department of Foreign Affairs and Trade

BLUE CARBON TRADING PATHWAYS FOR FUI

Conservation International – Fi 2023







Department of Foreign Affairs and Trade

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Conservation International – Fiji 2023

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2

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LIST OF CONTENTS

| INTRODUCTION | 5 |
|--|----|
| FIJI'S COUNTRY ASSESSMENT | 6 |
| Fiji's National Circumstances | 6 |
| POLICY FRAMEWORK | 8 |
| Overview of Fiji's climate action plan and commitments | 8 |
| Summary of Fiji's NDC 2020 | 8 |
| Summary of Fiji's Long-Term Low Emission Strategy 2018-2050 | 8 |
| Summary of Fiji's NDC Implementation Roadmap | 8 |
| ANALYSIS OF LEGAL FRAMEWORK FOR ENABLING CONDITIONS | 9 |
| Relevant Legislation | 9 |
| Enabling conditions specific to International Markets | 11 |
| Regulatory Gaps Analysis | 12 |
| NCS CREDIT GENERATION POTENTIAL | 15 |
| REDD+ Readiness in Fiji | 15 |
| Blue Carbon Potential in Fiji | 16 |
| MECHANISMS AND OPPORTUNITIES FOR CARBON TRADING | 17 |
| International Voluntary Market, Non-Market, and Domestic Opportunities | 17 |
| International Compliance Market Opportunities | 19 |
| Regional Opportunities | 20 |
| RECOMMENDATIONS FOR FIJI | 22 |
| Appendix 1 | 24 |
| Appendix 2 | 26 |
| Appendix 3 | 27 |
| Appendix 4 | 29 |



INTRODUCTION

The Asia-Pacific region is critical for implementing Natural Climate Solutions (NCS)¹ and generating carbon credits. Countries in the region are exploring possible cooperation to assist them in meeting national climate commitments, such as through the implementation of Article 6 of the Paris Agreement. Fiji has the right conditions to become a model for international carbon trading in the Pacific Islands region: it contains a supportive legislative framework, a range of initiatives for market and non-market approaches, and a critical scaling potential for blue carbon that integrates climate change mitigation and adaptation. This paper provides an assessment of carbon trading pathways for Fiji, particularly on blue carbon, as a model for the Pacific Islands region. Blue carbon has the potential to store five times as much carbon per square foot as terrestrial ecosystems but remains underdeveloped and underfunded². This paper further outlines the current status of carbon trading in Fiji and identifies enabling conditions, opportunities, and improvements needed to advance blue carbon trading for Fiji.

 ¹ Natural climate solutions are conservation, restoration, and improved land management actions that increase carbon storage or avoid greenhouse gas emissions in landscapes and wetlands across the globe (The Nature Conservancy, 2022)
 ² World Economic Forum. (2022) 12 organizations delivering on the promise of blue carbon.

https://www.weforum.org/agenda/2022/03/12-organizations-delivering-on-the-promise-of-blue-carbon/

FIJI'S COUNTRY ASSESSMENT

Fiji's National Circumstances

6

The Fiji Government has spearheaded efforts to mainstream the delivery of nature-based solutions to climate change mitigation and adaptation, including through forest and ecosystem-based financing mechanisms. Central to this effort was the passage of the Climate Change Act by parliament on September 24, 2021, which serves as foundational legislation guiding the delivery of Fiji's mitigation, adaptation, and disaster risk reduction and management targets. The Climate Change Act legislatively commits Fiji to achieve net-zero carbon emissions by 2050, as the first Small Island Developing State (SIDS)—or Large Ocean State—and the seventh country in the world to advance climate legislation toward these ambitious net-zero goals and targets. The Act also outlines the legal framework for Fiji to include carbon trading, as well as for transactions under an international REDD+ programme, and outlines the necessary coordination and governance structures to achieve these goals and targets.

Fiji is already a global leader in ocean and climate action. By facilitating effective blue carbon credit generation and trading (through domestic and/or international platforms), Fiji can serve as a leader for other Pacific Island States and Large Ocean States interested in participating in carbon trading. Fiji could play a critical role in scaling the blue carbon supply for international trading, specifically by making carbon markets more inclusive (through Pacific participation) and accounting for the resilience/adaptation values of blue carbon ecosystems in their traded value. Additionally, the revenue from carbon trading and other financing mechanisms could help Fiji achieve its goals under the National Adaptation Plan and the Low Emissions Development Strategy (LEDS), accelerating Fiji's transition towards a low-carbon economy with increased resilience to the severe impacts of climate change. The future development of a domestic Emissions Trading Scheme could also provide an opportunity to include nature in that system and drive the domestic demand for blue carbon credits.

Outlined below are some of the key enabling conditions for carbon trading, including blue carbon, in Fiji:

- Legislative Framework: As outlined above, Fiji's current legislative framework provides ample opportunity to engage in both domestic and international carbon trading. Although carbon pricing mechanisms or carbon taxes are not yet in place, Fiji's Climate Change Act, 2021 authorizes the Minister for Climate Change to introduce and implement a carbon pricing mechanism, including an emissions trading scheme, and identifies parts of the legal framework required to carry out carbon trading (e.g., carbon sequestration property rights, registry system, procedures for credit issuance, Monitoring Reporting and Verification (MRV) system, coordination and governance structures). Many of these foundational systems and analyses are actively being developed or strengthened.
- National Reporting and MRV: Fiji submitted its Third National Communication to the United Nations Framework Convention on Climate Change in 2020, which describes Fiji's Greenhouse Gas Emissions for the period of 2006-2011. With support from the United Nations Environment Program and the Global Green Growth Institute, Fiji is currently implementing a 3-year Capacity Building Initiative for Transparency (CBIT) project. This project aims to: 1) strengthen Fiji's institutional arrangements for the Enhanced Transparency Framework (ETF) to enable regular transparent reporting on NDC

implementation and National GHG inventory; 2) develop an IT-based GHG inventory preparation system to efficiently coordinate preparation of transparent, consistent, comparable, complete, and accurate National GHG inventories; 3) strengthen MRV systems to assist in tracking and transparent reporting on NDC implementation and resultant GHG emissions and climate finance. The 3-year project will further assist in implementing the Climate Change Act, 2021 and will build upon the climate actions committed by the Government of Fiji. In addition, Fiji has implemented the Initiative for Climate Action Transparency (ICAT) project, which was managed by the United Nations Office Project Services and with technical support from the Greenhouse Gas Management Institute (GHGMI). The project developed an MRV system for the agriculture sector (e.g., rice cultivation, livestock management, enteric fermentation) to ensure alignment with their Climate Change Act and the ETF.

- **Compliance Market Mechanisms:** In the pursuit of advancing its participation in carbon markets, Fiji is actively involved in Australia's Indo-Pacific Carbon Offset Scheme (IPCOS), marking its commitment to exploring a bilateral carbon trading agreement as a partner country. Concurrently, discussions are underway with the Government of Singapore to explore carbon trading mechanisms under Article 6 of the Paris Agreement. However, the realization of future bilateral carbon trading under Article 6 is contingent upon the establishment of a national registry and the development of clearly articulated policies, guidelines, and standards for the International Transfer of Fijian Mitigation Outcomes.
- **Non-Market Mechanisms:** To date, investment in REDD+ under the Forest Carbon Partnership Facility (FCPF) encompasses Fiji's most significant efforts to advance nature-based carbon trading. Under this partnership, Fiji developed several baseline assessments, frameworks, and processes to facilitate forest carbon trading, which are outlined in detail in section five of this report. The World Bank estimated that by participating in the Forest Carbon Partnership Facility (FCPF), Fiji could generate up to US12.5 million in REDD+ results-based payments (RBP)³.
- Voluntary Market Mechanisms: In addition to compliance market trading, private sector, and local non-profit and civil society organizations are also interested in developing voluntary carbon market projects. Live and Learn Fiji developed the Drawa Rainforest project under the Nakau Initiative, which was certified under the Plan Vivo Standard in 2012 and is recognized as the only voluntary carbon market investment in Fiji. However, without a viable REDD+ nesting framework, Fiji's ability to manage and trade its forest and blue carbon on both the compliance and voluntary market may be limited.

³ Forest Carbon Partnership Facility. (2021) 2021 Annual Report. https://www.forestcarbonpartnership.org/system/files/documents/fcpf_2021_annual_report_websngl_fnl_1_13_2022.pdf

POLICY FRAMEWORK

Overview of Fiji's climate action plan and commitments

Through the National Development Plan and the Low Emission Development Strategies (LEDS), Fiji actively connects its national strategies and plans to nature-based emissions reductions. The most relevant of these are summarized below. Others include the Green Growth Framework, National Climate Change Policy, Forestry Strategic Development Plan, Forestry Annual Operational Plan, and Agriculture Strategic Development Plan.

