INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT PROPOSAL

TITLE	COMMUNITY BASED RESTORATION AND SUSTAINABLE MANAGEMENT OF VULNERABLE FORESTS OF THE REWA DELTA, VITI LEVU, FIJI
SERIAL NUMBER	PD 696/13 Rev.2 (F)
COMMITTEE	REFORESTATION AND FOREST MANAGEMENT
SUBMITTED BY	GOVERNMENT OF FIJI
ORIGINAL LANGUAGE	ENGLISH

SUMMARY

The coastal and mangrove wetlands generally referred to as the Rewa Delta (35,238ha) is undoubtedly a source of useful sustainable resources for human communities in the area for both marine and terrestrial resources but more importantly, safeguards the entire coastal ecosystem that supports riparian flat lands. This project seeks to address the problem associated with overpopulation and pressure on resource exploitation through the establishment of demonstration sites for rehabilitation and sustainable management of coastal and mangrove wetlands. The target community lies within the Province of Rewa and the Province of Tailevu. Specific target communities include the villages of Natila, Waicoka, Nasilai and Muanaira; representing densely populated area in the Rewa Delta. Expected outputs include community empowerment to undertake sustainable management at the community level; improvement of the quality of existing ecosystem; strengthening the up-keep of traditional knowledge and skilling among community members to support sustainable resource use. In addition, it is expected that communities will adopt alternative livelihoods that will reduce pressure from overutilization of coastal and mangrove wetland resources; and by the end of the project at least 100ha of the degraded area in the selected demonstration site would be rehabilitated with appropriate coastal tree species to support ecosystem services and human wellbeing in the long term. At the national scale the project will demonstrate sustainable policy programs and activities that can be amplified in other river systems and communities that live in coastal wetland and mangrove area in Fiji and the Pacific Region.

EXECUTING AGENCY	DEPARTMENT OF FOREST, MINISTRY OF FISHERIES AND FOREST, REPUBLIC OF FIJI
COOPERATING GOVERNMENTS	
DURATION	36 MONTHS
APPROXIMATE STARTING DATE	TO BE DETERMINED

BUDGET AND PROPOSED SOURCES OF FINANCE

Source	Contribution in US$	Local Currency Equivalent
ITTO	**310,576**	
GOV'T OF FIJI	76,935	
TOTAL	**387,511**	

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PROJECT BRIEF

The Rewa Delta (35,238 ha) comprises two Provinces in Fiji being the Tailevu Province and Rewa Province. The Rewa Delta is an invaluable source of livelihood for communities in the area as it not only provides forest and marine products.

The Rewa River feeds into the Rewa Delta which has four principle vegetation type namely (1) lowland rainforest, (2) freshwater wetland vegetation, (3) mangrove forest and scrub, and (4) coastal strand vegetation (Mueller-Dombois and Fosberg (1997)). Lowland rainforest, freshwater wetlands, coastal forest, and mangrove forests acts as buffers to protect the coastlines against destructive forces from natural hazards and risks associated with climate change such as cyclones, flash floods, rise in sea level and coastal erosion.

On-going work through the Mangrove Ecosystems for Climate Change Adaptation and Livelihoods (MESCAL) indicates that all four vegetation types are in severe or extreme degrees of degradation. With increasing population, demand for timber and non-timber commodities increase as well as demand for arable land. The delta vegetation is under immense and continuous pressure from conversion to agricultural lands and intensive agricultural development that has led to reduction in vegetation cover and over exploitation of native tree resources. Critical habitat loss, increased frequency of tree cutting for domestic consumption and siltation in the river system have resulted in degradation and loss of forest and non-timber resources in the Rewa Delta. The underlying factors of these threats are varied and include society's lack of perception or awareness of the ecological functions and socio-cultural values of wetlands and riparian zones.

The development objective of this project is aligned the Fiji National Forest Policy (2007) to introduce an effective mangrove regulatory and management framework. The specific **objective is to establish demonstration sites that will show case community** based management regimes for coastal and mangrove wetlands; reforest degraded coastal and mangrove wetlands for biodiversity conservation; and provide alternative opportunities for community livelihoods to ensure improved human wellbeing.

The achievement of these objectives will be measured by the impact of the project outcomes through (1) the extent to which coastal and mangrove wetlands in the project areas are free from over-exploitation, pollution and conversion to other land-uses through community based planning and management, (2) improvement of coastal and mangrove wetlands landscape and ecosystem service across the Rewa Delta through rehabilitation of degraded resources in communities partaking in the project, (3) maintain and enhance traditional knowledge and skills on resource use and management and (4) strengthen legal and policy guidelines through facilitating collaboration among stakeholders, strengthening existing community governance structures as well as existing government regulations and management framework.

Major project beneficiaries will include the four representative villages including Natilia, Waicoka, Nasilai and Muaira which collectively comprise an estimated population of 2,500 who make up an estimated 400 households. Other beneficiaries are traditional authorities in the project areas such as the Provincial Office of Tailevu and the Provincial Office of Rewa who customarily are responsible for the development and wellbeing of all iTaukei (indigenous communities) as well as government agencies and institutions who are legally mandated to be responsible for all coastal and mangrove wetlands resources.

