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Waimanu River Catchment Integrated Management Plan

Fiji

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Prepared by
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Abbreviations

ADB	Asian Development Bank
CBD	Convention on Biological Diversity
CMP	Catchment Management Plan
DoE	Department of Environment
DWC	Drinking Water Catchment
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
EU	European Union
FAO	Food and Agriculture Organization
FAC	Fiji Agriculture Census
FRA	Fiji Roads Authority
GEF	Global Environment Facility
GOF	Government of Fiji
IRBM	Integrated River Basin Management
IBA	Important Bird Areas
ICM	Integrated Coastal Management
ICCM	Integrated Catchment and Coastal Management
ITLTB	iTaukei Lands Trust Board
IWRM	Integrated Water Resource Management
MEL	Monitoring, Evaluation and Learning
MoA	Ministry of Agriculture
MoH	Ministry of Health
MoEW	Ministry of Environment and Waterways
MPI	Ministry of Primary Industries
MRD	Mineral Resources Department
NBSAP	National Biodiversity Strategy and Action Plan
NEC	National Environment Council
NES	National Environment Strategy
RRA	Rapid Resource Assessment
REDD+	Reducing Emissions from Deforestation and Degradation
R2R	Ridge to Reef
SIDS	Small Islands Developing States
UNDP	United Nations Development Programme
WAF	Water Authority of Fiji

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1 Introduction

The R2R overarching management approach for the Waimanu catchment is comprehensive and aims to cover all activities within and around a 'catchment' or 'watershed' in the highlands and out to the sea to ensure natural resource sustainability and biodiversity. Integrated Catchment Management is a holistic approach to managing natural resources within the river catchment ecological systems and resource users. This involves all stakeholders in communities located in the Waimanu catchment and others from elsewhere that use and manage land, water, and other natural resources. This Waimanu Catchment Integrated Management plan covers several interlinked terrestrial and freshwater ecosystems. In addition to existing institutional and traditional social structures, the legal and traditional governance systems in place will be considered to ensure that all stakeholders are engaged and that possible conflicts are addressed from the beginning of the project.

The Waimanu Catchment Integrated Management plan is based mainly on technical findings and related information extracted from the RRA (Rapid Resource Assessment) of the Waimanu catchment, the Waimanu Catchment Site Diagnostic Report, and other relevant scientific assessments and surveys conducted in the catchment (Conservation International 2021a; Conservation International 2021b). Generally, there has been no dedicated study on the biodiversity of the Waimanu catchment nor have there been social issues studies conducted there. Therefore, the Management Plan also identifies and documents the gaps in scientific and social science information lacking in the catchment.

As documented in the RRA and Site Diagnostic Analysis report for Waimanu, this plan is expected to be read together with the Waimanu Catchment Site Diagnostic Analysis report, RRA and other studies undertaken in the Waimanu Catchment that have identified the Waimanu catchment as a critical catchment that needs to be managed to sustain water quality and quantity. The upper Waimanu catchment has been identified as a Key Biodiversity Area (Watling 2017) and ways to conserve this area need to be identified. At the same time, water management policies, laws and regulations need to be reviewed and upgraded to support integrated water resource management. The recommended actions in the Waimanu Catchment Diagnostic Analysis report are at different policy and technical levels and also include the need for awareness raising, more research and education.

1.1 Context and Purpose

This is the first Waimanu Catchment Integrated Management Plan. There have been other management interventions under agriculture, forestry, waste management sectors in the past decade, however, there has been little collaborative effort by the different sectors to work together on forest, river, agriculture, and other ecosystems. Some studies and management interventions that had been conducted on the catchment area (Singh 2017) include Water Catchment Management – strategic approach and management implementation status in the Savura, Waivou and Waimanu Catchments (Watling 2017), Urban Water Supply and Wastewater Management Project Rewa River and the Water Supply Subproject (WAF and MOE 2016), proposed Fiji Water Supply and Wastewater management project, which should assist the Water Authority of Fiji (WAF) and the Government of Fiji to provide safe water and sewerage services to the urban population of the greater Suva area where approximately 30% of Fiji's population lives (Sadole 2020).

1.2 Vision and Goals

The IWR2R Project envisions to have the upper Waimanu catchment declared as a protected site because of its importance. The development and adoption of a Waimanu River Integrated Watershed Management Plan will ensure effective management that connects water, land, forest, and coastal ecosystems using the ridge to reef approach.

1.2.1 Goals

The goal is to ensure cross-sectoral coordination in the planning and management of freshwater use, sanitation, wastewater treatment and pollution control, sustainable land use and forestry practices, balancing biodiversity conservation and conservation and hazard risk reduction and climate variability and change. The integration of communities, stakeholders and national government agencies within such a cross-sectoral planning framework is the underpinning approach in this plan.

1.2.2 Scope

The management plan proposes a 3–5-year plan with several feasible perspectives for restoration efforts and strategies to be undertaken primarily by community and settlement stakeholders and other relevant partners. Interventions are to be done in phases, although some activities will be on-going. According to the catchment demarcations, the upper Waimanu is a key biodiversity area, with mostly pristine forest, with an abundance of biodiversity (flora and fauna), thus the need for protection of unlogged and undisturbed forest areas. The middle catchment area, which includes leased lands within the Waibau area, consist of mostly degraded lands, threatened by continuing unsustainable farming methods, which include the indiscriminate and unsustainable removal of remaining forest cover, planting on slopes, commercial and subsistence farming.

In addition, there is gravel extraction, a quarry, fuel pumps, schools, shops, and other forms of development within the lower catchment that require working in coordination with Government agencies, NGOs, the private sector, and other partners. Management strategies suggested including the possibility of declaration of a protection area in the upper Waimanu catchment; improved forest management; sustainable agricultural practices and sustainable land use practices in degraded areas in the middle catchment; and community-based interventions on water protection, waste management, land restoration in the lower catchment area. The upper reaches of Waimanu Catchment must be protected under conservation lease arrangement while the lower reaches of the Waimanu Catchment will need extensive efforts in awareness and capacity building to ensure sustainable land use practices are adopted and implemented. At the same time, water management policies, laws and regulations need to be reviewed and upgraded to support integrated water resource management.

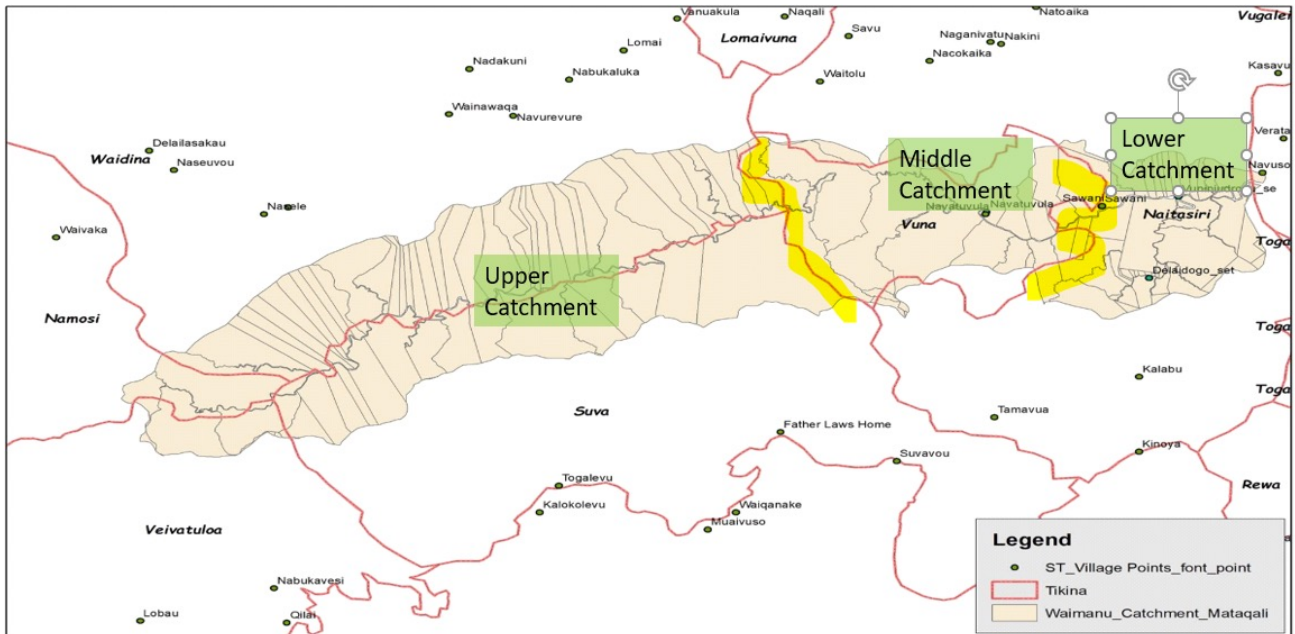
Where there is gravel extraction and other such development, strategies proposed include rehabilitation approach for restoration purposes, awareness, and capacity building for local communities. In all these proposed activities, there is the key aspect of ensuring stakeholders, especially indigenous people, have ownership of any management strategy and activities. Land is still dominantly owned by indigenous landowners and governed under traditional governance mechanisms, thus the need to ensure people participation. All interventions involving communities will be with the Provincial Office Naitasiri and the Commissioner Central's office, which is engaged in work with Indo-Fijian farmers, business owners and lease holders belonging to other ethnic groups.

Moreover, all interventions proposed will be gender and socially inclusive to ensure there is meaningful participation of all sectors of the communities and there is inclusion of vulnerable groups. In the lower Waimanu Catchment area, development is more widespread, thus attempts at restoration, waste management and sustainable farming practices should be focused on training and capacity building of local communities to ensure interventions can be implemented and monitored by them. Land use planning should be done at tikina/district level in communities in the upper, middle, and lower catchments of the Waimanu. Existing legal mechanisms, institutional arrangements and local governance systems should be understood and used to ensure there is buy-in from landowners and community leaders.

The scope for the managed areas of the Waimanu catchment cover a wide range of multiple sectors, including forestry, agriculture, biodiversity, and water sectors. This management plan includes areas up to Vuniniudrovu community, thus does not consider the coastal delta areas along the Rewa River.

The Waimanu river catchment Integrated Management Plan includes communities and settlements within the Vuna district (Sawani, Navatuvula) and Navuso (Vuniniudrovu, Waitolu). There are three iTaukei villages and many settlements along the Waimanu River, hosting a population estimated at 13,000 across a catchment area of 199 km² (Fiji Bureau of Statistics 2017). The villages include Navatuvula, Sawani and Vunaniudrovu. Other settlements in the middle Waimanu catchment are primarily smallholder agriculture lease holders.

In the upper Waimanu catchment, the communities are outside of the immediate river systems, therefore management will focus on conservation work through REDD+ mechanisms, and awareness raising, and capacity building and coordination work with other stakeholders within the lower reaches of Waimanu catchment. These stakeholders include about 665 land tenants with lease types ranging from Agricultural, Residential, Forestry, Educational, Tourism, Commercial, Government Stations, Water Mineral, and other uses such as for religious purposes. In addition, there are about 500 farmers along the Waimanu catchment with lease area ranging from 0.05 ha to 1500 ha.



WAIMANU CATCHMENT OVERLAY WITH MATAQALI LAYER AND DISTRICT LAYER

Figure 1: Map depicting management definition of Upper/Middle and Lower Waimanu Catchment Areas (Conservation International 2021a)

Key elements to this plan include:

- Key threats identified through the Site Diagnostic Analysis, Rapid Resource Assessment, Ecosystem Goods Service/Freshwater Health Index, and other studies conducted under SPC IW R2R programme and through other studies by the Fiji Government and other development partners.
- Priority management options useful for converging multi-stakeholder agreements on future investments in water catchments.
- Institutional arrangements and partnerships for safeguarding the Waimanu’s critically significant water resources.
- Legislations, policies, and local governance mechanisms that influence integrated management of the Waimanu catchment.
- Management Options and Strategies.

1.2.3 Gender and Social Inclusion

All project interventions, studies, research under the R2R Regional programme require gender and social inclusive approaches. A gender responsive approach requires examination and addressing of gender norms, roles, and inequalities and to actively promote gender equality. Gender and social inclusion will result in the meaningful engagement of men, women, youth and all members of communities and other stakeholders in all stages of project planning, implementation, and monitoring.