Summary of Fiji's NDC 2020

Fiji's updated Nationally Determined Contribution (NDC) (2020) has an unconditional mitigation target of a 10% reduction in energy-sector emissions from 2020 to 2030 and a conditional target of a 30% reduction compared to a business-as-usual (BAU)⁴ scenario. This target implies a greenhouse gas (GHG) reduction of 0.3 MtCO2e from 2020 to 2030. Fiji's NDC notes the importance of land-based activities for adaptation, resilience, and ecosystem services but does not include specific mitigation targets for the land sector.

The latest NDC update from Fiji includes several advances towards their 2030 target: a commitment to achieve net zero greenhouse gas emissions by 2050; the enactment of its Climate Change Act by 2021 (which was enacted into law in September 2021), providing some future pathways for domestic carbon pricing; and a commitment to operationalize its National Adaptation Plan.

Summary of Fiji's Long-Term Low Emission Strategy 2018-2050

Fiji's National Development Plan 2017–2036 and the Low-Emissions Development Strategy 2018–2050 share the goal of decarbonizing the economy by 2050. Both documents identify opportunities for emissions reductions from NCS. The land sector is classified as a moderate source of GHG emissions in the country as it is responsible for 37% of GHG emissions.⁵ The land sector has a moderate potential to achieve emissions reductions in the medium-term with potential reductions ranging from 0.18 to 1.7 MtCO2e by 2030, but significant emissions reductions potential by 2050.

Summary of Fiji's NDC Implementation Roadmap

In 2017, the government approved the NDC Implementation Roadmap, which establishes mitigation goals for the energy and transportation sectors only, in alignment with the broad focus of Fiji's NDC.

⁴ Republic of Fiji. (2020). Fiji's Updated NDC 2020.

https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Fiji%20First/Republic%20of%20Fiji's%20Updated%20NDC%2020201.pdf

⁵ https://unfccc.int/sites/default/files/resource/Fiji_Low%20Emission%20Development%20%20Strategy%202018%20-%202050.pdf

ANALYSIS OF LEGAL FRAMEWORK FOR ENABLING CONDITIONS

Relevant Legislation

Clarity on Carbon Sequestration Property Rights

Fiji has specified carbon sequestration property rights to mean the distinct legal right to carbon sequestration and carbon stocks as defined in the country's Climate Change Act, 2021. Carbon rights to emissions reductions and removals in Fiji are regulated by the state, with benefit sharing among community stakeholders and landowners. Carbon rights are separate from land rights and entitle the holder to sell, transfer, mortgage, charge, or pledge carbon rights. Rights must be registered with the Registrar of Titles.

In order to apply to register a carbon sequestration property right, a person must: i) hold a license or lease over the land and have the consent of the landowner (if in relation to iTaukei land, consent of 60% of qualifying clan members will be required); ii) in the case of a third party, the landowner must provide consent; iii) for freehold land, the landowner can request to register carbon rights as long as there is no conflicting lease or license over it. The Registrar must obtain the consent of the Conservator of Forests for the registration of carbon sequestration property rights related to forests (which under this Act include mangroves). It is worth noting that roughly 88% of Fiji's land is owned by iTaukei Fijians.

The application must specify the area and term of the right, and only one right (issued in the form of a certificate) may be issued for a particular area of land. No mining, logging, or extractive activity may occur in an area on land where a carbon sequestration property right has been registered; or where there is a REDD+ programme or an emission reduction project or activity involving forests, blue carbon, or other projects under the Climate Change Act.

In addition to the recent Act, Fiji has laws and regulations governing activities related to the land sector and land use. The Foreign Investment (Budget Amendment) Act (2016), Financial Sector Development Plan (2016–2025), and Environmental Levy Act (2015), along with earlier legislation such as the iTaukei Lands Act (Cap 133), all provide relevant regulation of activities and investment in forestry and agriculture. Furthermore, customary land tenure applies to roughly 88% of land area and is a key characteristic in land use decisions in Fiji. Land tenure is based on intergenerational and family land rights, and all land purchases and leases require consideration by the iTaukei Lands Trust Board (TLTB), as outlined above. If the land is required for development, the transaction costs and considerations for securing land leases must be considered, particularly as customary land titles are not issued to individuals, but to clans (known as mataqali) as customary landowners.

Specific conditions dictate the rights of the landholding group and the leaseholder in the case of the use of leased and forested lands. The 1992 Forest Decree establishes long-term concessions (10–30 years) or annual leases for timber extraction; however, the landholder retains access and removal rights. These leases are overseen by the TLTB, the landowner's representative, or an incorporated group of landholders. The TLTB may also enter into leases for "special purposes" such as conservation, which can be for a REDD+ activity.

Mangroves are not currently covered under REDD+ in Fiji. While not legally documented, carbon rights over mangroves and seagrasses are widely understood as state-owned because most mangroves are located under the high tide water mark. Numerous governmental agencies have regulatory jurisdiction and different roles in mangrove management, which sometimes results in overlap and coordination challenges.⁶

Benefit Sharing

10

There are several existing models of benefit-sharing mechanisms in general, which are available in Fiji. Though not all models are specifically related to benefit sharing for nature-based carbon, they are referenced under the REDD+ Benefit Sharing Plan as possible pathways, and are briefly mentioned below:

- <u>The iTaukei Lands Trust Board Lease Payment Distribution</u>: In terms of customary land, iTaukei land cannot be sold, transferred, mortgaged, or otherwise encumbered. Land under this category can be leased long-term for a maximum of 99 years for commercial purposes and 50 years for agriculture tenure. There are 5,746 land-owning units (clans or Mataqali) in the ER-P (Emission Reduction Program) and 31,8820 leases on record for all the ER-P. User rights of iTaukei Lands can be transferred through TLBL TLTB? with fixed-term leases.
- <u>The Fair Share Mineral Act 2018</u>: Through this Act, any royalty for mineral extraction has to be distributed between the State (20%) and the landowner 80%. Although it is unclear whether or not carbon is subject to this Act.
- <u>The Trustee Act or Charitable Fund Act</u>: This scheme supports the distribution of funds by the Trust to beneficiaries and it includes tax exemptions; thus, it is designed for non-profit entities. This scheme is to address issues limited to poverty, advancement of education, advancement of religion, and other similar purposes of a public nature.
- <u>The Companies Act 2015</u>: Companies limited by guarantee allow for members to subscribe for a nominal value, thereby taking on only limited risk in relation to the company's operations. The companies can apply for a not-for-profit status, giving it the same tax exemptions that would normally be associated with charitable trusts and Non-Governmental Organizations (NGOs)
- <u>The Cooperative Act 1996</u>: Cooperatives equally distribute benefits between cooperative members.
 Once registered, a cooperative may apply for a tax exemption for up to eight years. Cooperatives have by-laws or internal regulations and must hold annual general meetings.

Since the existing schemes do not relate to blue carbon, further work is required to design benefit-sharing mechanisms for the distribution of income from carbon credit sales in blue carbon projects. According to the Climate Change Act, the Minister of Forestry will be responsible for developing a benefit-sharing agreement for forest emission reduction projects, programmes, and activities (including mangrove forests). Under Article 6(2) of the Climate Change Act, the Minister responsible for forests, in consultation with the Minister responsible for lands may approve benefit-sharing plans for transactions under international REDD+ programmes, which must: i) take into account issues raised during consultations by

⁶ https://www.forestcarbonpartnership.org/system/files/documents/Final%20ER-PD%20Fiji%20_MASTER_v8_clean16619.pdf

the landowners, communities, and stakeholders; ii) recognize and reward the landowners, carbon right owners, communities and other stakeholders; iii) identify the beneficiaries; iv) determine a mechanism to distribute the payments for emission reductions and v) identify the nature of the monetary and non-monetary benefits to be distributed. Although REDD+ does not currently include blue carbon, these criteria remain relevant and could inform the development of a future benefit-sharing mechanism for blue carbon.

There is currently no formalized national policy and/or specific legal framework for mangrove use and updated mangrove resource management in place. Few policies provide sufficient coverage of mangroves as the forest policy, mangrove management plans, and National Biodiversity Strategic Action Plan (NBSAP). There is also limited capacity and resources to monitor and enforce existing policies, laws, and regulations related to mangrove use and management. Current policies related to the management of mangroves are fragmented, and possible solutions include harmonization, consolidation, or the development of a separate stand-alone mangrove policy/framework.

The Ministry of Environment is currently drafting the Environment Management Regulations 2022, which is expected to address mangrove conservation and management and sit under the Environment Management Act of 2005.