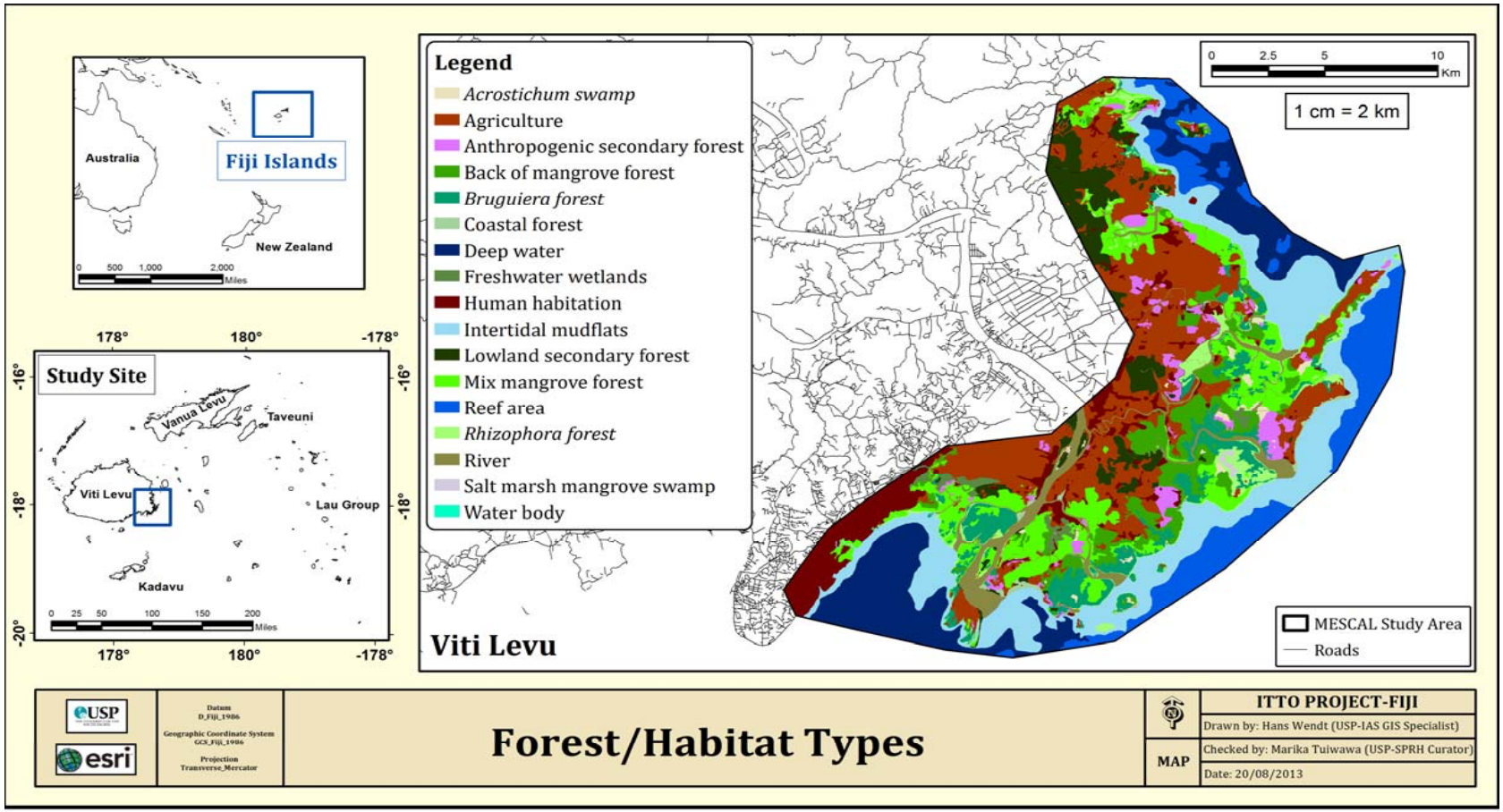
It is expected that by the end of this project, communities in the riparian zone will be protected against storm surges through a significant improvement in coastal and mangrove wetlands cover in presently degraded wetlands. Such vegetation cover is assumed to act as natural barriers to storm surges. The capacity of local community members would be enhanced through raising awareness and education on alternative livelihood options, awareness on importance of values derived from wetlands, production of planting materials (through establishing community nurseries) and planting techniques. There will also be documentation of practical guidelines for restoration of degraded wetlands and coastal forests. Such guidelines will be published for the wider benefit of all communities in Fiji and the Pacific region that are faced with similar challenges. Outputs that will lead to these outcomes include; (1) the formulation of a framework that will support the development of a coastal and mangrove wetland resources; (2) capacity building through local community training to implement activities that support the development of alternative livelihoods to reduce overdependence on coastal and mangrove wetland resources; (3) establishment of model sites that demonstrate rehabilitation of degraded coastal and mangrove wetlands and publication of guidelines for restoring degraded coastal and mangrove wetlands.

In developing the project certain assumptions have been made. These include: (1) Local authorities (Provincial and District Officers) as well as local communities will show interest in the project and appreciate the need to restore degraded wetland ecosystems, (2) extreme weather events and other disturbances such as drought, flood, fire and pest will not destroy planted seedlings and established stands and (3) seeds and vegetative materials of species that will be used in the restoration process will be readily available.

These assumptions have the potential to negatively impact the successful implementation of the project. To minimise the risk associated with these assumptions efforts will be made to ensure that community, and district authorities and in particular local communities identify and effectively participate in the project. This will be through an outreach programme to sensitize local communities on the essence of the project as well as its relevance to their livelihoods. Moreover policy implementers at the provincial and district levels will be part of the consultative workshop to ensure their full backing for the project. Attempts will also be made to minimize the impacts of disturbances and extreme weather events on planted seedlings and established stands. Integrated fire and pest management strategies will be adopted when necessary. Seeds will be obtained by using field tree spotters and climbers from the Fiji's Department of Forestry (DOF) who have adequate experience in seed collection. Moreover the DOF will also provide access to seeds of various species. When efforts in these directions are not enough, seeds will be purchased from private sources.

The total budget for this project will be **US$387,511**. ITTO is envisaged to contribute **US$310,576.00 and** the Government of Fiji will contribute **US$76,935** in cash and kind.

Figure 1: The Rewa Delta Proposed Project Site complementing MESCAL Project



MAP **OF REPRESENTATIVE VILLAGES**/ DEMOSNTRATION SITE IN THE REWA DELTA (Target Communities: Natila, Waicoka, Nasilai, Muaira)

LIST of ABBREVIATIONS and ACRONYMS

Acronym	Meaning
DOF	Department of Forestry, Fiji
DOE	Department of Environment, Fiji
DOLS	Department of Lands and Survey
SPC	Secretariat of the Pacific Community
CI	Conservation International, Fiji
IAS/USP	Institute of Applied Sciences, University of the South Pacific
MESCAL	Mangrove Ecosystems for Climate Change Adaptation and Livelihoods
PRA	Participatory Rapid Appraisal

PART 1. PROJECT CONTEXT

1.1 Origin

The Rewa River is the longest and the most important stream originating in north-central Viti Levu on the flanks of Tomanivi, Fiji's highest point [1,324 metres], it flows southeast for 145 km to its mouth at the Rewa Delta on the southeast coast, near the national capital city of Suva. The river drains one-third of the island, and its valley and fertile deltas support root crops, vegetable, rice, and dairy production in addition to traditional goods and services that tare cultivated by local communities. The coastal and mangrove wetlands in the Rewa Delta form an important array of useful resource supporting communities living within and in proximity of the Delta. They provide breeding sites for hundreds of marine species and are important dispersal centres for obligatory mangrove plant species. It also acts as natural barriers to the direct impact of strong winds and waves including the risk associated with climate change such as sea-level rise and extreme weather conditions on the shoreline. Such coastal and mangrove wetlands therefore play a significant role in the socio-economic and cultural lives of coastal dwellers.