2 Institutions and Legal Mechanisms

The Waimanu Catchment Integrated Management plan is aligned to Fiji's National Development Plan – 5 Years & 20-Years (2017–2036) (GOF 2017) that sets a strategic vision to promote inclusive social economic development and transformational development for the agriculture, forest, and other primary sectors. In Fiji's Development Plan, there is a focus on people having access to "100 Percent Access to Clean and Safe Water and Proper Sanitation". The National Development Plan states that resources will be allocated for sustained maintenance and construction of new water treatment plants, reservoirs and reticulation systems, rural water schemes, development of groundwater sources, and distribution of water tanks in rural areas.

Fiji is committed to fulfilling the 2030 Agenda for Sustainable Development, as well as contributing to achieving climate neutrality and low-emission development under the Paris Agreement on Climate Change. These agreements support the Waimanu Catchment Integrated Management plan as it has national target focus areas that lie within the Waimanu catchment.

2.1 Legal Mechanisms

This section discusses existing legal mechanisms which support the Integrated Management work. In addition to the key legal policies, attached in Appendix 1 is a list of the environmental laws that guide the work in the different sectors of the catchment.

2.1.1 National Environment Strategy (NES), National Biodiversity Strategy and Action Plan (NBSAP)

Fiji's major instruments for conservation and environment are the National Environment Strategy (NES) and the National Biodiversity Strategy and Action Plan (NBSAP) (GOF 2020), which outlines the implementation of commitments under the Convention on Biological Diversity (CBD). The NES and NBSAP have been endorsed by Cabinet and set the framework for conservation of biological diversity in Fiji's forests. According to the NBSAP, conservation and sustainable management of Fiji's natural forests is the single most important means of conserving the vast majority of Fiji's endemic fauna and flora. It provides further directives for the establishment of a comprehensive and representative system of forest reserves and conservation areas and emphasises the role of resource owners and local communities in conservation and sustainable management of natural forest.

2.1.2 Environment Management Act (EMA 2005)

The main piece of legislation is the 2005 Environment Management Act (EMA). Its key features include requirements for Environment Impact Assessments to be binding on all parties, permits to discharge waste and pollutants into the environment, National Resource Management Plan, declarations, enforcement orders, stop work notices that ensure environmental compliance according to the laws, introducing powers to protect water quality (both freshwater and marine) through environmental impact assessment of new projects and the introduction of effluent water quality standards and regulates the application of principals of sustainable use and development of natural resources.

2.1.3 National Environment Council (NEC)

The National Environment Council (NEC) was set up under EMA to advise the Minister for Environment on the views of the public, private sector, NGOs, local authorities, and others. The NEC is chaired by the Permanent Secretary for Environment, and its broad membership composition is designed to reflect all those groups affected by environment management measures and with environmental or conservation interests.

2.2 Water Management

Overall, rights to adequate water are guaranteed under section 36, Part 2, of Fiji's 2013 Constitution, towards progressive realisation of the right of every person to have clean and safe water in adequate quantities. In other pieces of legislation, water and management of water is mentioned under several guiding policies, laws and regulations discussed herein. Major policies, laws and regulations that have an impact on water catchment are highlighted in Annex 1.

As evidenced from the analysis of laws and regulations (Annex 2), there is an absence of clear and specific protection of water catchment areas and its management due to a lack of clear legislative mechanisms (environmental policies) relating to the environment. An identifiable pattern is that most of Fiji's existing laws associated with water management and environment protection are from an era where environment protection was of less emphasis.

2.3 Stakeholders and Roles

There are many stakeholders in the Waimanu catchment, including government and quasi government bodies, traditional communities, and land tenants. Government stakeholders consist of all government ministries that have offices and operations in the provinces of Naitasiri and Namosi, under the leadership of the Ministry of Rural and Maritime Development as well as all quasi-government agencies that are obligated by law to support rural development. Traditional indigenous stakeholders consist of all communities that have villages or own land in the Waimanu catchment. There are 122 landowning units within the Waimanu catchment distributed over six districts under three provinces. Districts in the Waimanu catchment include Vuna, Waidina, Naitasiri (in Naitasiri Province), Suva (Rewa Province), Namosi and Veivatuloa (Namosi Province). Stakeholder engagement at the community level needs to be gender and socially inclusive, considering the patrilineal nature of land ownership and leadership in traditional community settings¹.

Table 1: Government and Non-Government Stakeholders

INSTITUTIONS	ROLES AND RESPONSIBILITIES
Department of Environment	<ul style="list-style-type: none"> Administers the Environmental Management Act with a mandate to pursue sustainable use of natural resources; Monitors and enforces the National Liquid Waste Standards (i.e., discharge of pollutants to waters) Administers Environmental Impact Assessment Process
Department of Town and Country Planning & Rural Authorities	<ul style="list-style-type: none"> Issuance of Business Licenses for proposed operators for sand and gravel
Ministry of Lands and Mineral Resources	<p>Lands Department</p> <ul style="list-style-type: none"> To issue licenses for sand and gravel extraction on native, freehold, and state land under the Rivers and Streams Act. To issue licenses for quarries under the Quarries Act but their power depends on supply to a rock crusher or treatment plant. Recipient of royalty payments for sand and gravel extraction from waterways and quarry extractions. <p>Mineral Resources Department</p> <ul style="list-style-type: none"> To issue license for sand and gravel extraction for the purposes of delivering it to a crusher (i.e., Quarry Operations). Managing the extraction from the beds of rivers and streams. To ensure proper and relevant access to quarry extraction site. To monitor extraction volume so it is consistent with royalty payment submitted by operators.
Ministry of Health and Medical Services	<p>Department of Health</p> <ul style="list-style-type: none"> Enter any area for the purposes of water supply or sewerage or the disposal of sewage and inspect the same.

INSTITUTIONS	ROLES AND RESPONSIBILITIES
	<ul style="list-style-type: none"> • Has the power to stop activities that disturb or contaminate water/waterways. • Appropriate legislation affecting rural household sanitary practices have been in place for many years under the Local medical stations usually have good statistics on population numbers and information on sanitary arrangements in the villages.
Ministry of Forests	<ul style="list-style-type: none"> • Regulates all commercial timber harvesting. In the process designates areas of forests in which logging is prohibited. Monitors logging operations. • Mahogany plantations excluded. • Agency administering REDD+/Carbon Credits. Important potential partner in catchment conservation with concomitant benefits accruing to the landowners.
Ministry of Fisheries	In consultations with iTaukei Lands and Fisheries Commission and the relevant provincial office, the calculation of the appropriate compensation to be paid to qoliqoli owners and processing the same.
Water Authority of Fiji	In accordance with the provisions of section 28(1) of the WAF Promulgation, responsible for ensuring that all drinking waters delivered to the consumer conform with the Fiji Drinking Water Quality Standards.
Ministry of Agriculture; Land & Water Resources Section; Land Conservation Board	<ul style="list-style-type: none"> • Primary regulator of sustainable agricultural practices. • Once gazetted, the Ministry of Agriculture will be responsible for the Land and Water Resources Management Bill which will establish a Board to oversee the general supervision of land and water resources in the country.
Ministry of Waterways Department of Sewerage	<ul style="list-style-type: none"> • To provide professional advice to the permanent secretary for Infrastructure & Transport on policies and strategies for water and sanitation. • Coordinate consultative meetings with all relevant stake holders on National Water Resources and sanitation. <p>Current legislation covering water resources provides for irrigation (Irrigation Act), use of water by mining enterprises (Minerals Act), and the taking of water from rivers and streams (Rivers and Streams Act). The Rivers and Streams Act, allows for water abstraction from rivers at the discretion of the Dept. of Lands. It also allows traditional activities to be conducted by native Fijians in small streams. The Act contains provisions that determine non-tidal water resources at least to be the property of Crown/State.</p>
Ministry of Rural and Maritime Development	Provincial Administration – primary government agent for facilitating development Plans
Fiji Roads Authority	<p>Poor road building in forested terrain and maintenance of roads – a major contributor to mass sediment discharge to rivers and streams.</p> <ul style="list-style-type: none"> • Primarily but not exclusively FRA responsibility. • FRA and DoEnv responsibility during new road construction but some roads are built without EIAs, especially remote rural roads.
NGOs	<p>Best placed to advise on biodiversity conservation values</p> <ul style="list-style-type: none"> • Key Biodiversity Areas; Important Bird Areas
ITAUKEI LAND TRUST BOARD	<p>Responsible for the leasing of all native land in consultation with the landowners</p> <ul style="list-style-type: none"> • Issues Gravel Extraction Permits • Have prepared a ‘Conservation Lease’ which will be used for biodiversity, water catchment and other conservation purposes
ITAUKEI AFFAIRS	<p>Responsible for protocols and agreements with communities and entry into villages.</p> <p>Responsible for documentation of TEK (traditional environmental knowledge).</p>
Landowners/Indigenous populations	<p>Custodians of ~85% Fiji’s land resources; and, likely a higher proportion of water resource catchments.</p> <ul style="list-style-type: none"> • Water resources are an integral component of the ‘vanua’ and so maintaining its condition is an important cultural tenet for many
Leaseholders	<ul style="list-style-type: none"> • Leaseholders responsible for farming practices stipulated in their leases. • Freehold landowners are nominally covered by the requirements of the Land Conservation Ordinance and Land Conservation Board, but ineffective for several Decades. • Government has recently circulated for consultation a Land and Water Resources Management Bill which will establish a Board to oversee the general supervision of land and water resources in the country. If gazetted, the Act will repeal the Land Conservation and Improvement Act.

2.4 Traditional Governance System

The iTaukei governance structure consists of several layers of hierarchy. At the broadest level is the Confederacy, scaling down to Province and District. Each District has a Chiefly village. Within each village, there are clans or mataqali where each clan plays a specific role as outlined in Figure 2. A large village may have all five to seven mataqali while a small village may only have the critical clans.

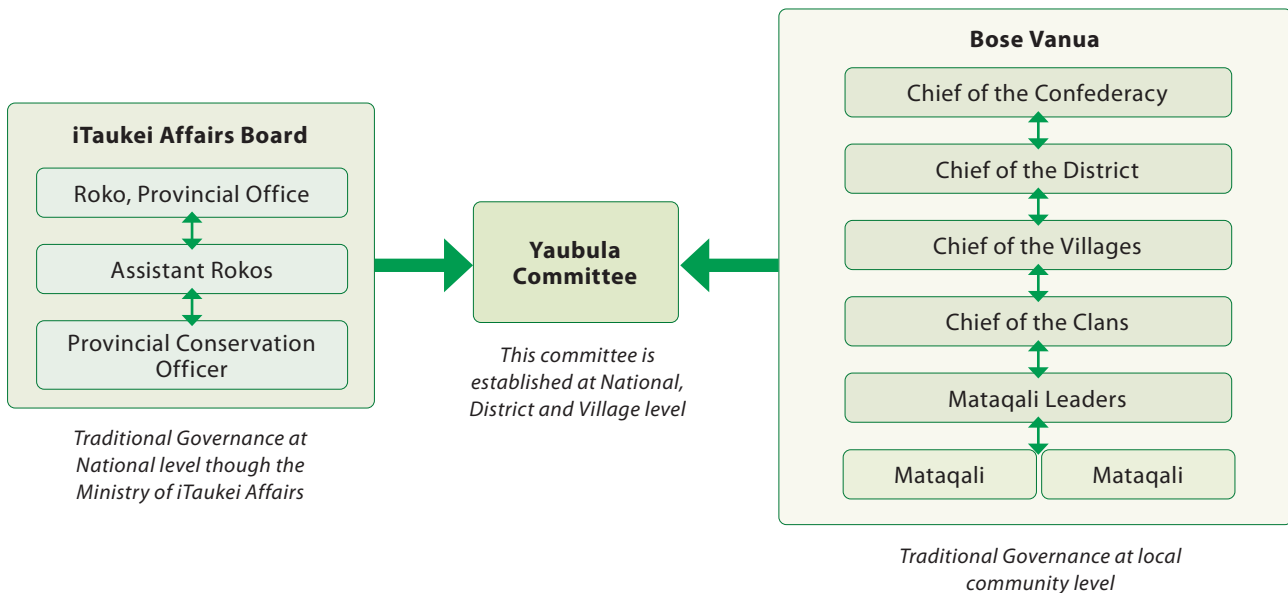


Figure 2: Formal and traditional governance system in Fijian communities with respect to Yaubula (Environment) Committee

2.4.1 The iTaukei Affairs Board

The iTaukei Affairs Board through the Provincial Offices plays a key role in facilitating resource use, development, and management through the iTaukei Affairs five pillars, which direct all work done with indigenous people.