National Accounting Process

The Climate Change Division (CCD), Office of the Prime Minister, is tasked with the development of the national GHG Inventory, while the Ministry of Forestry is responsible for the management of forest carbon data under the REDD+ programme, in alignment with Fiji's National Forest Monitoring System. The Government of Fiji plans to merge existing data platforms (e.g. land banks, iTaukei Lands Trust, National Forest Monitoring System) to simplify the benefit sharing pay-outs, and to avoid double counting in their transactions and generation. The Government of Fiji is also currently implementing the three-year (2022-2025) Capacity-building Initiative for Transparency (CBIT) project, funded by the Global Environment Facility (GEF), which aims to build capacity to ensure transparency of action implemented and support received to implement Fiji's NDCs and LEDS.

Specifically for forestry, the Forest Information Management System has been established under the jurisdiction of the Ministry of Forestry and has the aim of providing information on and tracking carbon accounting. As Fiji's current national accounting process and GHG inventory is based on agriculture, forestry and other land use (AFOLU) activities, further development of the database system is required by the Government of Fiji to incorporate blue carbon.

Enabling conditions specific to International Markets

National Registry

A national registry system is needed to centralize and track all international credits in a single online registry platform for voluntary carbon market projects, and Internationally Transferred Mitigation Outcomes (ITMOs) development and sales. The system also serves to ensure corresponding adjustments take place and are registered. Article 61 of the Climate Change Act sets forth the creation of the Fijian Registry, which is a national registry that intends to include: i) emission reduction projects, programmes, and activities; ii) Fijian Mitigation Outcome Units; iii) emission reduction units issued under approved international

emission reduction standards in relation to projects, programmes, and activities in Fiji; and iv) serve as the national registry for ITMO transactions. Following this and other provisions, the Minister is authorized to issue regulations to make the Registry fully operational. At present, the registry has not been developed.

The Climate Change Act further outlines that there will be a centralized registry of "emissions reduction projects, programmes and activities" to ensure that the "issuance, holding, transfer, surrender or cancellation of emissions reduction units are accurately and transparently recorded." This Registry will establish the coordinated foundation for bilateral trading under Article 6 of the Paris Agreements, as well as voluntary market trading by project "proponents." The Act also explicitly references blue carbon projects and notes that any forest emissions reduction projects must be coordinated with and approved by Fiji's Ministry of Forests. The clear language solidifies the institutional arrangements for forest and blue carbon projects.

National Authorization Process

As the rules for internationally transferred mitigation outcomes under Article 6 were settled in November 2021, Fiji set out the main provisions in the Climate Change Act to facilitate carbon trading. However, Fiji's transfer authorization processes at the national level have not been defined.

Treatment of the Voluntary Carbon Market

The government is yet to decide whether or not the Voluntary Carbon Market will be considered as an "other purpose" and therefore be subjected to Article 6 rules, including the requirement for national authorization processes and corresponding adjustments.

Regulatory Gaps Analysis

a) Policy and Regulatory Assessments for Carbon Trading

The Climate Change Act outlines the legal framework for Fiji to include carbon trading and sets up the necessary coordination and governance structures to achieve project creation and credit sales. Part 7 of the Act outlines the MRV criteria necessary for emissions and emissions reductions projects, and Part 10 outlines key considerations related to carbon sequestration property rights and guidelines for emissions reductions projects, programmes, and activities, as well as the issuance of emissions reductions units.

At this moment, no domestic carbon policies are under development; however, the 2021 Fiji Climate Change Act established that the Minister responsible for climate change has the power to introduce and implement a carbon pricing mechanism, including an emission trading mechanism, and national GHG levies or fees. These provisions lay the groundwork for future policy work to design carbon trading mechanisms and potentially link them with natural climate solutions, including blue carbon.

The protection and sustainable management of mangrove forest ecosystems are currently divided among five different ministries, each with separate mandates. These roles are not harmonized under a single legislation, which creates implementation challenges for the development of blue carbon projects. Distinct responsibilities for mangrove management among government agencies are sometimes unclear, causing issues with enforcement, regulation, and compliance with existing laws and policies.

b) Gaps and Opportunities for Policy and Regulatory Improvements

- <u>Clarity on Carbon Rights:</u> The Climate Change Act provides clarity on rights over blue carbon. Nevertheless, there's currently no formalized national policy or specific legal framework for mangrove use or updated mangrove resource management in place, leading to carbon rights over mangroves and seagrasses being widely understood as state-owned. Moving forward, there should be a focus on reviewing and improving existing laws related to blue carbon (seagrass and mangroves), aiming to clarify rights over blue carbon.
- <u>Benefit Sharing</u>: There is currently no existing benefit-sharing mechanism in place for mangroves and seagrasses in the country, providing the opportunity to improve existing institutional, legal, and operational aspects of benefit-sharing within mangrove communities.
- <u>National Registry and Authorization Processes</u>: The Climate Change Act provides for the creation of a national registry to track all credits in a single online registry platform for voluntary carbon markets and ITMOs generation and trade. The registry is not yet operational. At a minimum, the registry should provide information on project profiles, carbon owners or lease registration, credit buyers, unique identification numbers, and types and sources of finance, followed by developing an effective institutional arrangement to authorize mitigation outcomes for international transfer.
- <u>National accounting processes</u>: Fiji is building capacity to conduct thorough carbon accounting in forests and blue carbon ecosystems, for above- and below-ground sinks, since the registry is not developed. At this moment, research institutions and NGOs are in the initial phases of exploring accounting for soil organic carbon (SOC). The Climate Change Act specifically referenced blue carbon projects and noted that any forest emissions reductions projects must be coordinated with and approved by the Fiji Ministry of Forests. However, blue carbon is not yet included in the NDC, and mangroves are not a part of the Forest Reference Level, which excludes them from Fiji's REDD+ programme. The World Bank FCPF, which has financed the development of Fiji's REDD+ programme does not account for soil carbon, and further limits carbon credit trading to US\$ 5/tCO2e.

c) Treatment of Voluntary Carbon Credits

Article 6.2 of the Paris Agreement requires countries to ensure they apply corresponding adjustments when transferring credits for use by another country towards its NDC (to ensure units are not double counted). Although the voluntary carbon market (VCM) is not directly governed by Article 6, the supplier of carbon credits or host country can choose how to treat their voluntary carbon market transactions, and whether: 1) all VCM carbon credits traded internationally, are subject to Article 6 rules (including national authorization processes and corresponding adjustments); or 2) to allow VCM credits to be traded internationally without being subject to Article 6 rules. In option 1, where the credits are authorized, the host and the acquiring country each have the capacity to specify limits – including but not limited to use categories and whether re-selling is permitted. If both countries agree that the host country can use the credits towards their NDC, hence the acquiring country would not be able to use the credits for their NDC. In option 2, the selling country can use the traded carbon credits for their NDC, and the buyer is limited in how they can use the credit. As the credits not authorized, the traded credit would not be allowed to be used towards another country's NDC, including the acquiring country. It is an expectation of crediting arrangements that if a credit has been retired (e.g., in conjunction with a voluntary claim) it cannot be

resold, hence the application to a voluntary obligation requires careful wording of the claim being made as it does not involve the application of corresponding adjustment. Blue carbon is not currently included in Fiji's updated NDC, and there are no plans to incorporate it in the future. Countries that allow domestic and international entities to trade VCM credits must ensure the transparency, credibility, and robustness of the carbon credits generation and trading to maintain trust in the voluntary carbon market.

NCS CREDIT GENERATION POTENTIAL

REDD+ Readiness in Fiji

Under the Climate Change Act, the Forestry Ministry is responsible for developing and updating Fiji's national REDD+ Policy and Strategy, including national and sub-national programs, as well as developing the emissions level, safeguards, and benefit-sharing arrangements. Although Fiji has not submitted any documents on the REDD+ process to the UNFCCC, the country has significantly advanced readiness activities since 2009, when Fiji established the REDD+ National Programme. In 2015, the Programme received funding from the World Bank's Forest Carbon Partnership Facility (FCPF) to support readiness activities for 2015–2019. In 2018, the FCPF provided additional support for consultations and participation, institutional strengthening, capacity building, development and finalization of the National REDD+ Strategy, upgrading and further development of the Forest Reference Emission Level (FREL), development of an MRV system and the establishment of the Safeguards Information System (SIS).

The Readiness activities included studies to prepare Fiji for the Emissions Reductions Program (ER-P) phase, and the country submitted an Emissions Reductions Program Document (ER-PD) to the FCPF in 2019. Analyses supported through the FCPF included the Strategic Environmental and Social Assessment (SESA) study and its associated studies – the Environmental Safeguard and Management Framework, the Resettlement Policy Framework, the Process Framework for the Emissions Reduction Program, the MRV study, the Drivers of Deforestation and Forest Degradation (DoDD) study, the Feedback Grievance and Redress Mechanism (FGRM) study, the Benefit Sharing Mechanism, and the Carbon Rights Study. All of these assessments are expected to inform the preparation of the Fiji REDD+ Strategy, Benefit Sharing Plan, National Forest Monitoring System, FREL, and SIS which were slated for completion in 2020.