The vital functions of the Delta is threatened by the rapid growth of human population and intensive agricultural development that has led to the reduction in vegetation area and critical habitat loss, siltation in the river system, degradation and potential overexploitation of the resources. The majority of the coastal and mangrove wetlands are situated in densely populated areas, and as human population increases, the demands for wetland resources and the threats to these valuable ecosystems can be expected to increase. It is therefore necessary to adopt relevant practices to rehabilitate, and conserve the Delta and adjoining coastal forest.

In response to the above problems, a number of studies and programmes have been initiated and conducted to encourage and support conservation as well as sustainable management of coastal and mangrove wetlands in the country. This project is derived from the gaps identified in the first formal study of the Rewa Delta that is currently underway by the Mangrove Ecosystem for Climate Change Adaptation and Livelihood (MESCAL-Fiji). The MESCAL-Fiji project looks at attaining baseline information on the status of mangroves in Fiji by using the Rewa Delta as a pilot site (Figure 1); reviewing and strengthening the implementation of the National Mangrove Management Plan and the development of technical capacity among government officials to enhance mangrove management practices as well as developing research tools. The study is funded by the European Union co-ordinated by the Fiji's Department of Environment and focuses solely on the Rewa Delta.

The MESCAL project also focuses on the documentation of the biological, social and cultural aspects of coastal dwellers living in the Rewa Delta and placing an economic evaluation on the tangible outputs. The outcome provides baseline information to undertake the economic estimations. The terrestrial evaluation (MESCAL biodiversity reports in press (2012-2013)) of the area indicated target areas that require rehabilitation by means of reforesting. In particular, this involves the heavily degraded zones in the "back of the mangrove forest". **In such ecosystems, loss of traditional fruit and medicinal trees such *barringtonia adulis*, *pometia pinnatae*, *inocarpus fargifa*, were once common in their natural habitat and contributed to economic livelihoods among the local communities. In addition, the giant swamp taro (*cyrtospema chamissonis*), duruka *(saccharum edule)*, wild yam *(dioscorea nummularia)* and sago palm (*metroxyln vitiense)* were once common in the freshwater swamp at the back of the mangrove but these species are now scarce due to**

overexploitation and loss of habitat. Habitat loss can be attributed to failed attempts for national rice schemes and the development of large irrigation systems aimed at converting swamp lands into arable land. The loss of such key edible species poses a threat to food security for local communities. Studies indicated that degradation is an outcome of on-going anthropogenic activities both in the past and present thus the ITTO project will create and provide an opportunity for re-foresting these target areas, by form of an extension, of the pilot work undertaken by MESCAL using selected timber tree species. The MESCAL biodiversity report is available in the Secretariat of the Pacific Community website.

1.2 Relevance

1.2.1 Conformity with ITTO's objectives and priorities

The project supports the International Tropical Timber Agreement (ITTA 2006) through addressing Article 1 sub-elements (c), (j), (m), (n), (q) and (r). In particular the project will promote "better understanding of the contribution of non-timber forest products and environmental services to the sustainable management of tropical forest..." In addition, the proposed project will assist the Government of Fiji to assess the extent of illegal trade of mangrove fuelwood and formulate cost effective tracking mechanisms.

The project supports the Strategic Priority 4 of ITTO Action Plan 2013 – 2018, to reduce deforestation and forest degradation and enhance the provision of environmental services and Strategic Priority 6, that is, to build and develop human resource capacity to implement SFM and increase trade in forest goods and services from sustainably managed forests. Although the project focus is on tropical timber and non-timber resources that are not exported; adverse effects of deforestation and degradation on the local communities are wide spread and contribute to poverty cycle that continues to place pressure on natural capital. The project aims to address this through building capacity of indigenous people to engage in alternative livelihood options. In addition, the project will assess the impact of rehabilitation and re-afforestation of coastal wetlands as mitigation to the effects of climate change. Further, the project also supports ITTO's vision of establishing a Permanent Forest Estates (PFE) that will result from rehabilitation of degraded forest in partnership with local communities. Such initiatives directly supports the ITTO Work Plan 2013-2014 Strategic Priority 4; Activity (10) and (11) at the national scale.

Likewise, the project proposal supports the key objectives and outputs outlined under the joint initiative of CBD and ITTO in 2010 to enhance biodiversity conservation in tropical forests with the direct participation of local stakeholders, addressing the main drivers of biodiversity loss in tropical forests, deforestation and forest degradation.

The project will ensure that components of the ITTO Mangrove Action Plan 2004-2009 will be put in place in Fiji to support sustainable management of mangroves. In particular scientific data collected from the MESCAL project will be the building block for the project implementation. For instance, one of the key findings from MESCAL is the extent of invasive species found in the back of the mangrove area. The project will focus on restoration and enrichment planting in these area. In addition, the MESCAL project identified excessive harvesting of *Bruguiera* and *Rhizophora* spp. as firewood and construction material; pointing to the urgent need for replacement and enrichment planting. The project will advocate the establishment of community woodlots to address the current demand among local communities in a sustainable manner. The MESCAL project also revealed the extent of invasive species in the mangrove forest such as *Annona glabra.* Such invasive species are crowding area that would be suitable for fruit trees such as *Innorcarpus fagifer, Cocos nucifera, Dioscorea spp* and others. The project will therefore enhance mangrove conservation, restoration, enrichment and sustainable management of the mangrove resources.