The five pillars are: Good Governance and Wellbeing; Economic Empowerment; Conservation; Climate Change and Disaster Risk Management; and Vanua and Traditional Leadership. Under these five pillars, every village in all provinces has developed a Village Integrated Development Plan (VIDP). The plans are developed through a consultative process that comes through the Provincial Office, through the District Representatives (mata ni Tikina) to the village representatives (Turaga ni Koro) and are mostly based on village profiles that had been documented and kept by the iTaukei Affairs Database of information.

The VIDP guide development and management of work at the community level. They highlight the priorities of each village and could be useful for catchment work planning. Apart from the Yaubula Management Committees, which focus on natural resource management, there are also development committees, water committees, health committees, and education committees in all the communities and these are entry points when conducting consultations, awareness and training, capacity building at the community level.

For the Waimanu catchment, the iTaukei Affairs Board, through the Naitasiri Provincial Council Office, links government interventions, development and management to the landowners, communities, and the traditional governance system. Some of the work carried out will need consultations with the Tailevu and the Namosi Provincial Offices.

It is worth noting that the iTaukei Affairs system and the VIDP has not always worked as planned, and in many cases, external partners can go to the communities directly, thus does not having the support or collaboration of the vanua (group of clans and villages). The Bose Vanua is the ultimate decision-making body in all traditional settings in Fiji and in work that involves land and resources that sit on land that is dominantly under indigenous ownership. Unwritten rules of engagement with the vanua and communities define the engagement of people in work such as that proposed under the Waimanu Integrated Management Plan.

3 Institutions and Legal Mechanisms

The upper/middle Waimanu catchment appears natural however, these areas are prone to landslide/mass movement which affects the turbidity of the water and deposition of silt, which changes the river morphology (Conservation International 2021a, Gatthaar 1988, Raj 2004, Atherton et al. 2005, Singh 2017, Ryan 1980, Nainoca 1998). Flood management requires an integrated approach to address all issues in a holistic manner. Issues related to land and water resource use need to be planned and executed in a manner that will reduce or eliminate risks (SOPAC 2017).

Watling (2017) identified several threats through a hazard analysis in the Waimanu catchment, which was undertaken as a training exercise with key stakeholders. The identified threats are aligned to findings from the RRA and Site Diagnostic Analysis report for Waimanu.

The following environmental threats are documented in other reports² and are important considerations for addressing under this management plan:

- **Lack of coordination as government agencies work in silos.** Government departments have their different mandates and areas of focus within the catchment and there is little joint work undertaken.
- **Environmental management and controls are weak.** Policies in some cases are outdated or fail to address current and emerging issues and there is a major need to review existing regulations and law enforcement relating to forests, water use, and the different land uses and conservation practices in freshwater management.
- **Increasing intrusion of farming and agricultural leases** in the mid and upper catchment areas, which is the very source of freshwater deposits that feed the lower catchment and water treatment plants.
- **Growth in population as reflected in the number of new communities** and settlements across the catchment. Given the rural nature of such settlements, standards are not adhered to. Reports indicate very poor hygienic standards of effluent discharge. In some instances, the river has been used to as a dumpsite and deposit for waste materials that again, will negatively affect the water quality of the river. The catchment is under threat from increasing population and poor waste management including improper sanitation systems.
- **Increasing development projects** in the form of gravel extraction and quarry sites, road expansion, business and education centres and shifting cultivation. The establishment of these projects would involve the removal and clearance of land areas and blocks of forest to support infrastructure. On the governance aspects, there is essentially a lack in the overall legislative provision that deals specifically with water. Nor is there one that offers water catchment protection and/or its ownership.

² Examples: Conservation International, 2021A; Conservation International, 2021B.

4 Policy Gaps/Risks

4.1 Fiji Forest Policy

Ensured ecosystem stability through conservation of forest biodiversity, water catchments and soil fertility are important objectives of the Fiji Forest Policy (DoF 2007). The Ministry of Forests has no powers to create 'water catchments' but has the mandate to establish forest protected areas. Water catchments could be protected through the Forestry Decree (1992) provisions for Forest Reserve and Nature Reserve. Although legislation is in place to establish protected areas, lack of funding to secure conservation leasing arrangements with iTaukei Lands Trust Board has limited this work. Further, the compensation procedure for payment of opportunity foregone on account of protecting the forest is poorly understood by landowners and source of such compensation is difficult to secure.

4.2 Department of Agriculture and Forestry

Conflicting land use approaches – the Agriculture Department and multilateral partners advertise sustainable agricultural practices at great length, but in practice the focus of agriculture development is to increase agricultural production.

The Forestry Department seeks to implement the Permanent Forest Estates provisions of its Policy while Agriculture seeks to clear forest to plant dalo for export, and then abandons areas when yields decline. This is confusing to landowners, and a significant constraint to WAF, which will rely on other agencies to implement conservation practices for sustainable land use in line with their regulatory powers.

Supervision and control of logging practices is under-resourced and ineffectual – logging of mahogany plantation is outside the control of Department of Forestry. The Ministry of Agriculture Land Conservation and Improvement Act and its Land Conservation Board has been "almost irrelevant and outdated" regarding sustainable land-use for several decades.

4.3 iTaukei Lands Trust Board

The **iTaukei Land Trust Board** has identified that the provisions for Forest Reserves or Nature Reserves under the **Forests Decree** are not appropriate for the rights and aspirations of landowners and so will not arrange leases based on those legal arrangements. Instead, the TLTB has introduced a Conservation Lease which it is using for biodiversity protected areas and which is suitable and will be used for water catchment leases where appropriate (Watling 2017).

4.3.1 iTaukei Act (regulation 25) Village By-Law

The Village By-Law under the iTaukei Act Regulation 25 aims to strengthen traditional governance and ensure Fijian protocol is followed in Fijian villages through decisions made by the Bose Vanua and various levels of governance in the village. The law, which is in draft form, is prepared by the Ministry of Indigenous Affairs. It will act as a policing tool in everyday village life in respect to village, civil or criminal laws and ensure communities live harmoniously with each other. It empowers traditional chiefs or leaders in their leadership powers and provides a closer working relationship between the Government and traditional leaders. The Village By-Law was proposed in 2016 and is under review.

4.4 Minerals, Quarries

The absence of a system for land use planning (there is no National Land Use Plan) that incorporates assessments of geological reserves of quarried materials is contributing to conflicts in land use practice. For example, the impact of river gravel extraction on the supply of potable water and flood mitigation works.

4.5 Land and Water Resources Management Bill

This Bill, should it be enacted, is scarcely an improvement for WAF's needs on the Land Conservation and Improvement Act (which it will repeal); 'water resources' is merely added in name, but there are no provisions in the new legislation that would assist WAF exercise the requirements of drinking water catchment management except in the most roundabout and ill-defined way.

4.6 Department of Environment, Department of Lands, Mineral Resources Department, iTaukei Land Trust Board – Gravel Extraction

Gravel extraction is subject to four controlling or permitting organisations – Department of Environment, Mineral Resources Department, Department of Lands and iTaukei Land Trust Board. One of the two purposes of the Environmental Management Act stipulates that such exploitation of natural resources should be sustainable – this is ignored in current environmental impact assessments and so there is no requirement for the determination of sustainable extraction levels. As a result, contractors have gone ahead and opened quarries without regard for an allowable annual take.

4.7 Water Resource Management

In 2014, Government announced that it was reviewing existing water laws to streamline various stakeholder functions and powers for effective water and sanitation management in Fiji stating that "The new legislation should provide the required legal framework for water supply management in Fiji." The recently released Land and Water Resources Management Bill does not specify water supply requirements from drinking water catchments in any form. There are no provisions in any legislation for specifically identifying and protecting water catchments and effecting their protection. The principal issues which appear to have hindered efforts to reform the water supply/catchment protection provisions of other legislation relate to water resources that are the property of the state.

Catchment protection necessarily restricts land use rights of landowners and fair compensation is required if they are impacted.

5 Management Options

From understanding to the practical application of Ridge to Reef principles, the Pacific R2R Programme has presented participating Pacific Island countries an opportunity to test, refine, replicate and upscale emerging and sustainable development paradigm. Longer-term investment in R2R mainstreaming, concepts, practices and policies could be used as models for up-scaling to larger catchment areas linked to coastal areas.

To address the identified threats, the following has been highlighted: the need to protect, under conservation lease arrangement, the upper reaches of Waimanu catchment, while the lower reaches of the catchment will need extensive efforts in awareness and capacity building to ensure sustainable land use practices are adopted and implemented. At the same time, water management policies, laws and regulations need to be reviewed and upgraded to support integrated water resource management.

The goal of the Waimanu River Integrated Watershed Management Plan is to direct the interlinked management of water, land, forest ecosystems and enable strategic interventions and on-going monitoring of activities undertaken.

5.1 Principles

Community Participation – community participation and involvement bring in a sense of ownership and accountability for project interventions. Their participation from project initiation, initial consultation and implementation stage is very important and paramount for project implementation.

Supporting R2R planning – aligning the R2R Framework at national and regional levels to global and regional agreements and strategies – the Sustainable Development Goals, the Samoa Pathway, Smaller Island States (SIS) Regional Strategy and the Framework for Pacific Regionalism and National Development Plan, Green Growth framework, National Adaptation Plan.

Resilience through community priorities – understanding local contexts and supporting locally driven solutions are key to fostering ownership, sustainability, and resilience.

Recognising the value in gender and social inclusion – for an integrated approach during planning, consultations, implementation, and monitoring processes.

5.2 Phased Approach

It is recommended to undertake the management plan in three phases or a staged approach.



Figure 3: Phased Approach to Implementation of Management Plan

Phase 1: Initial Phase where there is continuation of ongoing work and addressing areas already identified under risks or threats. Supports the R2R target on building capacity of local professionals, new stakeholder groups, and community leaders to plan and adopt integrated and participatory mechanisms to complement traditional measures and approaches.

Phase 2: Demonstration and pilot sites, case study sites for management to be undertaken. Implementation of short-term and long-term management options. Also includes the monitoring and evaluation phase and identifying of best practices. This is in line with the R2R target to test, refine, replicate and upscale effective mainstreaming efforts of ICM/IWRM/ SLM/SFM concepts, practices, and policies.

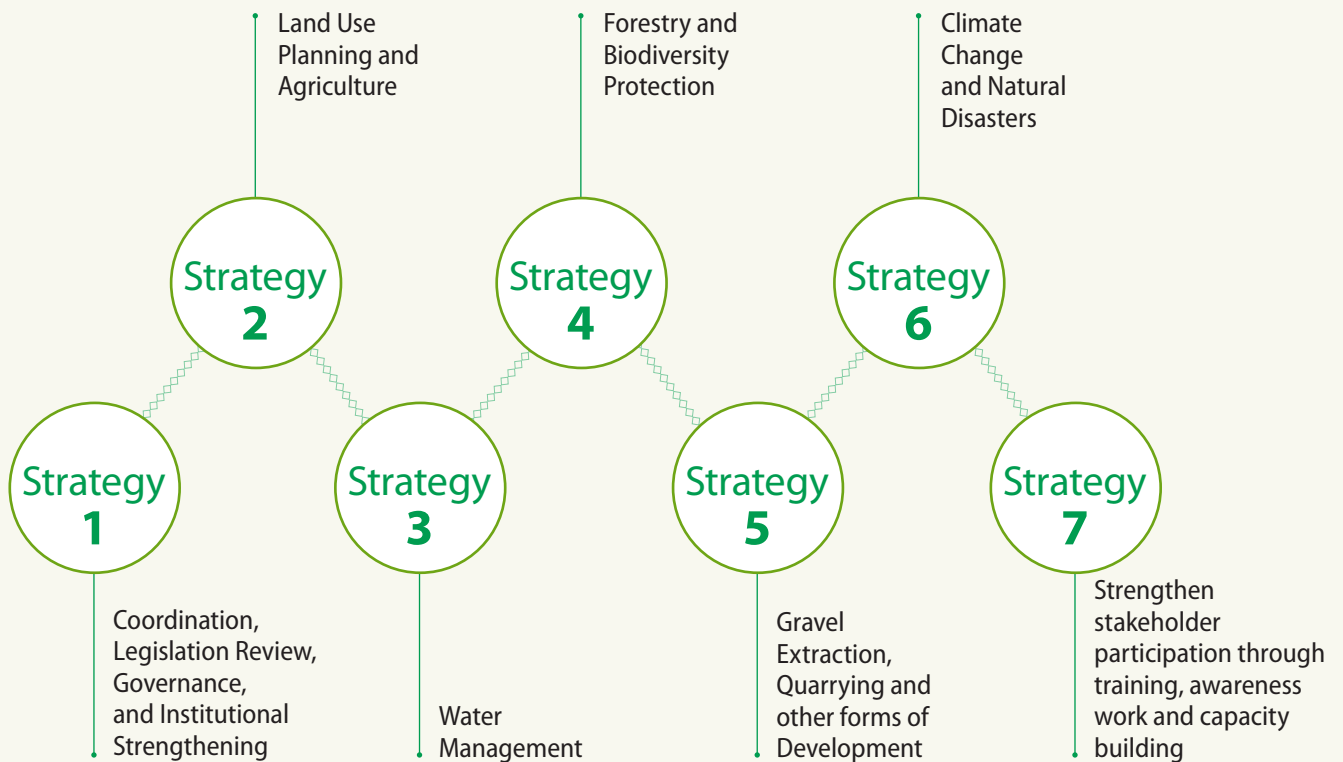
Phase 3: Upscaling of best practices, continue long term interventions. Monitoring and Evaluation. Communities to be prepared to take over management.