During Fiji's Reference Period (2006–2016), two REDD+ projects were established. The first one is the Drawa Rainforest Conservation Project (validated and verified under the Plan Vivo standard), which conducted conservation efforts and provided legal protection over a mature endemic rainforest. By July 2019, the Drawa Rainforest project sold 56,101 units (US\$13/tCO2e) and left 299 units in their credit balance. Without the nesting framework, projects like Drawa will be excluded from Emissions Reductions (ER) accounting areas to prevent double counting. The second project is the Nakauvadra Community-Based Reforestation project which was validated by the Climate Community and Biodiversity Standard (CCB). This project was implemented by Conservation International with financial support from the Fiji Water Corporation.

There are other REDD+ pilot sites; Vunivia (2011–2020) and Emalu (2012–present). Emalu forest was selected as a pilot site for the National REDD+ Programme in 2012, pristine forests are predominantly found in this area. This pilot site has several pilot projects that are at a sub-national level and later nested into a national framework. Measuring its above-ground carbon pools across 3 types of forests (lowland, upland, and cloud forest), Emalu's carbon stock is estimated at 516,121 tCO2eq.

The nesting guidelines were scheduled to be approved by 2020, but no nesting framework has been finalized in Fiji.

Blue Carbon Potential in Fiji

Fiji contains an estimated 40,000 hectares of mangrove forest and an undocumented extent of seagrasses in coastal regions across the country. Mangroves and seagrasses provide critical ecosystem services to Fijian communities by protecting from storms, shoreline stability, and habitat and breeding grounds for important subsistence and small-scale commercial fisheries.

To identify a proper standard methodology for blue carbon project implementation, the Fiji Government and its partners are exploring options between Plan Vivo and the Verified Carbon Standard (Verra VCS). Both standards offer multiple wetland (mangrove, seagrass, salt marsh, peat) methodologies to validate and verify tradable carbon credits. Verra offers two methodologies for carbon emissions reductions in blue carbon habitats (VM0007, VM0033), each with different project activities. One (VM0033) is only applicable to restoration projects with activities such as afforestation, reforestation, revegetation, and restoring wetland ecosystems. The second methodology (VM0007) covers conservation activities and restoration and includes activities such as preventing planned and unplanned ecosystem damage. Currently, it is uncertain whether the two methodologies will be combined or if the two methodologies will continue to be separate.

Plan Vivo does not have specified methodologies for emissions reductions that must be used for blue carbon ecosystems to be registered by the standard. Instead, potential projects are allowed to select a methodology, perform modifications to a methodology, or create their own. The flexibility allows potential projects to tailor the methodological requirements to the issues and activities of their proposed site and the local communities' needs and livelihoods. Plan Vivo provides integrated community and benefit-sharing requirements under the standard's rules, such as 60% of all income from carbon credit sales must be dispersed to the community. Other community-based provisions, such as a grievance mechanism, equitable governance, monetary transparency, and many others, are also required.

Verra differs in this regard as consideration for local communities is not required for projects. Integration of community benefits in a project can be achieved by completing the Climate, Community, and Biodiversity Standard (CCB), which can be completed in addition to the chosen emissions reduction methodology. Globally, blue carbon credits attract buyers who are willing to purchase them at \$13-\$35/tCo2e⁷. Appendix 2 summaries mangrove forest carbon projects from around the world. Of the 19 mangrove forest carbon projects that have been developed or are undergoing development to date, most (14) use Verra VCS as the requisite standard while VM0007 (REDD+ Methodology Framework) and AR-AM0014 (Afforestation and reforestation of degraded mangrove habitats) are the most popular methodologies. While several projects employ a mix of both reforestation and conservation (avoided emissions) activities, the reporting documents associated with these projects often do not differentiate either the spatial scale (ha) or emissions reductions and removals (tCO2e) generated from these different activities, which makes it difficult to draw robust comparisons (e.g., tCO2e ha from reforestation activities).

⁷ https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/102521-blue-carbon-gains-interest-in-effortagainst-greenhouse-gases-but-challenges-remain

MECHANISMS AND OPPORTUNITIES FOR CARBON TRADING

International Voluntary Market, Non-Market, and Domestic Opportunities

International Voluntary Market

There is one project that generates and sells carbon credits through the voluntary carbon markets with Plan Vivo and several projects under the Clean Development Mechanism (CDM). There are currently no Agriculture, Forestry and Other Land Use (AFOLU) projects in Fiji registered under Verra. There is potential to develop blue carbon projects through mangrove restoration and sustainable management approaches, particularly in the Ba Delta, Viti Levu Bay, and Rewa Delta (Table 1). However, the size, scale, and potential volume of carbon offsets generated in these locations are likely to be relatively small when compared to other mangrove restoration and conservation projects developed globally for the voluntary forest carbon market (see Appendix 3).

Voluntary market buyers generally require that credits be verified by an internationally recognized standard to feel comfortable investing. The relatively small size of the Ba Delta, Viti Levu Bay, and Rewa Delta projects may not produce sufficient credits to offset the costs of accreditation and investment, depending on the standard selected and the cost of project activities. At this stage it is also uncertain if avoided deforestation and/or improved forest management activities are needed in the Rewa Delta. Integrating community benefits and the equitable distribution of project funds can increase the price per credit sold, making the projects more financially viable and attractive to investors. Community benefits can be demonstrated through Plan Vivo or Verra CCB to increase the price per credit sold and funnel more income and investment into the project and local livelihoods. For the proposed sites of Ba Delta, Viti Levu Bay, and Rewa Delta, minimizing upfront costs and maximizing the carbon credit price is essential to financial viability. Additional co-benefits resulting from the project, such as achieving SDGs, biodiversity benefits, and community benefits, can also yield a higher carbon credit price that can be utilized. Determining the appropriate co-benefits to measure or monitor depends on the project site and the community's needs.

Verification of project benefits such as community engagement, equity, and biodiversity can incur additional project costs. The Verra CCB standard has additional verification fees, and financial requirements, in addition to the costs of verification for the carbon mitigation methodology. Plan Vivo's community requirements are integrated into the standard's requirements. Small-scale blue carbon projects should consider all associated fees of specific methodologies, fees associated with the chosen standard, the carbon credit price, and the co-benefits produced.

Smaller-scale carbon projects may still be feasible and economically justifiable if co-benefits are measured and reported alongside standard methodologies such as Plan Vivo or the Verra VCS CCB Standard as they tend to attract a premium price from credit purchasers. The project should also be framed in terms of helping Fiji meet climate change mitigation and adaptation targets. Additionally, tangible outcomes would include capacity building and education opportunities which are important for long-term sustainable management. For the planned project interventions in Fiji, either Plan Vivo or Verra VCS (along with certification to CCB and SD VISta) appear to be good options as accrediting standards, provided there is a

strong, robust methodology in place for assessing community and biodiversity benefits (as there is planned for assessing carbon offsets).

Blue carbon credits are in high demand on the voluntary and compliance markets due to the myriad of cobenefits that projects can create, including adaptation to climate change, increased biodiversity, protection from storm surges, and income to local communities through improved livelihoods. Many companies and countries are interested in blue carbon trading, however, the global supply of blue carbon credits from verified projects is limited and not meeting growing demand.

| INTERVENTION TYPE | LOCATION AND EXTENT (HA) | DESCRIPTION | RECOMMENDED STANDARD | RECOMMENDED METHODOLOGY |
|--|-----------------------------|---|--|---|
| Afforestation, reforestation, revegetation (ARR) | Ba Delta, Viti Levu Bay | Assisted or augmented recovery of mangrove forests damaged by tropical cyclones. | Either Plan Vivo or Verra VCS, along with CCB (3rd Edition) and SD VISta. | VM0033 Methodology for Tidal Wetland and Seagrass Restoration, v1.0 |
| Avoided deforestation | Rewa Delta* | Regulate unplanned reforestation from unsustainable extractive use of mangrove resources to avoid carbon emissions. | | VM0007 REDD+ Methodology Framework (REDD+MF), v1.6 |
| Improved forest management | Rewa Delta* | Improving the sustainability of extractive use of mangroves to result in net carbon gains. | | VM0010 Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, v1.3 |

Table 1: Options for developing VCM mangrove carbon offset projects in Fiji.

* Pending the outcome of upcoming studies to assess the extent and degree of deforestation within the Rewa Delta. This will determine whether an avoided deforestation and/or improved forest management project is warranted and viable.