1.2.2 Relevance to the submitting country's policies

Fiji became a member of RAMSAR in 2006. Fiji has the third largest area of mangroves in the Pacific Island region (after Papua New Guinea and Solomon Islands). Department of Forestry estimates the total area of Fiji's mangroves at 42,500 ha. Forest loss in coastal and mangrove wetlands has been estimated as high as 30%.

The Fiji Forest Policy Statement (2007) clearly articulates and commits the Department of Forest to "introduce an effective mangrove regulatory management framework" through wide stakeholder consultation to (1) actively review mangrove management and (2) permanently advocate the "… conservation of mangroves to provide for sustainable customary uses, the sustenance of coastal fisheries, the protection of shorelines, and as an adaptation measures against climate change impacts…"

Current efforts through the Mangrove Ecosystems for Climate Change Adaptation Livelihood (MESCAL) Fiji project is aimed at strengthening mangrove management in. The project outcomes focus on strengthening national mangrove management and improving technical capacity of government officials. The gap in the MESCAL project is to work at species level restoration of degraded systems and to take the restoration to community level with the full and direct involvement of communities that live in the Rewa Delta. The proposed project aims to address the gap and advocates rehabilitation of degraded coastal and mangrove wetlands in the Province of Tailevu, with proposed site in the Tikina of Bau.

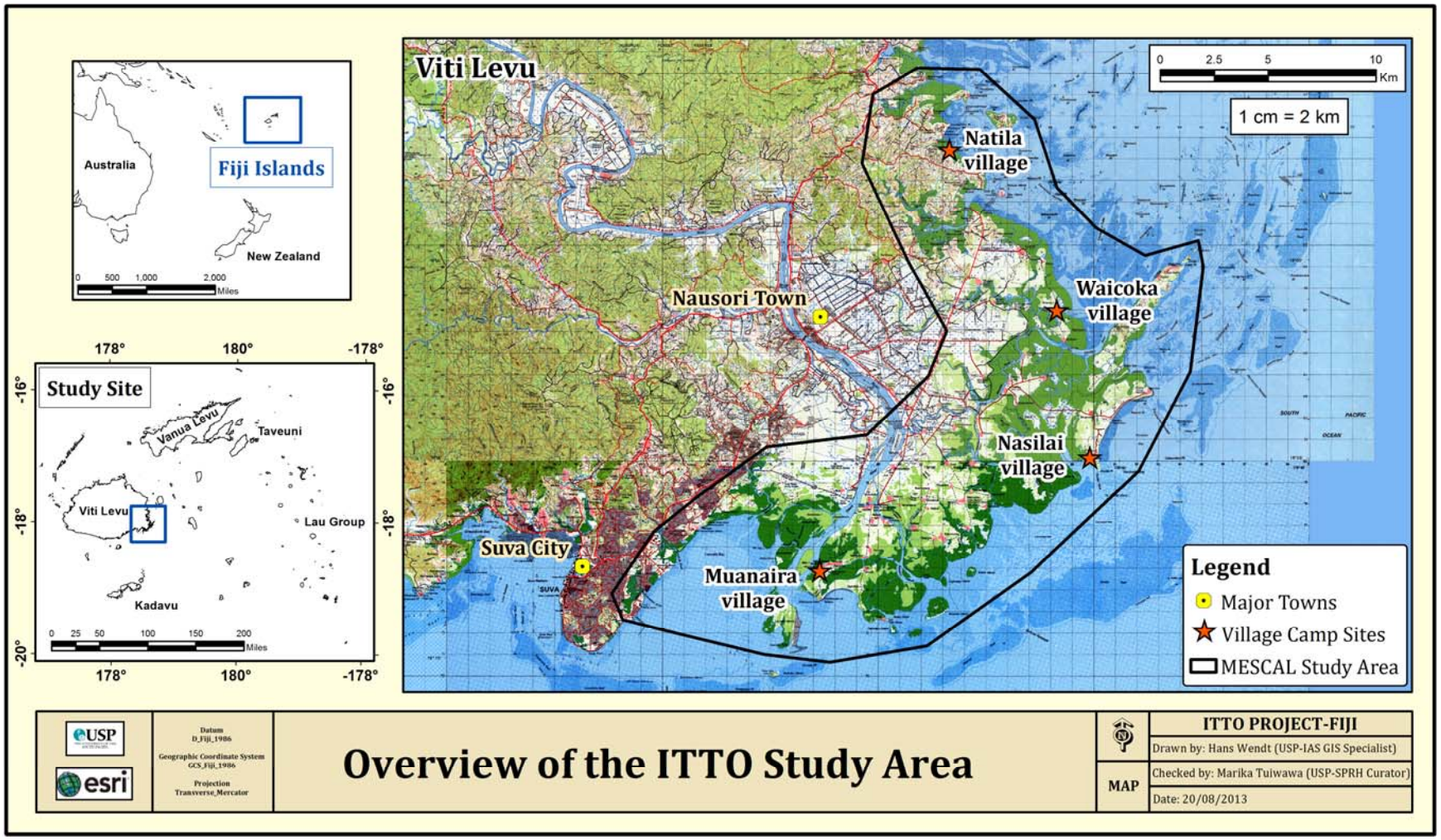
1.3 Target Area

1.3.1 Geographic location

The Rewa River is the widest river in Fiji and originates from Fiji's highest peak, Mt. Tomaniivi. It flows southeast for 145km to Laucala Bay in Suva and drains about one-third of Viti Levu. The Wainibuka and Wainimala are the main tributaries, feeding into the Rewa River. Alluvial soil enriches the basin of the river. Records show there are also more than 200 villages that occupy the banks of the Rewa river; from its headwaters in the interior of Viti Levu on the South East of the island.

The target area for project implementation is the coastal and mangrove wetlands of the Rewa Delta in the Tikina of Bau, Province of Tailevu. The Rewa Delta is located on the southeast of Viti Levu Island and is less than 2m above high tide level and particularly vulnerable to flooding. Like many coastal ecosystem and communities, it is prone to rising sea level, eroding coastlines and inundated agricultural and freshwater lands.