5.3 Management Strategies

There are seven strategies proposed, which are focused on the different sectors and priority areas of this Integrated Management Plan. Each Strategy has several interventions targeting identified focus areas.

Adoption of the proposed strategies will require involvement of the Yaubula Management Committees in the iTaukei communities and, at Tikina level, of the Naitasiri Provincial Council. Indo-Fijian lease holders, business owners and investors will be included through the Advisory Council under the Commissioner Central. Government Agencies, NGOs, the Private Sector will then work with communities through these structures and mechanisms.

Management Strategies



STRATEGY 1: COORDINATION, LEGISLATIVE REVIEW, AND INSTITUTIONAL STRENGTHENING

Key elements of the plan, which are useful for upscaling future investments in water catchments, include the need to develop and adopt guidelines for mainstreaming of best practices in watershed management.

There are existing resource management mechanisms and governance structures that require strengthening of partnership for short- and long-term goals of the project. Government ministries have the duty to cooperate and share responsibilities within the proposed Integrated Management Plan. The decision-making mechanisms are in place at the community or vanua level, with resource management committees (Yaubula Committees) already in place. There is need to consolidate traditional governance through protection of traditional knowledge and norms. There is need for collaborative work between government agencies and existing management mechanisms at the community level, to ensure there is no duplication of efforts and all work done builds on existing management in initiatives and decision-making structures already in place.

The following objectives support Strategy 1:

- To review existing legislations and to seek effective enforcement of existing legislation which impact negatively on the Waimanu catchment.
- To ensure government ministries collaborate on integrated management interventions proposed. Government agencies are duty bound to work together, thus the Department of Environment will work on a common platform of engagement with other government agencies. This strategy also assesses existing governance mechanisms and relevance to management of the catchment.
- To ensure appropriate synergies among the work of various sector agencies, between national governments and communities, and the investments of development partners and donors to implement stress reduction measures at a scale required to build island sustainability and resilience. This strategy will consider traditional governance mechanisms, human rights issues, gender issues and social inclusion issues.

Table 1: Proposed interventions for Strategy 1

Priority Area	Proposed Interventions	Outputs	Outcomes	Phases
Strengthening of coordination mechanisms between Government agencies.	Coordination work by Government agencies through a common platform organised by the Department of Environment with the Commissioner Central and iTaukei Affairs.	Multi-stakeholder discussions through coordination of the different government ministries undertaken. Coordination work stepped up and roles and responsibilities of Ministries in the implementation of the Waimanu integrated Management clarified.	Commissioner Central and DOE overseeing established coordination work. Integrated Management Committee set up for Government agencies and key stakeholders – to be financed and to have some delegatory powers within the Waimanu Catchment Management Plan.	1-2
Strengthening of the existing links to the Naitasiri Provincial Council and other Provincial offices where necessary, and the Commissioner Office Central to ensure participation of all existing groups and communities.	Management work is linked to the Provincial Council Yasana, Tikina and Village development plans. Other groups within the Waimanu catchment included through the Indo-Fijian Advisory Councils, through the Commissioner Central's Office and other existing groups.	Consultations undertaken with the Provincial Council and Commissioners office and interventions aligned to any current work carried out on management and empowerment of communities and other stakeholders. Training and capacity building of Yaubula committees and Indo-Fijian representatives conducted with the support of the Provincial Council and the Commissioner Central's office.	Yaubula committees in communities and at Tikina level and representatives of the Indo-Fijian community trained and engaged in management interventions and enforcement work.	1

Priority Area	Proposed Interventions	Outputs	Outcomes	Phases
There can be conflict of interest in some sectors with overlapping roles and mandates	The need to clarify definitions of upper, middle, and lower catchment areas and duties of Ministries within specific sectors clarified.	Definitions and responsibilities of the different government ministries to gravel extraction, logging, land use and other developments clarified, and these definitions used in progressing management interventions.	Different roles of government ministries clarified in different areas of management interventions.	1
Yaubula committees, Advisory Council Committees for Indo-Fijians work on management and enforcement work through capacity building.	Yaubula committees and representatives of Rural Advisory Councils (Indo-Fijian communities) included in capacity building for management work	Training and capacity building of Yaubula committees/other village committees and Indo-Fijian representatives conducted with the support of the Provincial Council and the Commissioner Centrals office.	Yaubula committees in communities and at Tikina level and representatives of the Indo-Fijian community trained and engaged in management interventions and enforcement work	1
Environmental management and controls are weak. There is a major need to strengthen law enforcement to protect resources	Review of existing legislation and policies relating to the different sectors impacted.	Review of legislation carried out/by consultant or management committee.	Legislation and policies reviewed and proposed for adoption.	1-3
Water legislation is weak and outdated, Water Supply Act does not cover urban water supply, WAF do not have the authority to establish protected areas in the catchment area.	Specific legislative proposal towards clear definition and ownership of water as a resource, its management, and regulations to be undertaken, review of existing Water Supply Act.	Specific review of WAF legislations undertaken through DOE supervision.	Legislation Review work completed.	1-2
Forests Dept. has no powers to create 'water catchments' though it can and does prohibit logging in areas important as 'water catchment'. Water catchments to be protected through the Forestry Decree (2002) provisions for Forest Reserve and Nature Reserve	Multi-government agency discussions to be held between the key government stakeholders in the upper Waimanu catchment to align work in catchment areas.	Ministry of Forestry, Agriculture, DOE, and Waterways, iTaukei Affairs Board and TLTB develop specific pathways to address logging, water-catchment protection in the upper Waimanu.	Guidelines for operation between the main government agencies established and memorandum of agreement established with landowners in the different communities.	1-3

Priority Area	Proposed Interventions	Outputs	Outcomes	Phases
Need to strengthen existing traditional management, protection of traditional sites	Identification of sites under traditional management, documentation of traditional sites. Wide consultations – in communities at national and community level on dual governance and regulations in some areas of the Waimanu catchment.	Cultural mapping of traditional management measures, managed areas, traditional sites of significance and documentation of TEK done. Consultations undertaken in communities, provincial, sectors and national level.	Management interventions consider existing management measures, traditional sites, and traditional environment knowledge (TEK). Increased awareness and protection of existing traditional managed areas, traditional sites by communities.	1-3
There is no clear pronouncement applicable to the protection and management of water catchments.	Water catchment management guidelines to be developed. A legal consultant to develop a set of guidelines which can be used.	Consultations on the development of the guideline undertaken stakeholder engagement in identifying priority areas and resource use guideline completed.	Water Catchment Guideline used for management work.	2
The participation of civil society organisations, communities and women, youth, and other vulnerable groups on all management interventions.	Institutional strengthening work to include women, youth and other vulnerable groups in communities including Indo-Fijians and other ethnic groups participation.	Increased sense of ownership by all members of the communities, settlements, lease holders including men, women, youths and vulnerable members of communities, Indo-Fijians, and other ethnic groups.	Increased participation and understanding of the project and the establishment of realistic views and expectations of anticipated project outcome by all stakeholders. Gender and social inclusion ensured in all community, settlements, CSO engagement.	1-3
Localisation of technical solutions, the planning of actions that align with local needs and traditions.	Technical interventions consider local information, priorities and needs.	Local solutions, technologies, management mechanisms and knowledge implemented.	Technical interventions include local knowledge, priorities, skills, and knowledge.	1-3

STRATEGY 2: LAND USE PLANNING AND AGRICULTURE

One of the main challenges in the middle Waimanu catchment is the unplanned removal of forests and land use without proper planning. Middle catchment is dominantly leased land and farmed for small scale commercial and subsistence purpose. In the lower catchment area communities are largely reliant on subsistence farming, thus the need for sustainable farming practices and land use planning.

The following objectives support Strategy 2:

- Development of land use plans to ensure district level planning and adoption of sustainable farming methods and land use, restoration interventions are planned and monitored.
- Support livelihoods – introduce resilient measures through pilot farm demonstration sites, reduce economic losses, increase farmer income, and sustain drinking water supplies.
- Improving state of water source by collecting baseline information and data for prioritisation, consolidation, and mapping of watershed areas.
- The R2R modelling framework now provides for the identification of priority land areas for land use inclusive of forest conservation that can maximise downstream benefits.
- Value added and value chain studies conducted to identify markets and value of agriculture alternatives.

Table 2: Proposed interventions for Strategy 2

Identified area of concern	Proposed intervention	Outputs	Outcomes	Phases
<p>Land use planning not well developed outside of urban areas. The fundamental problem relates to the curtailment of indigenous landowners' rights to use their land as they would wish.</p> <p>Land use planning at district and community level to ensure sustainable land practices.</p>	<p>Consultations and training on development of land use plans conducted with communities in the middle catchment and lower catchment areas.</p> <p>Work with Provincial Agriculture Planning targets and the Village Integrated Management plans to identify farming targets for villages and communities – both for subsistence and cash cropping.</p>	<p>Awareness work done in all communities and with all stakeholders in the middle and lower catchment areas. District land use plans based on RRA, IDA reports and information from other studies.</p> <p>District and community land use plans aligned to VIMP and considers targets under the Provincial Agriculture planning targets.</p> <p>Interventions that target women and youth included in the village and district land use plans (economic empowerment projects, specific farming projects).</p>	<p>Tikina land use plan developed and used.</p> <p>Monitoring of land use plans continuous process.</p> <p>Plans in place and guide work undertaken and monitored by Provincial offices.</p> <p>Women, youth targeted initiatives included in community/district land use plans.</p>	1-3
<p>Poor agricultural practices such as planting on slopes, close to streams, banks causing soil erosion, siltation, and eutrophication. Introduction of Sustainable Land Practices.</p>	<p>Verify land use plan to ascertain area to be restored/replanted; Meetings/workshops with villages on planting conditions and techniques in Waibau and the lower Waimanu catchment.</p>	<p>Continue work started in Sawani and Vatuvula villages on riverbank restoration. Restoration work in Navatuvula and Waibau areas.</p>	<p>Riverbank restoration completed and documented with report on process and lessons learned. Recommendations section of report to inform future work and possible monitoring.</p>	1-2
	<p>Farmer training on organic farming using mulching and organic fertiliser in the upper Waimanu catchment, Naitavuni district.</p>	<p>Organic farming using organic fertiliser introduced at community level.</p>	<p>Organic farming successfully introduced and replicated in other communities within the upper Waimanu catchment.</p>	1-3
	<p>Introduction of Sustainable Farming Practices to communities, especially the Waibau leased areas.</p>	<p>SLM training and skills training conducted. Pilot sites identified and model farms set up to test innovative practices and the use of SLM practices introduced.</p>	<p>Model farms/pilot sites set up in communities that are part of the SLM work.</p>	1-3
<p>Restoration of degraded land areas</p>	<p>Verify land areas to be used in land-use planning. Establish fruit trees farm in each catchment sub-region to ensure ecosystem services retention.</p>	<p>Nurseries and planting areas identified in villages (3 tikina) in the upper, middle, and lower Waimanu catchment areas.</p>	<p>Fruit trees farms established in each sub-region – upper, middle, and lower catchment areas</p>	

Identified area of concern	Proposed intervention	Outputs	Outcomes	Phases
Guiding and coordinating investment in the sustainable development of resources through an integrated approach. Women and youth empowerment.	Set up model farms where resource management in an integrated way can be tested. This is to include women, youth targeted projects and areas of interest - voivoi/masi planting and handicraft making where it already exists.	Model farms established and identified crops that are widely used by women, youths included.	Farms successfully in operation and women/youths increase income from activities undertaken.	1-3
Alternatives for the middle catchment – Waibau leased area – which are using unsustainable agricultural practices.	Value chain analysis to be done for all different target cash crops to ensure the participation of men and women. Small-scale farming for cash should be aligned to the Agriculture Policy for Fiji where business plans and finances are sought to ensure business success and sustainable farming practices.	Value chain studies undertaken. Training on business ventures to be carried out and farmers assisted with markets access and distribution outlets.	Specific engagement of women and youths in communities along the value chain identified and strengthened. Markets secured, trainings held, and women, youth and other community members successfully engaged in small scale commercial farming. Training and detailed outcomes to be reported on.	1
Gender and social inclusion in key interventions undertaken	Women to be part of committees of community interventions undertaken and to be part of trainings and any awareness or consultation work.	Women, youths, and vulnerable groups engaged in interventions undertaken. Women are members of committees set up in communities.	There is more appreciation and understanding of women's roles and the need for gender inclusion in work undertaken.	1-3
Runoff from piggery, poultry and cattle farms established along the riverbank upstream of the pumping stations pose nutrient overloading and compromises the water quality of the river	Needs an integrated approach where Land Use, Agriculture and Forestry address the primary source of the problem-agriculture	Sustainable practice in livestock breeding introduced to communities and farmers in leased areas	Decrease in waste and runoff from livestock breeding. Preliminary and ongoing data from before and after sustainable practices implemented.	1-2

STRATEGY 3: WATER PROTECTION AND MANAGEMENT

Protection of ecosystem services in the Waimanu River Catchment to ensure health and well-being of local communities dependent on natural resources in Waimanu.