Non-market approaches

Non-market approaches (NMA) in general refer to avenues for international cooperation that do not involve trading. Some examples could include traditional climate finance, capacity building, technology transfer, and results-based payments without carbon credit transfers, among others. The Fiji Government has ongoing cooperation with multiple partners for NMAs, including capacity building (e.g., GGGI partnership) and results-based payments (e.g., World Bank's REDD+ FPCF). The Fiji Government endorsed the Fiji REDD+ Policy in December 2010 and started its financial commitment in 2012 towards the project with the translation of the Fiji REDD+ Policy into the Fijian vernacular language, and the Finalization of the Fiji REDD+ Strategy. Fiji has received FCPF grants to support REDD+ Readiness for US\$ 5.8 million. In addition to FCPF funds, the Fiji Government and GIZ are contributing to Fiji's REDD+ readiness by committing US\$ 687,000 and US\$ 588,000 for the readiness activities, respectively.

Domestic Compliance Market

With the passage of the Climate Change Act, the Minister of Economy has the power to introduce and implement a carbon pricing mechanism, including an emission trading mechanism, and national GHG levies or fees. If designed to include nature, the future system could also be a source of demand and financing for blue carbon credits.

International Compliance Market Opportunities

Article 6.2 of the Paris Agreement

Article 6.2 of the Paris Agreement provides an avenue for direct bilateral cooperative approaches for achieving the acquiring country's NDC. An Article 6.2 transaction deals with "Internationally Transferred Mitigation Outcomes" (ITMOs) with a "mitigation outcome" and the requirements of transferring them outlined in the Article 6 guidance adopted at COP 26 and further guidance agreed at COP 27^{8,9}. International cooperation under Article 6.2 is open to credits from all sectors, provided that the units meet the minimum requirements in Article 6 guidance

Article 6.4 of the Paris Agreement

Article 6.4 provides the framework for country investment in the generation of a specific type of carbon credit that is generated through a centralized United Nations mechanism (replacing the CDM) that is intended to produce mitigation outcomes and benefit sustainable development in the host country. Article 6.4 is also open to all sectors, but the specific methodologies for Article 6.4 projects need to be developed and approved by the newly created Article 6.4 Supervisory Body. Therefore, Natural Climate Solutions may be eligible under Article 6.4, pending the approval of methodologies. Under this approach, Article 6.4 Emission Reductions (A6.4 ER) once authorized, become ITMOs and are subject to all guidance that applies to Article 6.2 ERs including further detailed guidance on reporting, review, and infrastructure processes still under negotiation. They may therefore be transferred, from the host country in which they were generated to another country and counted towards the buyer country's NDC with a corresponding adjustment¹⁰. Project proponents of ongoing CDM projects wishing to transition those projects to the Article 6.4 mechanism must send a request to to the UNFCCC secretariat and the Fiji Government no later than 31 December 2023. CDM projects are allowed to use the CDM methodology until its current crediting period or until 31 December 2025 (whichever comes first). Under the CDM, several projects in Fiji were developed (i.e., Kinoya Sewerage Treatment Plant, Fiji Nadarivatu Hydropower Project).

⁸ https://unfccc.int/sites/default/files/resource/cma3_auv_12a_PA_6.2.pdf

⁹ https://unfccc.int/sites/default/files/resource/cma2022_10a02_adv.pdf#page=2

¹⁰ https://unfccc.int/sites/default/files/resource/cma2021_L19E.pdf

CORSIA

At present, Fiji is not participating in the voluntary pilot phase of the International Civil Aviation Organization's (ICAO) Carbon Offset Reduction Scheme for International Aviation (CORSIA). Not withstanding, Fiji can still generate credits to be purchased by airlines from participating countries, to reduce their emissions. Carbon credits must meet CORSIA's requirements to be eligible for use under this scheme; currently, two REDD+ standards have been approved for use: Verra's Jurisdictional and Nested REDD+ (Scenarios 2a and 3) and ART-TREES. As of this date, FCPF is pending approval.

Regional Opportunities

Australia's Indo-Pacific Carbon Offset Scheme (IPCOS)

In 2021, Ministers from both former administrations formalized a letter of intent, culminating in the establishment of an Australia-Fiji partnership within the Indo-Pacific Carbon Offsets Scheme (IPCOS). This initial accord, emphasizing robust support for Article 6, extends its collaborative scope to leverage additional strengths, particularly in the Measurement, Reporting, and Verification of greenhouse gas emissions from the land sector, encompassing Blue Carbon and REDD+. A foundational aspect of carbon market implementation entails the cultivation of government capabilities, ensuring the transparent measurement and reporting of emissions, concomitant with a commitment to delivering discernible environmental and community benefits. Acknowledging Fiji's commendable progress in instituting policies, governance structures, and systems, the Department of Climate Change, Energy, the Environment, and Water (DCCEEW) is poised to initiate the formulation of a Joint Action Plan (JAP). This bilateral IPCOS JAP affords a distinctive opportunity for the collaborative design of activities aligned with Fiji's imperative requirements for meeting international climate change commitments. Additionally, commendation is extended for the recent establishment of a donor coordination committee, dedicated to realizing the objectives of the Capacity Building Initiative for Transparency program, underscoring the commitment to contribute without engendering redundancy in these pivotal endeavours.

Singapore's Carbon Pricing Act and Climate Impact X (CIX)

Singapore was the first country in Southeast Asia to put a price on carbon under its Carbon Pricing Act in 2018 and announced increases to its carbon tax post-2023. Through an amendment to the original act passed in 2022 ahead of COP27, the carbon tax will increase to S\$25/tCO2e in 2024 and 2025, and S\$45/tCO2e in 2026 and 2027, with a view to reaching S\$50-80/tCO2e by 2030. In addition, taxable companies may also use high-quality international carbon credits to offset up to 5% of their taxable emissions starting in 2024. Given the limited potential for generating sufficient reductions and removals domestically, Singapore recognizes the need to look to international credits, potentially regionally, for supply. The international credits can be generated from any sector, including NCS, which can bring additional co-benefits to the region, but credits must meet stringent quality standards (such as those demonstrated by carbon offset programs eligible under CORSIA or by government pre-authorization of other crediting methodologies or offset programs).

The inclusion of international offsets including NCS in Singapore's domestic carbon pricing scheme is expected to give potential country partners, including Fiji, additional incentives to establish the necessary technical and governance capacities to participate in these market opportunities and create a strong

market signal for regional players to generate NCS credits (including blue carbon credits) and to set up the necessary governance structures to trade credits with Singapore on Singapore's exchange.

Singapore also launched Climate Impact X (CIX) in 2021. CIX is an NCS credit trading platform founded by DBS, SGX, Standard Chartered, and Temasek, which aims to help companies trade in the voluntary carbon market. Their pilot auction took place in October 2021 and cleared 170,000 carbon credits from avoided deforestation and reforestation projects in Asia, Africa, and Latin America at a rate of US \$8/ton.¹¹ CIX owns two digital platforms: the Project Marketplace and the Carbon Exchange.

Table 2: Summary of market and non-market mechanisms and standards

| MECHANISM TYPE | MECHANISM | CARBON STANDARDS |
|-----------------------|-------------------------|---|
| Market | Voluntary Carbon Market | Plan Vivo, Verified Carbon Standard (VCS), Gold Standard, etc. |
| Market | IPCOS (Australia) | ТВС |
| Market | CIX (Singapore) | ТВС |
| Market | CORSIA | Verra JNR, ART TREES, (FCPF conditional) |
| Non-Market and Market | World Bank FCPF | FCPF |
| | | |

21

¹¹ https://www.industry.gov.au/regulations-and-standards/methods-for-the-emissions-reduction-fund

RECOMMENDATIONS FOR FIJI

Based on the preceding observations, there is a potential opportunity for Fiji to produce and sell carbon credits through the restoration of mangroves (and potentially from improved forest management)¹² in order to meet the growing demand for high-quality blue carbon credits. Some of the pathways and opportunities for trading include the voluntary carbon market, and international compliance market opportunities, such as under Article 6 of the Paris Agreement and CIX. Monitoring and reporting on co-benefits (e.g., biodiversity, community benefits, and adaptation/resilience benefits) could also increase the value of carbon credits sold on the market.