Figure 2: Locality Map of the Proposed Project Site



1.3.2 Social, economic, cultural and environmental aspects

Most communities in coastal and mangrove wetland live a subsistence livelihood and depend on coastal and mangrove wetland resources as a source of revenue generation from the sale of fuel wood, house piles, dyes, pandanus leaves, shells, fish, mud crabs, mud lobster, a wide range of crustaceans and many local delicacies. Local communities depend on these resources to supplement and sustain their subsistence life style.

Socio-economic information was gathered from 10 study sites through the MESCAL project. The study showed that by means of livelihood the sale of fish, mangrove invertebrates and firewood were the main income sources and that the average household monthly income was $253. The study also indicated that the most common fishing method was by hook and line, due to its low cost and high returns followed by trapping and gleaning. In addition the majority (92%) of the households stated that their primary fuel-wood source was from dry mangrove while only a few (5%) used green mangrove; and that other major uses include the harvesting of green mangroves for house (22%) and fence post (12%) and also for traditional herbal medicine (19%) and construction of simple household furniture (10%). The consumption of mangrove for firewood was high at 805 bundles per month and the majority of these are dry wood. Mangrove harvesters are commonly males (78% are male youth and men) followed by young female and women then children (3%). Only 7% of the respondents stated that they do not use mangrove for any purpose. The socio-economic study also showed that there is no preference for the type of mangrove to be used for firewood. More importantly, the majority of respondents (72%) stated that they do not consider any sustainable harvesting approach when cutting down mangrove while only 28% mentioned that they do.

The project will provide an opportunity to develop landuse plans that will rationalize resource use and ensure significant economic benefits directed to the local economy through training on sustainable harvesting techniques for fish, mangrove invertebrates and firewood and other important resources practical application of alternative livelihood options. The project will also support conservation of coastal and mangrove habitat under threat from deforestation and over utilization through awareness raising, rehabilitation and enrichment of existing ecosystems. Sustainable management and maintenance of such natural systems will lead to sustainable incomes in the long term that will benefit local communities participating in the project.

Based on report of the archeological component under the MESCAL project a total of 27 sites visited ranging from sites for the installations of chiefs, fortification sites, old villages, burial grounds and sacred sites. Basically, the study found that cultural heritage footprints are scattered within the provinces of Tailevu and Rewa. Many accounts have been documented by early European settlers and visitors travelling through the Rewa River. The MESCAL report also produced an annotated field map of significant cultural sites identifying sites of historical and cultural significance in the Rewa River Mangrove study area.

The coastal and mangrove wetlands are important ecological units, providing feeding, roosting, nesting sites for migratory and resident birds. It also provides nursery for marine species and a natural sea wall to storm surges. Coastal and mangrove wetlands in the Rewa Delta, particularly the Tikina of Rewa, Noco, Dreketi, Bau and Nakelo are situated in densely populated areas, and as population increase the demands on these wetland resources increases

threatening their ecological integrity and capacity. Activities such as farming, dredging, siltation and construction are impacting negatively on these wetlands and the environment in the form of soil erosion, algal bloom due to essential nutrients for agricultural needs and more importantly, species and habitat loss along the river. The project will provide an impetus for communities to retain traditional knowledge and apply such skills to sustainable manage natural resources, improve food preservation technologies to address food security.

The MESCAL project provides detailed information on species diversity in the Rewa Delta. Reports indicate the sightings of 36 species of birds (28 landbirds, 6 shorebirds and 2 seabirds) and two species of bats. Nine different habitats were observed during the survey and only five species of landbirds were recorded in all nine mangrove habitats. These included the Wattled honeyeater, White collared Kingfisher, Vanikoro Broadbill, Orange-breasted Myzomela and the introduced Jungle Myna. One of the species of bats recorded (*Pteropus samoensis*) is listed as a Threatened species in the IUCN Red List. In terms of insects; a total of 14 Coleopteran families were sampled including rare beetle families; Cerambycidae, Cicindelidae and Passalidae. New records for this area included the butterfly *Papilio schmeltzi* (Fijian swallowtail butterfly) and the endemic moth *Calliteara fidjiensis*. Despite the fact that the insect taxa within this system do not provide much in terms of significant findings pertaining to species rarity, the vital role they play in ecosystem services in mangrove systems provide adequate evidence to suggest the need for their conservation within the Rewa River Mangrove System. A total of 792 fishes representing 43 species (in 30 families) and 125 crustaceans representing five species (in four families) were reported in the survey. Juvenile stages of these species dominated the catch, with over half of the species present as juveniles or sub-adults in the mangrove habitats, including the largest endemic insular fish species, reve (*Mesopristes kneri*). The primary food fishes caught in the survey are Mullets or kanace (*Mugil cephalus*), Jack or saqa (*Caranx papuensis*) Mangrove Jack or damu ni veitiri (*Lutjanus argentimaculatus*), Tarpons or yavula (*Megalops cyprinoides*) and Ponyfishes or kaikai (*Leiognathus* spp.). This also includes seasonal visitors to the estuary such *Tylosurus crocodilus crocodilus, Rastrelliger kanagurta* and ogo (*Sphryaena qenie*). In general, the downstream zones and river mouth dominated biomass of fishes across the sites. Downstream mangrove in Waicoka village had the highest total biomass of fishes caught 3.07 kg per hour whereas Vunidawa upstream had lowest biomass at 0.29 kg per hour. Overall, most fishes and crustaceans sampled were either eaten or sold by the local fishers, while some are used as baitfish or not used at all but play important ecological roles in the mangroves. The need to effectively manage the mangrove forest of the Tailevu and Rewa provinces and its adjacent reef community is strongly recommended. The project aims to address this through establishing access mechanisms to track illegal trade in both wood and non-timber forest products such as fish and other edible products. The project will also strengthen existing governance framework to ensure sustainable management plans are developed and implemented in an efficient and meaningful manner.

1.4 Expected outcomes at project completion

At project completion, degraded coastal and mangrove wetlands will be restored through rehabilitation **and enrichment** planting. In addition, it is envisaged that communities would have clear policies **and community based guidelines** in place to provide framework for utilization, management and monitoring of the rehabilitated areas. **An existing program within the iTaukei Affairs Board called the Yaubula Management Support Teams**

(YMST or Community based Resource Committees) will be strengthened through the project whereby the YMST will spearhead community management and monitoring of mangrove resources. In addition, existing governance systems (Village Development Committees) will be strengthened through improving coordination and monitoring of wetland management and conservation.