The following objectives support Strategy 3:

- Support livelihoods – introduce resilient measures through pilot demonstrations to reduce economic losses, increase farmer income, and sustain drinking water supplies.
- Improve human health – improve human health with continued access to safe drinking water during droughts and reduction of sewage pollution of groundwater supplies and shellfish.
- The Ministry of Environment (R2R project) has already been undertaking work on waste management in the lower catchment area in Sawani and Vuniniudrovu communities. Similar efforts are needed in the future for all communities along the Waimanu riverbank.
- All communities have a Health Committee that works closely with the Ministry of Health on water use and health. Efforts to incorporate natural resource policies of the Ministry of Environment, Ministry of Waterways, Ministry of Forestry and Ministry of Fisheries is imperative for a holistic approach.

Table 3: Proposed interventions for Strategy 3

Priority Areas	Proposed Interventions	Outputs	Outcomes	Phases
Wastewater management	Work with the Ministry of Health, WAF, community village water committees and development committees on capacity building and awareness on water management and health issues.	Health Committees in communities work on protection measures, continue waste management work already introduced.	Waste Management initiatives successfully implemented. Increased awareness of water uses and health by all stakeholders.	1-2
	Situation analysis- of water use and protection and management			
Freshwater bodies affected by logging, deforestation, reforestations, poor agricultural practices, and poor land management practices.	Water catchments need to be managed actively based on sustainable land use practices and coordinated management interventions.	Riverbank restoration, forest replanting, setting up of nurseries successfully implemented in communities.	Riverbanks restored in key sites, forest replanting have taken place and nurseries in operation. Determined clear end goal of hectares restored and forest replanted at the beginning of planning stage.	1-3
Insufficient community education, awareness, and participation especially on water rights issues and implications on customary land ownership.	Community Education, awareness on water rights, water use and protection in all sub-regions – upper catchment, middle catchment, and lower catchment.	Community education and capacity building and consultations undertaken in all communities within the catchment areas.	Increased recognition of water rights and responsibilities.	1-2
Lack of conservation practices in freshwater management.	Need to work with existing committees like the Yaubula Management Committee) to specifically look at freshwater management.	Guidelines for conservation practices for freshwater management to be used at community level developed.	Guidelines for freshwater management adopted and used.	1-2

Priority Areas	Proposed Interventions	Outputs	Outcomes	Phases
Lack of support mechanisms for water management	Use existing groups and community organisations for community awareness and quick responses e.g., waste management with the Waibau Women's Group and Soqosoqo vakamarama (women's groups) and youth groups, farmers groups, etc. in the catchment area.	Water and water management activities included into training done in communities and all other stakeholders to existing support groups.	Support groups identified and capacity built through awareness and capacity building.	
Lower Waimanu catchment has been more developed than the upper Waimanu area and so would require a separate assessment and list of potential water quality hazards, threats, and actions	Separate assessment to be done for lower Waimanu catchment	Assessment carried out and threats, challenges and opportunities identified through community consultations and other forms of stakeholder engagement.	Additional management initiatives developed for the lower Waimanu catchment.	1-2
The low standards of septic tanks and wastewater disposal in communities. ACS (boarding school) and the three villages are potential point sources for untreated wastewater entering the river close above water extraction points	Community awareness, capacity building and training to improve sanitary practices and wastewater disposal to be undertaken.	Community awareness, capacity building and training implemented in all 22 communities through district level meetings	Communities have waste management strategies that they themselves implement and monitor.	1-3
The freshwater health index measures ecosystem health by making clear connections between freshwater ecosystems and the benefits they provide to people	Freshwater health index is communicated to communities and stakeholders through awareness and training sessions.	Water health index is translated, and knowledge management tools used to inform communities and other stakeholders.	Improved understanding of freshwater health index, and steps taken by the community themselves to ensure protection of freshwater sources.	2-3
WAF has no legislation of its own which defines catchment management requirements	Working through the Integrated Management approach, WAF to get the goodwill and support of the landowners. WAF requires the cooperation of landowners if it is to manage their land to improve source water quality.	Community consultations conducted by a multi-stakeholder team to ensure community/landowners buy in to water management needs.	Landowners work with WAF and TLTB on benefits/arrangements on the loss of their land/water use rights.	2-3
WAF to consider working with all other key stakeholders to provide an efficient watching brief on catchment management	An integrated approach to be adopted to address issues relating to catchment and impact of land use and other forms of development. Collaborative planning on water management to be conducted that includes government agencies, the private sector, NGOs, communities, and settlements, and the TLTB.	Stakeholder engagements include consultations with government agencies, businesses, communities, other development partners.	Multi-task approach to management where key stakeholders define management interventions. Interventions implemented through a collective approach.	1-3

Priority Areas	Proposed Interventions	Outputs	Outcomes	Phases
Insufficient community education, awareness, and participation especially on water rights issues and implications	Train two communities (one in the upper and one in lower catchment) on community monitoring of water quality. Social dimension study on water quality, and protection. This is to include collection of sex-disaggregated data.	Community training on monitoring of water quality undertaken. Sex-disaggregated data on use of water resources collected.	Monitoring of water quality ongoing. Sex-disaggregated data on water use available.	1-2
Inclusion of traditional/ community-based regulation on water protection.	Develop two community-based regulations supporting the Waimanu Catchment Management Plan	Community workshop with upper catchment and lower catchment communities to discuss and consolidate regulation for freshwater system	The regulations discussed and agreed to by communities.	1-2
Roles and responsibilities of agencies involved in water use are unclear.	Water Forum to be held annually to plan the management of water with the input of users of water, communities, businesses, and all other stakeholders. Outcome to guide collaboration work.	Integrated approach to water management to be through meetings, strategic collaborative planning of all government departments that oversee or are mandated to work on water resources in Fiji.	Communities and settlements to have water protection included in village management plans and village profiles.	1-3
Establishment of catchment reserves, restricted development zones, and planning restrictions	Baseline survey to be conducted on areas of high risk within the catchment area and a multi-stakeholder team to work on establishing catchment reserves, restricted development zones, and restrictions. Experts on biodiversity protection, soils experts, water, agriculture, forestry experts to be hired to do the work.	Baseline surveys completed. Multi-stakeholder team establish catchment reserves and restricted development zone.	Catchment reserves and restricted development zones established	2-3
A multidisciplinary approach is adopted to ensure that agencies with responsibilities for specific areas associated with water quality are involved in monitoring of drinking water.	Multi-disciplinary team work on monitoring guidelines, protocol and reporting mechanisms. Training conducted with all stakeholders and selected representatives to be trained to undertake monitoring of drinking water.	Consultations conducted in communities and with other stakeholders on protocols, reporting mechanisms and monitoring guidelines developed.	Protocols, reporting mechanisms and monitoring guidelines adopted for use at the community level/ government level.	2-3

STRATEGY 4: FORESTRY, BIODIVERSITY PROTECTION

Protection of forest and key biodiversity areas is critical to protect and maintain abundant ecosystem services in the Waimanu River Catchment.

The following objectives support Strategy 4:

- Protection of remaining pristine forest area in the upper Waimanu catchment and protection of biodiversity – plants, avifauna, and freshwater systems.
- Re-forestation of degraded forest areas at the middle/lower parts of the Waimanu catchment.
- Identification and protection of endemic and most vulnerable flora and fauna (avifauna and freshwater species) in the catchment area.
- Develop payment for ecosystem services that will support long term management of local habitats to secure freshwater supply now and into the future.

Table 4: Proposed interventions for Strategy 4

Identified Priorities	Proposed Interventions	Outputs	Outcomes	Phases
Upper Waimanu Area has been identified as a Key Biodiversity area thus the area needs to be prioritised for conservation.	Fiji is currently well-advanced in its REDD+ Readiness Programme activities. Set up forest protected areas in the middle catchment of the Waimanu river.	Conservation/ protection interventions in place for water.	Protected site part of Protected Areas Network.	1-3
	Identify some key conservation organisations to work on conservation in the areas. Identify and secure commitment of national authority such as WAF on payment for ecosystem services that can secure sustainable financing for the establishment of water catchment protected areas through leasing arrangement with TLTB or Land Bank.	Secure external funding to support conservation work in Waimanu catchment. Secure sustainable financing mechanism that will ensure the provision of clean and high-quality drinking water for the greater Suva population.	Restoration of degraded forest areas successfully completed with community support ensured. Public-PrivatePartnership in the management of freshwater system	2
To reduce erosion from Waibau, it is necessary to recover the forest area through reforestation and establishment of permanent protected forest in the upper/ middle catchment area	Forest protected areas in Waibau area implemented by communities in the area.	Areas identified for permanent protection and community consultations on enforcing protection.	Community forest protected areas identified.	
Waimanu catchment needs to be conserved for water.	Incentivise landowners to conserve the area. Consideration of inclusion of the upper Waimanu under REDD+- conservation interventions to link into existing programmes.	Conservation undertaken by the people themselves in the communities that have land ownership in the upper Waimanu catchment.	Area under REDD+	1-3

Identified Priorities	Proposed Interventions	Outputs	Outcomes	Phases
Need to consider payment for ecosystem services to address the lack of rights and lack of funds to pay for leases of key forest areas to be protected under the water catchment lease provision.	Put in place a conservation levy (levied through consumer water bills) to help WAF cover the lease payment.	Consultation undertaken with all stakeholders on conservation levy.	Agreement to the conservation levy secured.	1-2
Lack of biodiversity information is likely to implicate the potential loss of biodiversity that can have a significant and direct human health impact should ecosystem services be no longer adequate to meet social and environmental needs	Baseline study to be conducted for biodiversity in the Waimanu catchment.	Baseline study done on biodiversity in the Waimanu catchment.	Vulnerable species and endemic species identified for protection.	1-3
Loss of biodiversity when forest areas are lost or degraded in the lower catchment area	Research and identification of existing biodiversity, both flora and fauna, for the Waimanu catchment. This is to set the baseline for biodiversity, and to ensure protection of the flora and fauna and endemic birds of Viti Levu.	Stock take, of species found in the catchment completed.	Research findings identify vulnerable, endemic flora and fauna – that need protection.	1-2
Deforestation for farming purposes along the riverbanks and Waibau area which had targeted agroforestry about a decade ago.	Re-forestation of lower catchment areas by lease holders, settlements, and communities. Identification of areas for replanting/ reforestation. Agroforestry to be re-introduced.	Re-afforestation started in selected sites in the Waimanu middle catchment and lower catchment.	Agroforestry and re-afforestation successfully introduced.	1-3
Loss of forest resources in lower catchment/middle catchment area	Reforestation of degraded sites. Set up nurseries to be the source of trees to be planted at village level – to target women and youth in villages. Community training on establishment and management of a tree nursery to germinate native species in two districts.	Establish three central nurseries to germinate and supply seedlings sourced from local seeds. Nursery already established in Navatuvula, Colo-i-Suva in the middle and lower catchment and Delailasakau and Naseuvou villages in the upper catchment.	Reforestation using indigenous trees. Nurseries successfully run by community groups – ownership and responsibility of re-afforestation programme by communities.	1-3
	Verify land use plan to ascertain area to be restored/ replanted with fruit trees along riverbanks and degraded lands . Consultations, workshop with villages on planting conditions and techniques in Navatuvula district and one of the villages in the lower catchment area.	Area to be restored in the lower and middle catchment identified and replanted.	Restoration and replanting completed in target communities.	1-2
Riverbank erosion in certain parts of the catchment area – continue vetiver grass planting on riverbanks	Community replanting programmes, which include vetiver grass planting along riverbanks to be continued.	Continuation of vetiver grass planting in identified sites – Sawani, Vuniniudrovu and other sites in the lower catchment area.	Riverbank erosion slowed down. This is documented through collection of scientific data before and after planting.	1-2

STRATEGY 5: GRAVEL EXTRACTION, QUARRIES AND OTHER DEVELOPMENT

Extractive activities such as gravel, quarries, and downstream processing of timber (logged outside of the catchment area) contribute to low water quality and potential adverse impacts of siltation downstream. These activities are licensed and legitimate and must also operate within acceptable standards set by the Ministry of Environment Management Act 2005.