- Strengthen Enabling Policy and Legislative Conditions for Carbon Trading: The Fiji Government has made tremendous progress through the establishment of its Climate Change Act, which lays down the foundations for many of the policies required to enable the generation and trading of carbon credits. There is a need to continue to ensure that the right enabling policies are in place. Some of the following are key suggestions:
 - o Provide more clarity on carbon rights for? blue carbon.
 - o Establish benefit-sharing arrangements for blue carbon in alignment with REDD+.
 - o Strengthen and expand Fiji's existing REDD+ MRV system to include blue carbon.
 - o Include blue carbon in the updated Forest Reference Level.
 - o Develop a REDD+ Nesting framework.
 - o Issue guidance on whether Voluntary Carbon Market projects are subject to Article 6 rules under the category of "Other Purposes", as defined in paragraph 1(f) of the annex to decision 2/CMA.3.
 - o Define the procedures and requirements for national authorization, and the application of corresponding adjustments under Article 6.
- Explore Blue Carbon Trading through Multiple Markets: Fiji has the opportunity to trade blue carbon in multiple ways. The voluntary market is growing and there are multiple ways that Fiji can participate in it – from directly brokering sales with private sector companies to offering credits via a voluntary market platform such as CIX. Most voluntary buyers and platforms will require credits to be verified by an internationally recognized standard such as the VCS. Many, though not all, will increasingly want a corresponding adjustment and compliance with other Article 6 requirements. The compliance market is another option and includes trades under Article 6 (complying with country NDCs), CORSIA (complying with UN requirements for international aviation), and national compliance schemes that allow international offsets (such as Singapore's domestic tax). For example, FCPF continues to work towards being a CORSIA Eligible Emissions Unit Program, and VCS' Jurisdictional and Nested REDD+ is also eligible for CORSIA. In order to explore multiple mechanisms, Fiji will need to develop a nesting framework for REDD+. In all cases, Fiji can work towards NCS project development to meet the requirements of both voluntary and compliance markets.

Integrate Mangroves into REDD+: Fiji has already invested in a national REDD+ system under the World Bank FCPF programme, which can be updated to include blue carbon activities from

¹² http://www.cleanenergyregulator.gov.au/ERF/Pages/Choosing%20a%20project%20type/Opportunities%20for%20the%20land%20sector/ Vegetation%20and%20sequestration%20methods/Tidal-restoration-of-blue-carbon-ecosystems-method.aspx

mangroves. By integrating blue carbon into REDD+, Fiji can synergize the delivery of REDD+ projects at the national level and local levels for smooth implementation, and link blue carbon MRV to the REDD+ international database. This will require adopting proper methodologies to develop blue carbon projects since the current REDD+ activities in Fiji only include terrestrial forests. This also leaves Fiji open to carbon trade opportunities for seagrasses outside of REDD+, while ensuring that any carbon trading meets criteria for the standard Article 6.

- Continue to Build Institutional Capacity for MRV: As outlined in the document, the Fiji Government is investing in building capacity, infrastructure, and institutional processes for carbon trading in alignment with the Climate Change Act 2021. Specifically, additional capacity and equipment are required for MRV, specifically to strengthen and expand Fiji's REDD+ Forest Monitoring System (integrating remote sensing, field measurement, data processing, and information management, etc.).
 - Develop Safeguards and Benefit-Sharing Guidelines: Comprehensive guidelines should be developed, or existing guidelines adapted, for international carbon trading implementation with strong environmental and social safeguards. These guidelines should build upon Fiji's existing REDD+ Social and Environmental Safeguards Assessment (SESA) Framework, Benefits Sharing Plan, and a myriad of other laws and policies as outlined briefly in the document. These guidelines will help ensure that blue carbon projects in Fiji are inclusive to local communities and have localized project governance structures that are equitably represented by women, minority groups, key stakeholders, and community members, and include effective community-led decision-making processes. Specifically, the benefit-sharing guidelines should address adequate sharing of project benefits back to communities, such as through the provision of materials for sustainable livelihoods. Guidelines will also outline required Free, Prior, and Informed Consent procedures, in alignment with existing policies, to ensure that projects align with community needs, priorities, and aspirations.



Appendix 1: Market Mechanisms and Requirements Table

| MARKET | REQUIREMENTS | ACCEPTED STANDARDS | OTHER ISSUES TO CONSIDER | ADDITIONAL COSTS | CONSIDERATIONS FOR FIJI |
|---|---|--|---|---|---|
| ternational ompliance arket der Article 6.2 ticle 6.2 ovides an verarching amework for ountries to create ad transfer itigation utcomes through lateral and ultilateral preements, as ell as provisions r safeguards, assuring ovironmental tegrity, porting, and tegrity, and counting. Rules r Article 6.2 oply to Article 4 as well hen mitigation utcomes are ternationally ansferred. | Open to credits from all sectors (including AFOLU) as long as they meet the minimum requirements. Article 6 units called Internationally Transferred Mitigation Outcomes (ITMOs) must be: • Emission reduction and removals that are real, verified, and additional; • Generated in respect of or representing mitigation from | STANDARDS Not specified; as long as units meet the Article 6.2 requirements, they are eligible. | CONSIDER The details of each bilateral/ multilateral deal will be determined by the two countries involved. National authorization from the host country and a corresponding adjustment will be required. | Buyer countries are also strongly encouraged to commit to voluntarily contribute: • A Share of Proceeds (SOP) whereby 5% of the units are transferred to the Adaptation Fund at issuance to help fund adaptation projects in developing countries. • A voluntary cancellation at issuance of at least 2% of credits, rendering those credits no longer valid for use, which in turn helps deliver an Overall Mitigation in Global Emissions (OMGE), or reduction of global emissions. | FOR FJJI Fiji can explore bilateral and multilateral trading with countries that want to meet their NDC commitments by using cooperative approaches under Article 6.2 of the Paris Agreement. These may occur under specific programs developed by buyer countries or simply through bilateral deals negotiated with another country. |

| Open to credits from all sectors but specific methodologies for Article 6.4 need to be developed and approved by the Supervisory Body: - Credits from the CDM can be applied toward the first NDC period. Afterward, only post- 2020 credits are allowed to be used toward NDC commitments. - The crediting period will vary depending on the type of project or activity. Most Article 6.4 activities will be subject to a crediting period of 5 years which can be renewed twice; or a maximum of 10 years with no renewal option. For activities involving removals, the maximum crediting period is 15 years, which can be renewed twice. - Crediting periods may not begin prior to must start in 2021. | The Supervisory Body is not yet established and thus has not yet identified appropriate methodologies. | National authorization from the host country and a corresponding adjustment will be required. | There are 3 mandatory additional costs for buyer countries associated with transactions under Article 6.4: A Share of Proceeds (SOP) whereby 5% of the units are transferred to the Adaptation Fund at issuance to help fund adaptation projects in developing countries. A voluntary cancellation at issuance of at least 2% of credits, rendering those credits no longer valid for use, which in turn helps deliver an Overall Mitigation in Global Emissions (OMGE), or reduction of global emissions (Not applicable to Fiji as a SIDS): A Share of Proceeds (SOP) for administrative expenses including fees for registration, issuance, renewal, and post-registration. This fee is waived for activities in least developed countries and | Fiji can explore participation in the new mechanism once it is fully established, however, the timing for completion is not yet clear. |
|--|--|--|--|---|
| Only emission unit programmes approved by the United Nations' International Civil Aviation Organization (ICAO) Council are eligible for use towards CORSIA compliance. | ART TREES, Verra JNR, *FCPF (pending approval ¹⁵ | Interaction between CORSIA and Article 6 of the Paris Agreement requires national authorization as well as the application of corresponding adjustments. | Not specified. | Fiji has played an active role in the development of CORSIA and advocated for the exemption of participation |
| Among the approved carbon offset standards deemed eligible for airlines to purchase in meeting their climate goals, are those from different sectors, including some project types from REDD+ standards- Verra's JNR and ART TREES. REDD+ units from these standards are eligible for airlines to purchase to meet their climate goals. | | Pricing is market-based, meaning it is dynamic. According to Ecosystem Marketplace, in 2021 the weighted average price was 11.76 USD/tCO2e for forestry and land use credits eligible for CORSIA. | | for certain states, including SIDS and LDCs. Fiji can potentially generate credits to be purchased by international airlines under CORSIA, particularly if FCPF is accepted. |
| Currently, there are no globally agreed rules governing the voluntary carbon market or how it will interact with other markets (such as those created domestically). Nevertheless, in the absence of global rules for what companies can claim, other types of guidance on corporate norms are emerging to set the bar for what is deemed appropriate or credible under the voluntary carbon market. | Plan Vivo Gold Standard VCS ACR CAR Verra JNR ART TREES (accepted by the Leaf Coalition of buyers) | Host countries have the national prerogative to decide whether or not the voluntary carbon market is considered to be an "other purpose" under Article 6. If the VCM is considered an "other purpose", then Article 6 rules apply and both a national authorization from the host country and corresponding adjustment will be required. Prices in the VCM climbed in 2021 by nearly 60% over 2020, | Not specified | As described in Appendix 2, stakeholders in Fiji wishing to design VCM projects can use VCS or Plan Vivo. To enable VCM trading, a nesting framework is needed if credits are to be sold as REDD+, as are procedures for Article 6 transactions. |
| | but specific methodologies for Article 6.4 need to be developed and approved by the Supervisory Body: - Credits from the CDM can be applied toward the first NDC period. Afterward, only post- 2020 credits are allowed to be used toward NDC commitments. - The crediting period will vary depending on the type of project or activity. Most Article 6.4 activities will be subject to a crediting period of 5 years which can be renewed twice; or a maximum of 10 years with no renewal option. For activities involving removals, the maximum crediting period is 15 years, which can be renewed twice. - Crediting periods may not begin prior to must start in 2021. Only emission unit programmes approved by the United Nations' International Civil Aviation Organization (ICA0) Council are eligible for use towards CORSIA compliance. Armong the approved carbon offset standards deemed eligible for airlines to purchase in meeting their climate goals, are those from different sectors, including some project types from REDD+ standards- Verra's JNR and ART TREES. REDD+ units from these standards are eligible for airlines to purchase to meet their climate goals. Aret these from different sectors, including some project types from REDD+ standards- Verra's JNR and ART TREES. REDD+ units from these standards are eligible for airlines to purchase to meet their climate goals. Aret the absence of global rules for what companies can claim, other types of guidance on corporate norms are emerging to set the bar for what is deemed appropriate or credible under the voluntary carbon | but specific methodologies for Article 6.4 need to be developed and approved by the Supervisory Body: • Credits from the CDM can be applied toward the first NDC period. Afterward, only post- 2020 credits are allowed to be used toward NDC commitments. • The crediting period will vary depending on the type of project or activity. Most Article 6.4 activities will be subject to a crediting period of 5 years which can be renewed twice; or a maximum of 10 years with no renewal option. For activities involving removals, the maximum crediting period is 15 years, which can be renewed twice. • Crediting periods may not begin prior to must start in 2021. Only emission unit programmes approved by the United Nations? International Civi Aviation Organization (ICAO) Council are eligible for airlines to purchase in meeting their climate goals, are those from different sectors, including some project types from REDD+ standards- Verra's JNR and ART TREES, REDD+ units from these standards are eligible for airlines to purchase in meeting their climate goals, are those from different sectors, including some project types from REDD+ standards- Verra's JNR and ART TREES, REDD+ units from these standards are eligible for airlines to purchase in meeting their climate goals, are those from different sectors, including some project types from REDD+ standards- Verra's JNR and ART TREES, REDD+ units from these standards are eligible for airlines to purchase in meeting their climate goals, are those from different sectors, in the absence of global rules for what companies can claim, other types of guidance on corporate norms are emerging to set the bar for what is deemed appropriate or credible under the voluntary carbon | but specific methodologies for Article 6.4 need to be developed and approved by the Supervisory Body: - Credits from the CDM can be applied toward the first NDC period. Afterward, only post- 2020 credits are allowed to be used toward NDC commitments. - The crediting period will vary depending on the type of project or activity. Most Article 6.4 activities will be subject to a crediting period sibject to a crediting perio | bit specific methodologies developed and approved by the Supervisory Body: - Crediting period Nither Nore period. Afterward. only post- 2020 credits are allowed to be used toward NbC commitments. - The crediting period will be used toward NbC commitments. - The crediting period will be used toward NbC commitments. - The crediting period will crediting period will crediting period of Sysars which can be renewed twice. - Crediting period will crediting period will creation approved credits are allowed to be used toward NbC commitments. - The crediting period will creating period will creating the subject to a crediting period will creating period will |