At the national level there are two main expectations including the formulation of a policy framework for coastal and mangrove wetlands and formulation of tracking mechanisms to arrest illegal trade of timber and fuel wood. **The project will provide the platform to the Department of Forest to raise awareness on the procedures and processes involved with obtaining legal licenses to utilize mangrove. After the project the Department will continue to monitor and track illegal timber trade from mangrove resources.** At the end of the project it is expected that coastal and mangrove wetland will support enhanced production of fish and other marine species, facilitate sustainable supply of fuel wood, house poles and other non-wood products that improve income levels and livelihoods of local communities.

PART 2. PROJECT RATIONALE AND OBJECTIVE

2.1 Rationale

2.1.1 Institutional set-up and organizational issues

The Executing Agency together with collaborating partners will provide technical and logistical support for the execution of the project. The Executing Agency will be the Department of Forestry. Partner organisations include the Secretariat of the Pacific Community, the Institute of Applied Science/University of the South Pacific and Conservation International.

All above organisations have specific field expertise from policy making at national and regional scales, research and policy advisory services to direct linkages and proven record for community based project implementation. All organisations have long associations in the field of practical and applied (forestry based) community development in Fiji.

The collaborating partners in the public sectors include the Department of Forestry, Department of Fisheries, Department of Lands and Survey, Department of Environment and Department of Agriculture. These agencies will be responsible for guiding project activities to align to Government policy focal areas as well as providing technical inputs that will form the basis of information which facilitates community discussion and awareness.

Regional research organisation and non-government will be heavily involved in all stages of the project through facilitating and supporting the Executing Agency in carrying out project activities. A number of project components will be contracted to such institutions to supplement the expertise of the Executing Agency as well as to secure quality project outputs and outcomes.

2.1.2 Stakeholder analysis

Stakeholder Group	Characteristics	Interests	Potentials	Involvement in project
Primary stakeholders				
Local users of wetland resources not living with the targeted communities	Livelihoods depend on coastal and mangrove wetland resources (commercial basis)	Sustainability of resource base	Knowledge and readiness to actively participate in project activities	Beneficiaries of products from timber tree and non-timber species/ products
Women of the communities in **Target communities**, Province of Tailevu	Live subsistence dependence on coastal and mangrove wetland resources	Sustainability of resource base	Available indigenous knowledge and their readiness to actively participate in community development projects	Beneficiaries of products from timber tree and non-timber species/ products
Men and Youths of the communities in **Target communities**, Province of Tailevu	Livelihoods depend on coastal and mangrove wetland resources (Semi commercial basis)	Sustainability of resource base	Available indigenous knowledge and their readiness to actively participate in community development projects	Beneficiaries of products from timber tree and non-timber species/ products
Department of Forestry	Mandated by Policy to ensure conservation of forest and biological resources	Ensuring restoration of degraded areas	Institutional capacity to embark on reforestation projects	Executing Agency institution
Department of Lands and Survey	Legally mandated to manage State Land (foreshore area below the high tide water line are State Lands)	Economic development and sustainable use of resources	Institutional capacity to enforce endorse developments and maintain law and order	Collaborators
Department of Agriculture	Legally mandated to direct and assist development of agro-products	Sustainable resource use	Institutional capacity to influence farmers practices	Collaborators
Traditional authorities (Chiefs, clan heads, opinion leaders)	Custodians of traditional values and norms	Sustainable flow of benefits	Has the authority to enforce **by-laws** and traditional rules and regulations, and can influence communities perception of project	Collaborators
Secondary stakeholders				
Department of Environment	Mandated by law to protect and improve Fiji's environmental conditions	Environmental consequences of wetland degradation	Capacity to ensure compliance of environmental standards	Collaborators

Secretariat of the Pacific Community	Broad-based advocacy and skills development to regional countries	Sustainability of resource base and improvement in local communities well-being	Have strong collaboration with national and local governments with the capacity to mobilise local communities	Major partner institution in project planning, design and implementation
Conservation International Fiji	Provide advocacy and community based conservation, terrestrial rehabilitation and restoration of degraded landscapes	Sustainability of resource base and improvement in local communities well-being	Have strong collaboration with national and local governments with the capacity to mobilise local communities	Major partner institution in project planning, design and implementation
Institute of Applied Science /University of the South Pacific	Has the mandate to research and assist wetlands management and resources use	Conservation and sustainable utilisation of natural resources	Has technical capacity to mainstream project results	Major partner institution in project planning, design and implementation
Tertiary stakeholders				
Provincial Office	Mandated by law to ensures good governance and welfare of the iTaukei	Portal of engagement with iTaukei (indigenous) communities	Have an influence on administration, & development strategy in Provincial governance	Main partners
Ministry of i-Taukei Affairs	Mandated to protect the indigenous culture and the economic and social development of indigenous Fijians	Economic and social well-being of the indigenous community	Have an influence on administration & development strategy in Provincial governance	collaborator
iTaukei Lands Trust Board	Secure, protect and manage land ownership rights assigned to the indigenous landowners and to facilitate the commercial transactions that revolve around its use.	Economic and social well-being of the indigenous community	Mandated to determine and approve appropriate landuse for indigenous land	Collaborator

2.1.3 Problem analysis

Although coastal and mangrove wetlands cover just a little over 10% of the total land area of Fiji, they provide an important social, economic, cultural and environmental function such as flood control, provision and sustenance of a wide variety of marine species, wood and non-timber wood based products, and site specific crop production. These habitats also serve as habitat for birds, nursery for marine species, water purification systems, barriers for storm surges and many other benefits.

Under the RAMSAR Convention, MESCAL project is currently being implemented to enlighten the public on the need to conserve and sustainably utilise mangrove resources. This

project addresses a gap in the MESCAL project through addressing challenges that are faced by communities that depend on coastal and mangrove wetlands. The proposed project aims at supplementing the work of MESCAL project by addressing the needs of local communities, focusing on rehabilitation of coastal and mangrove wetlands and devising appropriate mechanism to track illegal harvest and sale of fuel wood.