The following objectives support Strategy 5:

- To ensure that impacts of the gravel extraction currently on-going in the Waimanu river can be reduced or have some safety measures developed.
- To ensure that any developments in the Waimanu catchment area include EIAs and other environmental and social safeguards.

Table 5: Proposed interventions for Strategy 5

Identified Priority	Proposed Intervention	Output	Outcome	Phase
Gravel extraction to be addressed through a working group	A working group to be formed and led by the iTaukei Affairs Board, Commissioner's Office to oversee gravel extraction.	Gravel extraction discussion at community level with landowners and private sector on gravel extraction and impacts. Land leases and compensation, impacts to be discussed.	Agreement reached and documented in gravel extraction requirements and management measures to be in place.	1-3
Awareness and capacity building on impacts of gravel extraction to be done by FELA (Fiji Environmental Law Association).	Awareness of process raised at Fiji Environmental Law Association (FELA) will conduct strengthening and enforcement and compliance training to facilitate Commissioner's Office and Ra ICMC to deal with the legalities of gravel extraction.	Awareness workshop on the impact of gravel extraction without a proper environmental impact assessment (EIA). Awareness of how to make a complaint on suspected illegal extraction and follow it up compliance with laws/ guidelines for development from all relevant authorities.	Improved awareness on impacts of gravel extraction. Communities more empowered and knowledgeable on processes and laws on extraction requirements. Improvement of awareness also documented.	1-2
EIA processes to be made clear to communities and landowners.	Public consultations to be mandated in EIAs. PS office to liaise with Lands Department to identify who has licenses to extract gravel. Develop National Grievance Mechanism for Gravel Extraction	Public consultations held on current or new gravel extractions. Community members with gravel extraction concerns should make a formal complaint/ report to the Provincial Conservation Officer.	Increased participation in the EIA process by communities. Processes of consultations by EIA consultants followed and understood by communities and other stakeholders.	1-3
Support Government decision to decrease gravel extraction and increase hard rock quarries.	Feasibility study on long term impact/cost benefit analyses of gravel extraction and hard rock quarry to be undertaken and planned investment of the funds acquired to be part of the baseline work conducted.	Feasibility study on gravel extraction and quarry and potential benefits to communities conducted.	Study conducted and costs benefits to communities communicated to all stakeholders.	1-3

Identified Priority	Proposed Intervention	Output	Outcome	Phase
Baseline data disaggregated by gender	Collection of sex-disaggregated data on engagement of women, men, and other sectors of community on gravel extraction, including impacts/benefits.	Sex-disaggregated data collected on gravel extraction and other forms of development.	Gender participation in development in the Waimanu catchment identified.	2

STRATEGY 6: CLIMATE CHANGE ADAPTATION AND NATURAL DISASTERS

Projections on the impact of climate change indicate potential for increased intensity of hurricanes, prolonged droughts and heavy rainfall resulting in freak floods. The anticipated impact on Waimanu catchment highlights the risk of water-borne diseases associated with poor waste management.

The following objectives support Strategy 6:

- To understand all challenges that will be faced in the development of the Integrated Management Plan.
- To understand and plan on adaptation measures that will reduce and control health hazards associated with the impact of floods and droughts.

Table 6: Proposed interventions for Strategy 6

Priority Areas	Proposed Interventions	Outputs	Outcomes	Phase
Waimanu lower catchment usually affected by flash floods	Flood management requires an integrated approach to address all issues in a holistic manner.	Flood management options discussed with communities and all other stakeholders.	Collective actions taken at community level to address flood risks.	1-3
Need to address climate change and natural disasters	Issues related to climate change and addressing natural disasters to be planned and executed in a manner that will reduce or eliminate risks.	Disaster risk preparedness and responses in place in all communities.	Disaster risk preparedness mechanisms in place and operationalised.	1-2
Disaster risk reduction practices	Training on disaster risk responses to be communicated to communities and other stakeholders.	Community training on disaster risk reduction/ disaster management conducted in all communities.	Disaster risk/response teams ready to engage in communities within the Waimanu catchment.	1-2

STRATEGY 7: STAKEHOLDER ENGAGEMENT

The participation of civil society organisations, community leaders and government agencies in development planning is essential to increase the local relevance of management actions and their results.

Communal empowerment is also critical in executing the respective activities involved, hence awareness, participation and training on the respective thematic areas is equally important in ensuring the sustainability to reducing environmental impacts in the long term. Community members, individuals and families ought to become aware or be informed of existing policies aimed at building their financial knowledge and skills and providing them with the opportunities and resources needed enable them to generate income. This can be achieved by engaging with respective government ministries such as the Ministry of Agriculture, Fisheries and Forestry.

Assessing the different implications for women, men and vulnerable social groups of planned policy and its application is central to mainstreaming gender. Valuing the diversity among these groups involves the process of integrating different needs into any development planning and decision-making processes. It is imperative to take gender equality and social inclusion issues into the 'mainstream' of the objectives and activities of the management plan.

Building the capacity of local professionals, new stakeholder groups, farmers, resource users, landowners and community leaders is important to ensure informed decision making and uptake of self-determination and social responsibility among local populations of the management interventions and expected outcomes.

The following objectives support Strategy 7:

- Capacity of all stakeholders is developed through identified training, capacity building and community awareness work.
- Ensuring meaningful stakeholder engagement through participatory approaches and using traditional governance mechanisms. (Stakeholder engagements include stakeholder mapping and analysis, which had been carried out during the initial stages of the R2R work in Fiji and work undertaken in other watershed areas have collected sufficient information to map the major stakeholders and others that are specific to the Waimanu catchment area).
- A memorandum of agreement signed with communities where there are partnerships developed, including cost sharing opportunities.

Table 7: Proposed interventions for Strategy 7

Priority Areas	Proposed Interventions	Outputs	Outcomes	Phase
Community training/capacity building in all communities.	Community training, capacity building, awareness work on Integrated Management of the Waimanu catchment conducted in all villages in the lower Waimanu catchment.	Community training conducted in Sawani, Vuniniudrovu, Colo-i-Suva, Waibau Settlements and at least 6 other communities and settlements in the middle and upper Waimanu catchment.	Development Committees and Yaubula Committees specifically trained on water, forestry, agriculture, gravel extraction and other threats to water systems, land.	1
	Community workshop in upper Waimanu and lower catchment areas with villages to discuss and consolidate regulation for freshwater system from headwaters to coastal areas.	Develop two community-based regulations supporting the Waimanu Catchment Management Plan.	Community based regulations developed and aligned to village By Laws and Village Development Plans.	1

Priority Areas	Proposed Interventions	Outputs	Outcomes	Phase
Community training/capacity building in all communities.	Training of trainers for participatory approaches to planning, development of management work, monitoring for the two districts.	Training of trainers conducted with leaders, women's representatives, youth representatives, community committees, yaubula committees. Three training activities conducted in each district.	A pool of trainers in communities – they will continue training in communities throughout the project duration.	1
	Focused training and capacity building on project management, reporting, monitoring	Development committees from communities and Yaubula committees at community level and provincial level undertake training on project management.	2 training activities done using focus areas identified as examples.	1
	Stakeholder engagement and gender inclusion through all stages of the work.	Women, youths, and men in decision making roles, in committees, in project monitoring groups	Gender and social inclusion in all stages of interventions. Women included in committees and decision-making forums.	1-3
Local population trained to monitor effluent discharges into river systems.	Technical training on monitoring of effluent discharge at community level conducted.	Men, women, youths trained in specific technical fields.	Outbreaks and pandemics that arise are addressed at community level. Monitoring of effluent discharge and production of monitoring programme reports for useful scientific information.	1-3
Conduct a Waimanu catchment wide socio-economic, adapting models used in similar sites to develop comparative community surveys.	Socio-economic surveys conducted at community and district level, to provide baseline for management work.	Yaubula committees, Representatives of groups Trained in data collection and data compilation and reporting.	Socio-economic report completed, findings to inform the finalization or extension of the Waimanu Catchment Integrated Management Plan.	1-3
Local population and stakeholders are aware of projects and findings of studies conducted.	Feedback mechanism to communities established.	Accessibility of data to all communities and stakeholders. Reporting back to communities and settlements continuous.	Data collected used in planning and implementation of planned interventions.	1-3
Recognition of the traditional governance systems and values, including land tenure systems and social structures	Traditional protocol, norms and sites of significance acknowledged and followed in community engagements. Consultations at community level and with Provincial Office.	Traditional governance system strengthened through training of leaders (men and women). Village profiles and village development plans to guide work that include indigenous land and people. Yaubula committees strengthened at Tikina and village levels.	Traditional leaders and key landowners establish network/connections with government agencies, NGOs. Management plan and work done closely monitored and supported by Provincial Office.	1

Priority Areas	Proposed Interventions	Outputs	Outcomes	Phase
Identifying entry points, NGOs, CSOs to form a multi-stakeholder approach	Mapping of status of all on-going interventions to find entry points for collaboration through this work. This will also identify the different NGOs and partners working on different projects to enable a multi-stakeholder approach.	NGOs, CSOs, links established, and entry points identified. Multi-stakeholder group established, and Waimanu Management Committee set up.	Multi-stakeholder group formalised; Management Committee established.	1-3
Setting up a Waimanu Catchment Management committee to include all key stakeholders and be gender inclusive.	Yaubula Management Committee set up in each community, and a Yaubula committee at the Tikina level, then at provincial level. The Waimanu Catchment Management Committee includes the Yaubula committee at all levels and other key stakeholders.	Yaubula committees strengthened and workshops on responsibilities and target work to be done held. Guidelines for operation of the committee set up to be used to guide the work on management. This committee will liaise and work with DOE and NEC.	Waimanu Catchment Management Committee set up and mechanisms for operations in place.	1-3
Gender mainstreaming and social inclusion training undertaken in communities.	Gender mainstreaming awareness training conducted in all communities.	Gender Mainstreaming strategy and action plan developed. Gender champions identified at community level. Gender Assessment and Action Plan developed for the Waimanu Management plan.	Gender participation, inclusion in all aspects and phases of interventions done.	
Development of a communication strategy customised and addressing awareness gaps at community level.	Communications Strategy to be inclusive of all stakeholders and beneficiaries of interventions.	Communications strategy is gender and socially inclusive to ensure that the voices and concerns of women, youths and other vulnerable people receive information and have a voice in decision making.	Communications in and throughout communities use the strategies agreed on.	1-3

6 Knowledge Management and Communication Plan

6.1 Effectively Communicating the Benefits of Integration and Lessons Learned

Communicating with all stakeholders and from government to NGOs, the private sector to communities need a communication plan that takes the needs and priorities of all stakeholders into account. The communication plan must be culturally appropriate and target the different groups within the catchment areas. It will include all forms of media given that electricity and internet is not available to the upper Waimanu catchment area. Information collected and disseminated should be gender sensitive and socially inclusive.

6.2 Knowledge Management and Communication will include:

- Training of young media professionals in integrated water and coastal management.
- Mentoring of natural resource managers on communications and media issues.
- Targeted television broadcasting of water resource and coastal management media products.
- Preparation of short film, documentary, and other awareness materials for outreach purposes.
- Design of awareness materials (translated into local language) and use of web-based technologies for communications.
- Liaison with national and regional media outlets for broad syndication of media products.
- Development of multi-media products in support of regional and national coordination initiatives.
- Capture and regional sharing of national experiences in project execution.
- Planning of communications strategies in support of region-wide scaling-up of integrated approaches.
- Development of knowledge products will be important to ensure there is awareness and better understanding of catchment ecosystems, and functions by the people that use these resources.
- A knowledge management platform to facilitate institutional learning between stakeholders.
- Alignment of work with the Naitasiri Provincial Council and the Office of the Commissioner Central who look after Rural Development and have development plans for the province.