¹³ https://uploads-ssl.webflow.com/617023faf0a2fb7dfc2e047f/617f995198e81b9589075a01_20211101-CIX%20Pilot%20Auction%20Press%20 Release.pdf

Appendix 2: Summary of market volumes, geographical and sectoral scopes of the main voluntary market standards. Adapted from Climate Focus (2022) with data sourced from Ecosystem Market Place (2022), Plan Vivo (2022), and Fair Carbon (2022).

| STANDARD | MARKET VOLUME (M = MILLION)* | MARKET PRICE (USD \$)** | NAME OF CREDITS ISSUED | GEOGRAPHICAL SCOPE | SECTORAL SCOPE | NO. MANGROVE PROJECTS REGISTERED OR UNDER DEVELOPMENT |
|-----------------------------------|------------------------------------|----------------------------|--|---|---|---|
| Verified Carbon Standard (VCS) | 125.6 M | \$4.17 | Verified Carbon Units | 1,792 registered projects in 82 countries. VCS is dominant in developing countries | Covers all project classes | 14 |
| Gold Standard (GS) | 5.2 M | \$3.94 | Verified Emission Reductions (VERs) | 1,313 registered projects in 80 countries. Credits are purchased especially by buyers in the European Union. | Covers most project classes but excludes project-level REDD+. After 2025, will only cover credits backed by corresponding adjustments ¹⁴ . | 0 |
| American Carbon Registry (ACR) | 2 M | \$11.37 | Emission Reduction Tons (ERTs) | 156 projects in the United States | Covers industrial processes, land use, land use change and forestry, carbon capture, and waste. | 0 |
| Climate Action Reserve | 4.9 M | \$2.12 | Climate Reserve Tons (CRTs) | 26 projects in the USA, and 2 in Mexico. | Covers agriculture and forestry, energy, waste, and non-CO2 GHG abatement (e.g., methane reductions from livestock). | 2 |
| Plan Vivo | 0.7 M | \$11.58 | Plan Vivo Certificates (PVCs) | 27 projects registered around the world. | Covers agriculture forestry, and land use sectors. | 3 |

27

Appendix 3: Summary of attributes for mangrove projects listed on voluntary carbon markets.

| PROJECT NAME | LOCATION | SITE AREA (HA) | ACTIVITIES IMPLEMENTED | WEBSITE | STANDARD | METHODOLOGY | PROJECT PROGRESS | ANNUAL CREDITS ISSUED |
|--|-------------------------------------|---|---|---|------------------------------|---|--------------------------|-----------------------------|
| Tsimipaika Bay Mangrove Carbon Project | Tsimipaika Bay, NW Madagascar | 5,077 ha | Conservation and reforestation | | Verra VCS | VM0007 | Under development | 12,500 |
| Tahiry Honko | Madagascar | 1,230 ha | Conservation (establishment of protected area, sustainable timber harvesting), reforestation of mangroves in deforested areas, improved forest management (establishment of alternative timber plantations) | https://www.plan vivo.org/Handlers /Download.ashx?IDMF= 39070798-4292 -4797-9ab2-7d b77a9afe63 | Plan Vivo | Tahiry Honko technical specifications | Accredited and available | 1,371 |
| Mikoko Pamoja | Gazi Bay, Kenya | 117 ha | Reforestation | https://aces-org.co.uk/ mikoko-pamoja-project/ | Plan Vivo | Custom | Accredited and available | 2,000 |
| Vanga | Gazi Bay, Kenya | 460 ha | Afforestation/ Reforestation, Avoided deforestation | https://www.planvivo. org/vanga | Plan Vivo | VM0033, CDM tool AR- Tool14, IPCC (2013) Guidelines for National Greenhouse Gas Inventories: Wetlands | Under development | 5,019 |
| Community- based avoided deforestation project in Guinea- Bissau | Guinea- Bissau | 145,698 ha (mixed mangroves / terrestrial) | REDD+ (avoided deforestation in two national parks, including the 74,700 ha Cacheu Mangrove National Park) | https://registry.verra. org/app/projectDetail/ VCS/2324 | Verra VCS | VM0007 | Accredited | 90,330 |
| Livelihoods Senegal | Casamance, Senegal | 10,414 ha | Reforestation of degraded mangroves | https://livelihoods.eu/ portfolio/oceanium- senegal/ https://registry.verra. org/app/projectDetail/ | Verra VCS | AR-AM0014 | Accredited | 30,000 |
| Senegal and West Africa Mangrove Programme (SWAMP) | Sine Saloum, Senegal | 42 ha restoration, 1,700 ha conservation | Restoration and conservation (REDD+) | VCS/1318 https://registry.verra. org/app/projectDetail/ VCS/2406 | Verra VCS | VM0007 | Under development | Estimated at 2,547 |
| Manglares Jrsulo Galvan | Tabasco, Mexico | 1,200 ha | Reforestation and conservation (development of channels to lessen the risk of fire) | https://www.facebook. com/ search/top?q= ejido%20 %C3% BArsulo%20gal v%C3%A1n | Climate Action Reserve | Forest Protocol for Mexico | Under development | Unknown |

¹⁷ Note: Forest Carbon Partnership Facility applied for recognition under CORSIA and is awaiting resolution.