Coastal and mangrove wetlands have been subject to the effects of population growth, economic and social pressures manifested in the form of rapid urbanisation agricultural land expansion and industrialisation. There is no specific policy aligned to a single Government Agency that regulates mangrove resource utilization. Currently, extraction policies are enshrined in the Fiji National Forest Policy while the ownership is regulated in the Crown Lands Act Cap 132 and Fisheries Act Cap 158. Nevertheless excessive resource extraction is resulting in over-exploitation of resources such as fisheries and fuel-wood, reduction in vegetation area, critical habitat loss, and siltation in rivers. In addition, loss of traditional knowledge and skills as a result of rapid westernisation are contributing to extensive human activities such as bushfires, hunting, fuel wood harvesting, and intensive agricultural farming. The continuous degradation coupled with over-exploitation of resources from coastal and mangrove wetland leads to biodiversity loss and reduction in the provision of ecosystem services and functions.

Whilst only a handful of research accounts have taken place to address the above problem, there has been a lack of site specific investment aimed at reversing the trend to improve the conservation and management of coastal and mangrove wetlands. The project proposes to set up demonstration sites where investment will enable amplification of relevant community based interventions that comply with internationally best practices.

The project therefore aims to address four major problems associated socio-economic aspects of community reliance and unsustainable management practices; the loss of ecosystem services and habitat for biodiversity; loss of traditional knowledge and skills as well as the deficiencies and lack of coordination between key governing agencies. A problem tree is outlined in Figure 3.

To address the above key “causes”, the project is designed to provide alternative livelihood options for key communities that would alleviate current pressures from excessive resource utilization. Commodities will be selected through wide consultation with stakeholders to ensure quick “win-win” and adoption of intervention. The project will also focus on rehabilitation of degraded systems to address biodiversity loss in alignment with the National Forest Policy 2007. The project will also endeavour to rekindle traditional knowledge through introduction of improved traditional fallow and harvesting systems that are supported by resource management plans based on land allocation and strong local governance system. The project will endeavour to bring stakeholders together and in particular facilitate discourse among Government agencies to streamline and improve policy and management structures. I addition, closer collaboration among Government agencies will ensure mainstreaming of sustainable coastal and wetland mangrove management into Government strategic direction. An objective tree is outlined in Figure 4.

Figure 3: Problem analysis

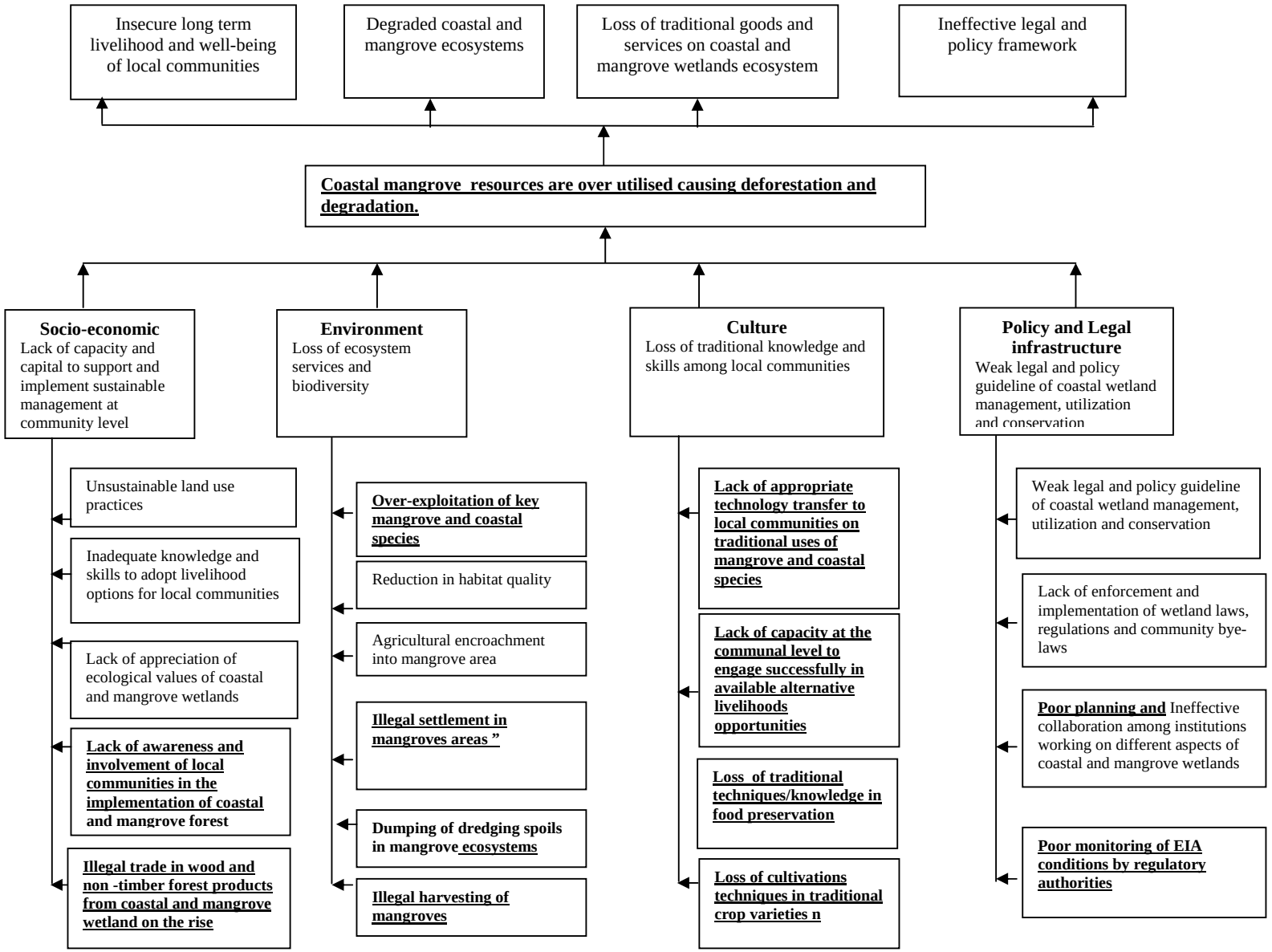
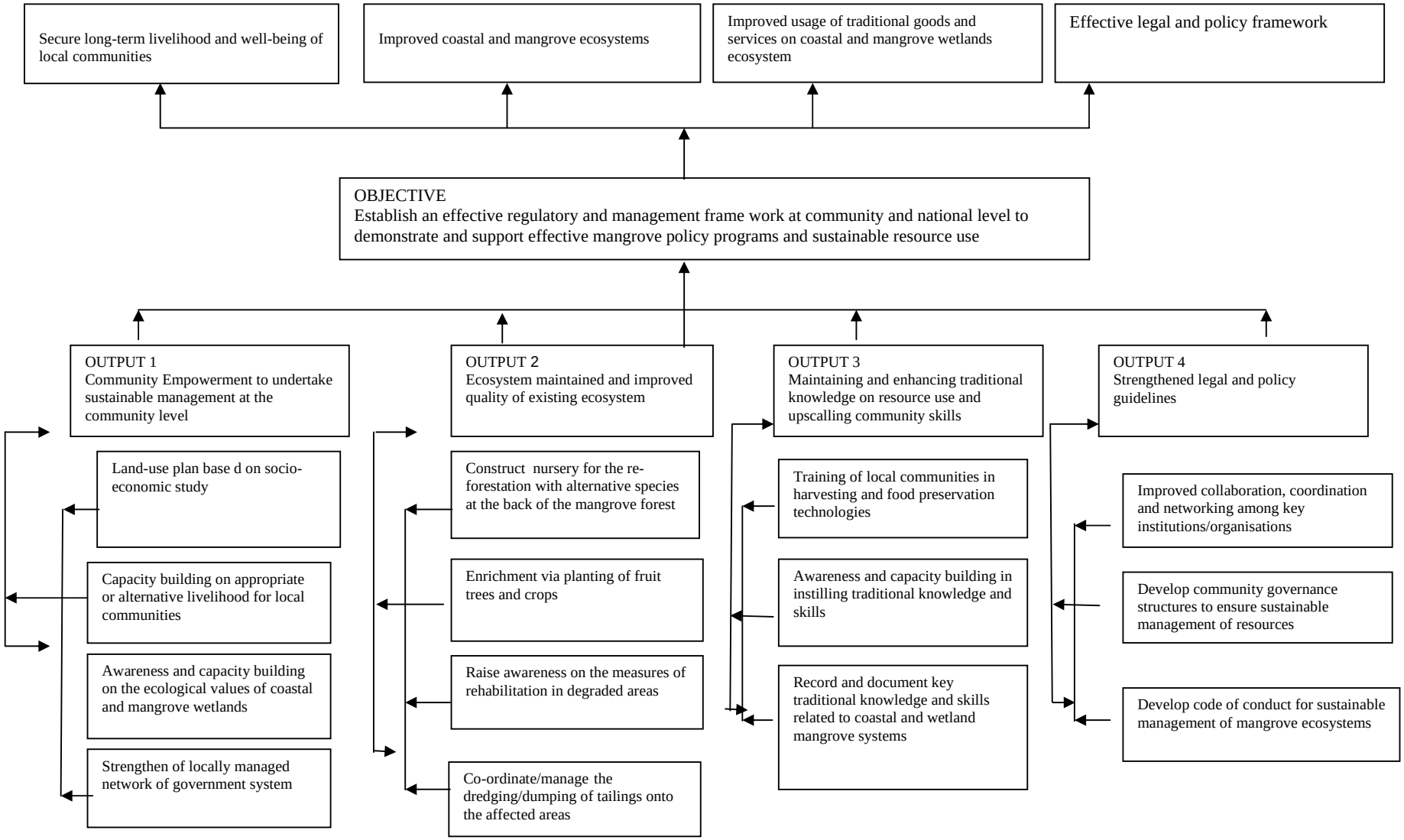