6.3 Miscellaneous

6.3.1 Review and Amendment

This plan will be fully reviewed after a period of three years (2021–2024), with a mid-term review conducted two years into the timeline that this plan is operational. Any major issues identified through the monitoring, evaluation, and learning (MEL) under Section 4.3 below may justify a full review or part review of the plan.

6.3.2 Monitoring, Evaluation and Learning

Monitoring is addressed in the Implementation plan of this Management Plan.

The Monitoring and Evaluation Indicators are to be designed to determine the impact of the management actions/interventions prescribed in the management plan. At the end of the year, annual reviews can be conducted and lessons from on-going interventions used to improve on-going activities.

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Annex 1: Summary of Environment Laws

Summary of Environment Law

1) Environment Law, Planning and Assessment

- o Environment Management Act 2005
- o Local Government Act
- o Land use Act
- o Crown Acquisition of Lands Act 1940
- o Crown Lands Act 19467
- o Environmental Levy Act 2015
- o iTaukei Affairs Act iTaukei Land Trust Act Land Transfer Act Mining Act 1966
- o Native Lands Act Native Land Trust Act Rotuma Lands Act 1959
- o Town Planning Act 1946

2) Biodiversity Conservation and Natural Resources

- o Birds and Game Protection Act 1923
- o Continental Shelf Act 1970
- o Endangered and Protected Species Act 2002
- o Fisheries Act Forest Decree 1992
- o Irrigation Act 1974
- o Land Conservation and Improvement Act 1953
- o Protection of Animals Act 1954
- o Endangered and Protected Species Act 2002
- o Marine Spaces Act 1978
- o Offshore Fisheries Management Decree 2012
- o Petroleum (Exploration and Exploitation) Act 1978
- o Petroleum Act 1939
- o Protection of Animals Act 1954
- o Quarries Act 1939
- o Rivers and Streams Act 1882
- o Water Supply Act 1955
- o Water Supply Act 1955
- o Plant Quarantine Act 1982
- o Quarantine Act 1965 Biosecurity Promulgation 2008

3) Waste Management and Pollution

- o Litter Promulgation 2008
- o Ozone Depleting Substances Act 1998
- o Public Health Act 1936 Sewerage Act 1966
- o Current legislation covering water resources provides for irrigation (Irrigation Act), use of water by

- o mining enterprises (Minerals Act), and the taking of water from rivers and streams (Rivers and Streams Act).
- o The Rivers and Streams Act, allows for water abstraction from rivers at the discretion of the Dept. of Lands. And it also allows traditional activities to be conducted by native Fijians in small streams. The Act contains provisions that determine non-tidal water resources at least to be the property of Crown/State (iTaukei Affairs), etc.).

In addition, other regulations that should be considered include:

- o iTaukei Affairs Act
- o State Lands: SLA leases and licences
- o Environment Management Act, 2015

Source: SPREP in 2018 carried out a review of Fiji's environment legislations that is the reference basis of any land and marine management, zoning, and planning. In accordance with the SPREP and EDO NSW (2018) review, these policies are categorised as follows:

Annex 2: Analysis of Existing Laws related to Waterways/Water Catchment

Policies, Laws and Regulations	Application	Comments
Constitution of the Republic of Fiji (2013)	<u>Section 36</u> of Part 2-Bill of Rights- Guarantees the right to adequate Food and Water.	The State must take reasonable measures within its available resources to achieve the progressive realization of the right of every person to adequate food and water. ie to have clean and safe water in adequate quantities.
5YR &20YR National Development Plan (Nov 2017)	Goals, Policies and Strategies to strengthen policy planning and sustainable resource management. To also expand access and work towards ensuring equity in the provision of water sanitation services. See pp 18-24	Formulate and implement a National Water Resources Management and Sanitation Policy to govern the planning and development of water sources Plan to review existing policies and standards, incentives, legislations, and processes governing the provision of water and sanitation services to improve quality of services and action. Amend Public Health Act (Cap 111) and National Building Code to cater for water storage and rainwater harvesting systems.
Agricultural Land and Tenant Act [Cap 270]	Governs relationship between the two parties in an agricultural lease between Landlord (TLTB Trustee) and Tenant	Pressures on land indicate an urgency to increase sustainable production per unit area. However, there is inadequate understanding throughout the agricultural/land use sector about the closer relationship between land use, crop type and capacity. Section.13 defines the notion of good husbandry and is defined in terms of traditional farming practices e.g., construction of hedges, terraces, drains and maintaining soil fertility and control of pests. Act does not address issues of preserving ground water quality, soil compaction and enrichment of surface water
Drainage Act [Cap 143]	Works by establishing drainage areas under the jurisdiction of a local drainage Board, which carry out works with respect to that drainage area, Much of the Act is devoted to levying rates for drainage. Board may sue for the sale of land to recover defaulted payments,	The Act provides considerable capacities for the Government to intervene in the use of private lands. But has a lack of attention to defining a drainage area. With no other guidance supplied, there is vast potential for application and abuse under this tool
Endangered and Protected Species Act [No 29 of 2002]	This Act materially enhances the Government's ability to conserve threatened species. The Act operates primarily to adopt Fiji's International controls per its obligations under CITES.	The protection of wildlife exists only in trade context, however definitional drafting gaps exist between CITES and Fiji's context that warrant correction.
Environment Management Act (2005)	For the protection of the natural resources and for the control and management of developments, waste management and pollution control and for the establishment of a National Environment Council and for related matters.	Deals with any activity or undertaking likely to alter physical nature of land in any way and includes construction of buildings, or works, the deposit of waste or other material from outfalls, vessels or by other means, the removal of sand, coral, shells, natural vegetation, seagrass, or other substances, dredging filling, land reclamation, mining or drilling for minerals, but does not include fishing. Introduces power to manage water quality in both freshwater and marine.

Policies, Laws and Regulations	Application	Comments
Forest Decree Bill [No 31/1992]	Replaces the Cap 150 through promulgation. General scheme remains similar to its predecessor, but with attempts to broaden the forest agenda. More elaborate framework for forestry undertaking than in Forest Cap 150. Has a very useful inclusion in a national Forestry Plan but with little elaboration other than it is the task of the Forestry Board.	Forest and nature reserve provisions are saved under the new law. Unalienated State land, Unalienated native land already reserved for public purpose and land leased by the State may be declared by the Minister as a forest reserve or nature reserve. The Minister may, upon advice of the Forestry Board, may compulsorily acquire alienated land for reservation, per sec 6. Forestry can only occur within forest or nature reserve, so reservation of land is precursory to any activity –see s.28. Provisions of Forest Reserve and Nature Reserve can offer protections for water catchment BUT compensation for such ventures is poorly known/understood by landowners.
Forest Bill [No 13 of 2016]	An Act to provide for the management of Fiji's forests and other related matters	Defines development activity on land like the definition under EMA. Refers to forest biomass and forest management inventories to meaning measurement and assessment of the current forest resource, for the purposes of sustainable resource management. It also defines forest management standards with expected levels of performance in the execution of a range of management functions and operational activities compromising ethical, social, ecological, and economic dimensions of sustainable forest management.
Gravel Extraction	Major requirement for Government's infrastructure development plans. Existing under application of four different controlling laws; Environment Management Act (EIA), TLTB Trust Act- Leases and Licenses Regulation, Department of Lands and Mineral Resources Department.	Multiple controlling agencies may result in gravel extraction not being managed sustainably. Possible cross purposes of intent and function may arise where stipulations for the applications of principles of sustainable use and development of natural resources under EMA are overlooked in cases of boulder and gravel extraction from rivers.
Health Act Cap [111]	Of slight relevance to environmental protection through the concept of public nuisance which is a common law principle and has been codified and given statutory basis to protect public health. The Act governs the collection and disposal of waste and sewage. It does not, however, cover sanitary landfills.	The Act may provide, to some extent, remedies for compelling the abatement of nuisance events that may affect public health such as pollution of internal water bodies (rivers, foreshores, ponds) under ss 57-59. Authority can compel an owner or occupier to abate the nuisance and seek Court order for non-compliance.
Irrigation Act [Cap 144A]	Concerned with improving Agricultural productivity through the optimal use of impounded water. Within gazette irrigated areas, broad powers vested on to the Commissioner to promote irrigated agriculture accrue to the Commissioner. These include constructing bridges, canals, pumps, sluices, and other irrigation works at any time-see s.7	Under this Act, there is heavy emphasis on agricultural production, but surprisingly environmental needs are non-existent. Indeed, farmers can be compelled under this legislation to remove vegetation from their land. Little to no support for environmental protection is found under this legislation.
iTaukei Land Trust Act [Cap 134]	Facilitates all dealings through control and administration of customarily owned lands in Fiji. This applies to approximately 90 percent of all lands in Fiji. All procedural policies pertaining to lease types and treatment of resources such as forests and gravel are covered under TLTB Leases and Licenses Regulations.	In practice, TLTB does not readily recognize the practical provisions of Forest Reserve or Nature Reserve under Forest Decree [1992] as appropriate for rights and aspirations of LoUs so will not arrange for such leases. Instead TLTB has opted for Conservation Leases which is predominantly used for biodiversity protected areas and suitable for use in water catchment areas

Policies, Laws and Regulations	Application	Comments
Land Conservation Act [Cap 141]	The Act provides statutory basis for the government to act in anticipation of farming related impact activities such as erosion, eutrophication, soil compaction, localized pollution caused through livestock husbandry or cultivation of crops	One of the pivotal laws relevant to protecting the environment of Fiji. It ensures integrity of land and water resources that sustains agricultural productivity. The Act makes provisions for the Conservation and improvement of the land and water resource of Fiji. see ss 6, -9
Land and Water Resource Management [Bill No.7 2016]	This is an Act to make provisions for the management, conservation and improvement of Land and Water Resources and for other related matters. If passed as law, it promises to streamline various stakeholder functions and powers for effective water sanitation and management.	There is little or no coverage of compensation to loss of land use rights by landowners under the Bill, but it directly addresses land degradation issues while water supply issues are marginally and effectively integrated into it.
Mining [Cap 46]	The mining Act is typical in any legislation of Commonwealth heritage. It aims to expedite the prospecting of minerals. The Act ensures that land is available for mining but affords protection to some of the parties that can be affected by mining related activities. Tenement holders are entitled to compensation for surficial damages and will be determined by the Director if parties do not agree. –s.40. Rights to prospects give primacy to the tenement holder; prospector can revegetate land, extract water, and dig shafts with less restraints-see s. 24.	All land in Fiji is essentially open for mining under the Mining Act. One exception is REDD+ project areas,
Natural Disaster Management Act [1998]	Instrument of institutionalizing disaster management in Fiji related to disaster response and management, it also provides foundation for Fiji national Disaster Management Plan	The National Disaster Management Office shall in consultation with other government departments and agencies coordinate and implement formulated disaster prevention policies under s.39(1). These include Drainage and Irrigation Department for the assessment of coastal riverine flooding AND the Ministry of Agriculture in liaison with Public Works Department re flood controls and watershed management programmes.
Petroleum (Exploration and Exploitation Act) [Cap 148]	The legislation governs petroleum development and borrows heavily from comparable Federal Australian legislation. The structure of the regime of works presented under the Act is comparatively clear with mature structure and drafting precision. Its application is to designated areas and the State is empowered to explore for or recover petroleum with full liberty under s.4.	Environmental issues are treated clearly and under other provisions of the Act. Licensees are compelled to employ good oilfield practices which are designed to protect the environment from pollution by oil-see s.62. Regulations require all applications and renewals for production and pipeline licenses to be accompanied by an environmental impact assessment under Regs.7-11.
Quarries [Cap 147]	This Act compliments the Mining Act and applies to the extraction of minerals not covered under the latter. The Act is more on Safety in the workplace n=and is very brief.	Whilst addressing some aspects of health and sanitation, major environmental impacts directly attributed to quarrying have not been foreseen and therefore not addressed.