| MarVivo | Baja California Sur, Mexico | 22,000 ha + 137,000 ha (potential MPA area) | Protection of mangroves | https://marvivo.earth/ project-areas/magbay/ | Verra VCS, Verra CCB, SD VISta | Unknown | Under development | Unknown |
|--|---|---|---|---|--------------------------------------|---------------------------------|--------------------------|------------------------------|
| Mangroves of Sinaloa Mexico | Mexico, Sinaloa | 49,387 ha (unclear size of reforestation area vs. avoided deforestation) | Reforestation and conservation (avoided unplanned deforestation and degradation under REDD+) – reduce deforestation caused by shrimp farming | https://registry.verra. org/app/projectDetail/ VCS/2518 | Verra VCS | VM0007 | Under development | Estimated at 3,123,836 |
| Manglares San Crisanto | Yucatan, Mexico | 691.5 ha | Removal of impediments for natural regeneration, hydrological restoration | https://thereser ve 2.apx.com/y module/reg/ab Documents.asp ?r=111&ad=Pr pt&act=update &type=PRO& aProj=pub&tab lename= doc&i 1=1428 | Climate Action Reserve | Forest Protocol for Mexico | Accredited | Unknowr |
| Bonos del Jaguar Azul | Yucatan, Mexico | 5,060 ha | Restoration (active), restoration (passive), conservation of intact mangroves | https://registry.verra. org/app/projectDetail/ VCS/2500 | Verra VCS | VM0033 | Under development | 48,518 |
| Mangrove Restoration and Sustainable Development in Myanmar | Ayeyarwady, Myanmar | 4,500 ha | Restoration of degraded mangroves | https://registry.verra. org/app/projectDetail/ VCS/2088 https://wif.foundation/ ongoing-projects | Verra VCS | AR-AM0014 | Under development | Estimated at 403,83 |
| Thor Heyerdahl Climate Park | Ayeyarwady, Myanmar | 2,100 ha | Restoration of degraded mangroves | https://wif.foundation/ ongoing-projects | Verra VCS | AR-AM0014 | Accredited and available | 12,413 |
| Livelihoods Yagasu | Aceh and North Sumatra, Indonesia. | 11,000 ha | Restoration of degraded mangroves (planting) | https://livelihoods. eu/portfolio/yagasu- indonesia/ https://registry.verra. org/app/projectDetail/ VCS/1493 | Verra VCS, Verra CCB | AR-AM0014, CCB First Edition | Accredited | 124,706 |
| Zhanjiang Mangrove Afforestation Project | Guangdong, China | 400 ha | Afforestation | https://www. climateimpact.com/ global-projects/ mangrove-reforestation- china/ | Verra VCS, Verra CCB | AR-AM0014 | Accredited | 5,880 |
| Delta Blue Carbon | Indus Delta, Pakistan | 350,000 ha | ARR | https://registry.verra. org/app/projectDetail/ VCS/2250 | Verra VCS, Verra CCB | VM0033, CCB Third Edition | Undergoing validation | 2,407,629 |
| Vida Manglar | Columbia | 7,561 ha (project area). Area of reduced forest loss = 5,381 ha | REDD+ | https://registry.verra. org/app/projectDetail/ VCS/2290 | Verra VCS, Verra CCB | VM0007, CCB Third Edition | Accredited | 31,310 |
| India Sundarbans Mangrove Restoration | India | 4,403 ha | Reforestation | https://registry.verra. org/app/projectDetail/ VCS/1463 | Verra VCS | AR-AM0014 | Accredited | 51,249 |
| | | | | | | | | |

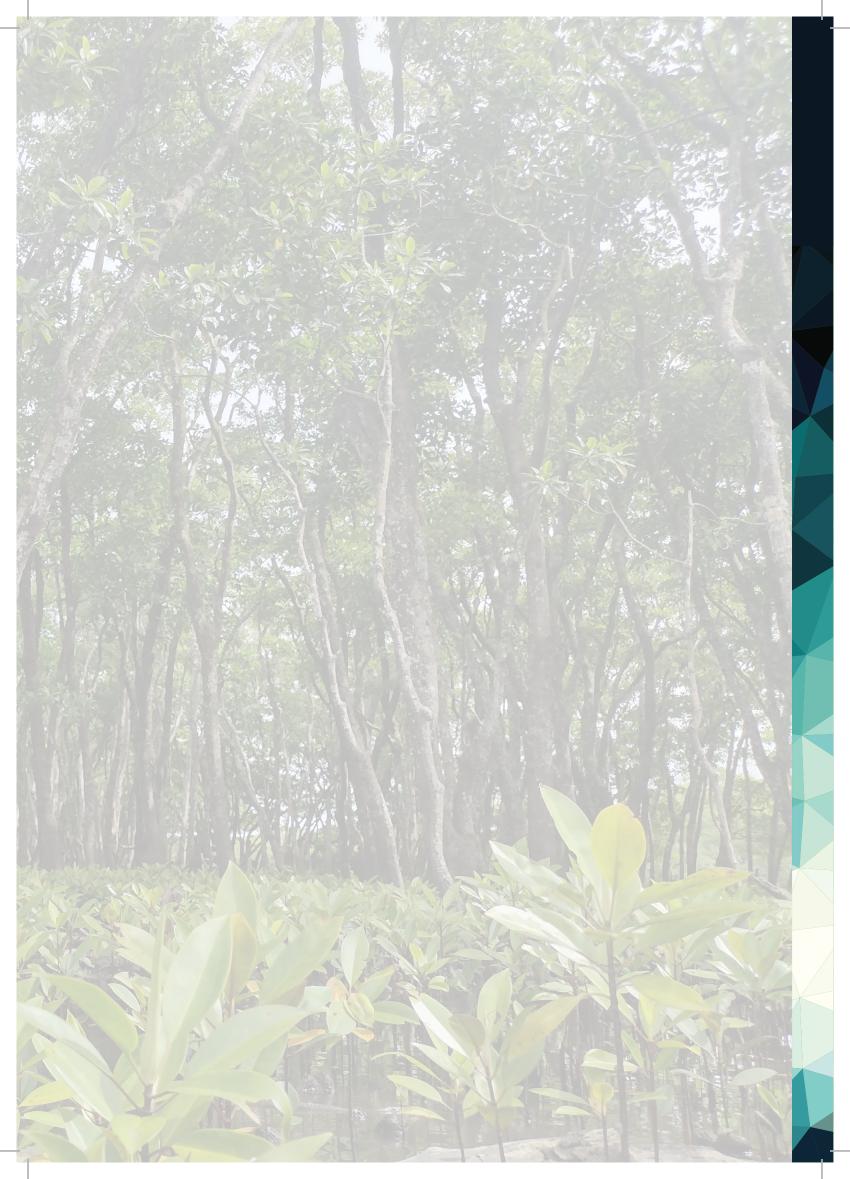
Appendix 4: Summary of REDD+ Standards and Accessibility for Fiji (adapted from Eligibility Requirements for REDD Standards and Finance, May 2021)

| SECRETARIAT | STANDARD | INCLUSION OF FORESTS IN NDC | MARKET PRICE (USD \$)** | GEOGRAPHICAL SCOPE | WHO GETS CREDITED? |
|--|--|--|--|---|--|
| Architecture for REDD+ Transactions (ART) Secretariat | The REDD+ Environmental Excellence Standard (TREES) | TREES Participants, or the Participant's national government, shall include forests in their NDCs. Forests must be included as part of the overall NDC target. A specific NDC target for forests is not required. | LEAF ¹⁵ guarantees a floor price of 10 USD per ton, however, based on demand within the Coalition corporate buyers can offer to pay a higher price | Participants shall be national governments or subnational governments (no more than one administrative level down from the national level). No scale thresholds apply to national participants with national accounting areas. During an interim period through December 31, 2030, subnational accounting areas may be registered under ART as a recognized step to national-level accounting. After the interim period, accounting shall be at a national level. Sub-national areas must be comprised of at least 2.5 million hectares. | National governments or subnational jurisdictions |
| Verra | Verra's Jurisdictional and Nested REDD+ | No specific provisions | | A jurisdictional FREL may cover an entire country or a subnational jurisdiction. Subnational boundaries may follow existing administrative boundaries or may be based on ecosystems (e.g., ecoregions). | National governments, sub-national jurisdictions, and nested projects. |
| Government of Japan | Joint Crediting Mechanism | No specific provisions | To be agreed by the Joint Committee formed by the government of Japan and the host country. | Project-level activities are allowed. | Project-level activities are allowed. |
| World Bank's Forest Carbon Partnership Facility | FCPF Methodological Framework v2.0 | No specific provisions | The FCPF has a fixed price of 5 USD per ton. If countries generate additional REDD+ results that go beyond the agreed contract volume, the World Bank can choose to buy these additional credits ("call options") in some cases for USD 6 per ton (or to be negotiated at a later date). If the World Bank does not exercise these "call options", the host country may opt to transact these credits with a third party. | Participants are national or subnational governments. Countries must first advance through the Readiness Fund to show they have a minimum framework to implement a REDD+ program: a national strategy, a safeguards framework, laws and/or regulations in place, and Measurement, Reporting, and Verification (MRV) capacity. Out of nearly 60 countries participating in the Readiness Fund, 18 were accepted into the Carbon Fund pipeline. | National or subnational governments |

29

¹⁵ Note: Forest Carbon Partnership Facility applied for recognition under CORSIA and is awaiting resolution.





Conservation International – Fiji July 2023