Policies, Laws and Regulations	Application	Comments
Rivers and Streams Act [Cap 146]	Enshrines the rights of the public to have access to riparian water bodies. An easement exists along riverbanks for public access, except where under control of the Town Planning Act to have altered the status of another use per section 3. Similarly, these classes of people may seek to build on riverbanks and encroach upon or impede public access under section 10. Residents living close to the river may apply for additional rights to extract water for consumptive purposes- per section 7.	Noteworthy for the advocating of public interest in relation to rivers and streams. Could probably be expanded to capture other aspects of riverine management, water quality preservation and control of material extraction. Also allows for traditional activities to be conducted by customary owners in small streams.
Roads Act [Cap 175]	Enables the construction of public roads and provides the government with fairly broad powers to this end. The rights of adjoining land users therefore yield to the State on a compensable basis under section 4. Materials may be similarly extracted from adjoining properties for the purposes of road works-per sections 7and 8. Excavated material may be dumped on lands adjacent to roadworks under section 10.	In both governance and environmental issues, the Act may be repugnant to the fundamentals of private property rights and ethics of sustainable developments
Sewerage Act [Chap 128]	Provides for the construction and the maintenance of infrastructure for the treatment of sewage. Powers to this end is shared between Councils and the Government	Coverage of the Act applies to all towns. The Act does not evidence any awareness of environmental considerations. Neither the construction nor the operation of sewage facilities is subjected to any constraints or controls to protect the environment or the attainment of environmental goals.
State Lands Act [Chap132]	This governs tenure typology of lands belonging to the State, which can be disposed of permanently by Government or transfer through leasing agreements. The sale of any State lands does not automatically vest ownership of minerals under it to the new owner. The State retains all mineral rights exploitation rights on any land it has sold. The Regulations to the Act creates different types of leases including agricultural, residential, grazing, quarry, and special purposes amongst others.	Farming leases and quarries may be up to 30 years while other categories can extend to 99 years. Notably farming leases impose minimum conditions designed to conserve soil and vegetation per Regs 14 and 17. There are opportunities for the grant of annual licenses to graze livestock, extract building materials and cultivate crops with attached conditions that recognize erosion and vegetation, but this is not reflected in other types of licenses, refer Regs. 35-39. Little provisioning is given to environmental issues State lands see providing access to public lands for production [i.e., agriculture] as it's a main purpose
Town Planning Act [Cap139]	An Act defining physical development of land in built up areas of Fiji that represent an early approach to development on an environmental basis. Town planning schemes are the preferred instruments for controlling land use within Town Planning Areas as opposed to development permission. A scheme consists of plans and provisions to regulate land development in terms of the objects –see s.17.	The Act is afflicted with problems related to both its policy intent and actual construction. Uses expediency as a consideration for decision making but lacks substantial basis of decision making. Broad public input into planning is excluded and planning schemes are not prepared through public consultation. Section 17(4) seems to elevate a town planning above the operation of any inconsistent Act, Regulation, or by-laws.

Policies, Laws and Regulations	Application	Comments
<p><u>Water Supply Act [Cap 144]</u> REPEALED Water Authority Promulgation [No 25 of 2007]</p>	<p>Legislation governing the supply of water with much emphasis on infrastructure delivery. Charges for supplying water are covered substantially by the Act.</p>	<p>Little coverage in relation to environmental aspects of supplying water. Catchment areas can be declared by the Minister. Catchment areas are by nature intended to protect water quality from pollution per section 24. Hence, it is an offence to pollute water in the water works. The WAF Promulgation (2007) makes no mention of catchment or provisions for water catchment management</p>

Policies relating to Water, Environment and Land		
Policy	Policy Focus	Comments
<p>National Biodiversity Strategy and Action Plan 2020-2025 (2018)</p>	<p>Emphasizes the conservation and sustainable management of Fiji natural forest as the single most important means of conserving the vast majority of Fiji endemic flora and fauna while meeting local needs</p>	<p>It identifies the strategic concern of reducing major threats to forest and freshwater ecosystems from unsustainable logging, agriculture, fisheries, mining, and human settlements. The correlative objective to this is to improve coordination of Government policies, legislations, and management guidelines to ensure protection of Fiji forest and water catchment ecosystems.</p>
<p>Fiji National Adaption Plan (2018)</p>	<p>To spearhead efforts to comprehensively address climate change, in response to Fiji's international commitments and national needs; To bring adaptation efforts across multiple government sectors under one document; To influence and accelerates the national development pathway towards climate resilient development and to improve resilience against changes in climate but also climate variability which will also increase under future scenarios. Created as a continuous, progressive, and iterative process to support a systematic and strategic approach to adaptation by all government decision making, which will facilitate institutional coordination, resource mobilization and ultimately effective adaptation actions</p>	<p>Action for hazard management activities include flood management activities for priority river systems including Rewa river, landslide protection measures and the development of a national waterways Policy to establish institutional arrangement to comprehensively manage waterway resources and address related issues. There is the inclusion of biodiversity and the natural environment predicated on large social and economic climate resilience benefits derived from intact and healthy ecosystems. There is also the need to protect biodiversity and the natural environment from climate and non-climate threats.</p>
<p>Fiji Environment Strategy [1992]</p>	<p>Aimed to provide a framework which will enable Government to assume management of the various emerging environment issues from a policy and legal base and administration structure that provides a firm foundation for immediate and future action.</p>	<p>Amongst the sectorial emphasis to be assisted through external financing was land and resource management legislation. Strategy requires effective legislation to enable sustainable land and water resources. It recognizes then that the freshwater resource was under no effective legislation or management, yet development and exploitation of the resources was proceeding rapidly. See Fiji Environment Strategy Report, section 10.4 at p45.</p>

Policies relating to Water, Environment and Land		
Policy	Policy Focus	Comments
National Climate Change Policy	<p>Integrate climate change issues in all national and sector policy and planning process by incorporating climate change into national plans and budgets with Climate Change Policy framework and to ensure all national and sectoral policies align with NCCP.</p> <p>To collect manage and use accurate and scientifically sound climate change related data and information through a clearing house mechanism for climate change.</p> <p>The policy also increases awareness and understanding of climate change related issues across all sectors and at all levels in Fiji; Integrate climate change in school curricula, tertiary courses, vocational, non-formal education, and training programmes through development of appropriate materials and learning tools;</p>	<p>Integrate climate change issues in all sector policy and planning processes by incorporating climate change in national plans and budgets with the Climate change Policy framework and to ensure all national and sectoral policies align with NCCP.</p>
Fiji REDD+ Policy [2011]	<p>It has the overall intention of enhancing the national forest-based carbon balance by supporting and strengthening initiatives that address the drivers of forest-based carbon emissions and encouraging the drivers of forest-based carbon sinks.</p> <p>The policy will regularly review policy and technical issues to maintain alignment with ongoing international policy and technical developments. Furthermore, the implementation policy will ensure REDD+ plus program will involve the participation of all relevant stakeholders coming from the various sectors and agencies.</p>	<p>Policy is aligned to the objectives of Fiji's sustainable economic and empowerment development strategies that include amongst others energy and environment strategies.</p>
Forest Policy (2007)	<p>Ensures ecosystem stability through conservation of forest biodiversity, water-catchments, and soil fertility; Ensures sustainable supply of forest products and services by maintaining a sufficiently large permanent forest area under efficient and effective management.</p> <p>Increased engagement by landowners and communities in sustainable forest management and ensure an equitable distribution of benefits from forest products and processes including ensured protection of intellectual properties;</p>	<p>Forest Department has no powers to create water catchments although it can and does prohibit logging in areas important as water catchments and selected as such, based on topographical considerations.</p>
Green Growth Framework for Fiji [2014]	<p>A tool to accelerate integrated and inclusive sustainable development, the GGF inspires action at all levels, to strengthen environmental resilience, build social improvement and reduce poverty.</p> <p>It supports economic growth and strengthen capacity to withstand and manage adverse effects of climate change</p> <p>To be innovative in finding new transformative solutions to long standing problems through bold and adaptive leadership and fair and transparent consultative processes, in advancing the transition to a people centered green economy.</p> <p>Integrated through a holistic approach to support development that is sustainable and climate change resilient;</p>	<p>Inspires action at all levels to strengthen environment resilience, build social environment and reduce poverty. Also, to inspire through creation empowerment of all members of the community to make decisions and o take and build green economy and to inspire in transformative change to better align the economy and society with the environment to sustain livelihoods now and future generations.</p>

Policies relating to Water, Environment and Land		
Policy	Policy Focus	Comments
National Disaster Risk Management Policy [2018-2030]	Promotes good disaster risk governance through good risk assessment. It also promotes active participation and engagement of all groups in society, recognizing their different priorities, skills and knowledge and knowledge in addressing climate change and disaster risk reduction	Consolidating legal systems and instruments. It seeks to strengthen risk governance and identify priorities for future action by learning from the past. The plan is to mainstream sustainable development and risk reduction into all policies, plans and practice, even at community level.
Rural Land Use Policy (2005)	Includes provision for the protection of soil and water values such as promoting effective integrated watershed land and water management to improve water quality and quantity in degraded catchments. it also seeks the establishment of guidelines that maintain biophysical minimum needs for water quality and quantity.	Policy has led to the adoption of Land Use capability classification guidelines which is a systematic approach to land use to determine capacity for sustained production.
Ministry of Waterways and Environment Strategic Plan [2020-2024]	The Strategic Plan provides the blueprint for identification and better management of environment and waterways risks in Fiji. The government is committed to this through the vision of safeguarding environment and keeping communities safe. The Strategy is linked to 20YR development Plan, the Green Growth Framework, and the SDGs 2030	Facilitated in its process stakeholder participation/mapping to ensure that the expectations and needs of clients and partners including CSOs, Academic Institutions, and the private sectors are all integrated into the strategy. The process of developing strategy included detailed analysis of existing conditions and foreseeing the future while keeping a direct connection to national environmental and development goals. One of its strategic objectives is the sustainable management of waterways and watersheds
National Plan for Disaster Management [1998]	To develop a way forward to overcome the overlapping roles in administrative boundaries and to create a stronger sense of shared responsibility for disaster risk reduction.	To ensure that learning from Winston were incorporated into the legislative frameworks and disaster governance, documents have been updated according to selected priority areas, including the role of climate change in disasters and with an enhanced focus on the needs of vulnerable groups.
Review of Policy and Legislation Relating to the Use and management of Mangroves in Fiji [undated]	To take stock and assess/analyze existing mangrove policies and legislations in Fiji and to propose to Government recommendations that it may wish to consider to better address the issues relating to use and management of mangroves	Sustainable use and management of mangrove ecosystems is hindered by the absence of clear policy direction and effective regulatory control. Fiji's land use planning legislation does not provide the tools required for coherent planning and zoning which could support mangrove's sustainable management at national and sub-national levels

Policies relating to Water, Environment and Land		
Policy	Policy Focus	Comments
National Resource Inventory Report of Rep of Fiji [2010]	The consistent development of water resources and supply strategies in Fiji has been thwarted by lack of clear and comprehensive legislation compounded by several government agencies that are mandated to deal with water at one level or another	The commercial use of water catchment from groundwater supplies, as well as resource management issues in catchments including logging, underlies the need for a comprehensive review of national policies followed by legislation. Many of these issues are politically and socially sensitive in Fiji
National Water Resources Policy for the Fiji Islands [DRAFT]	Developed in recognition of increasing threats and competing demands for water resources in Fiji. The draft policy covers all freshwater resources in both groundwater and surface water and acknowledge that freshwater can affect the quality of coastal and marine water. The policy states goals and principles to guide water management in Fiji	Aims for institutional strengthening by establishing a coordinating body to provide consistent advice on water reform and water management problems and national significance. Also, to strengthen coordination arrangements between water use sectors.
Watershed Management Master Plan [1998] *Yachio Eng Group JICA	To formulate a Master Plan for the watershed management and flood control of Viti Levu's four major rivers.	Erosion resulting from inappropriate land use and poor land management practices in the watersheds had led to progressive siltation of rivers resulting in deterioration in drainage and floodplains, frequent inundation, and formation of shallow bars across river mouths. Dredging has become a costly necessity. General lack of attention by loggers to erosion, stream follows and ecological considerations, similarly, to established reserved forest area.
Mangrove Management Program [1985]	This contains a formulated Mangrove Management Program for Fiji. It contains characterization, policies and maps of the mangrove location, types and use zones for the Main islands of Viti Levu, Vanua Levu, Ovalau, Gau and Kadavu.	In the absence of a specific legislation, his document is used for decision making purpose of foreshore reclamation of mangrove areas by the Department of lands and Surveys. An on-going mangrove management program is in place to monitor the use and extent of mangrove areas.