Figure 4: Objective Tree



2.1.4 Logical framework matrix

STRATEGY OF IMPLEMENTATION	MEASURABLE INDICATORS	MEANS OF VERIFICATION	KEY ASSUMPTION
Development objective: To introduce an effective mangrove regulatory and management framework for coastal and mangrove wetlands in Fiji	1) Effective regulatory framework is put in place at National level 2) community based management framework successfully implemented aligned to national policies and regulation on coastal and wetland mangrove	1) Government Policy Statements and commitments 2) Community buy-in and successful field demonstration 3) Amplification to other coastal and mangrove wetlands in Fiji	1) Government Agencies recognize the need for coordination and alignment of resources 2) Buy-in by Community leaders and members to support demonstration sites
Specific objective: **<u>To establish demonstration sites that will showcase effective policy programs and activities</u>**	1) By the end of 3nd year 100ha of degraded wetlands reforested 2) Identified livelihood options for communities are adopted and implemented by the end of 2nd year 3) Development and establishment of monitoring framework by end 2nd year	1) Field visits 2) Project progress reports 3) Project evaluation reports and monitoring reports	1) Local communities are ready to collaborate on reforestation initiatives 2) Acceptance of identified livelihood options by catchment communities
<u>Output 1:</u> Local communities trained and empowered to implement activities linking livelihoods improvement to reduce overdependence on coastal and mangrove wetland resources	1) By the end of first year local communities trained in identified livelihood options 2) By the end of the third year communities have adopted livelihood options 3) By the end of the first year the communities become better informed of the importance of coastal and mangrove wetlands	1) Community interviews 2) Project progress report and certificate of participation 2) Field visits **3)** Individual Interviews	1) Effective communications strategies adopted 2) Resource persons and training materials available 3) Communities are willing to adopt identified livelihood options
<u>Output 2:</u> Degraded coastal and mangrove wetland rehabilitated and guidelines for restoring degraded coastal and mangrove wetlands developed	1) By the end of the third year 100ha of deforested wetlands rehabilitated 2) Guidelines for degraded coastal mangrove wetland restoration developed and published	1) Field visits 2) Progress project reports 3) Published guidelines manual 4) Publication of Community based Management Plan of Rehabilitated area	**<u>1</u>**) Seeds/Saplings for timber tree species are available 2) That wildfires are kept under control 3) harvesting of native coastal and mangrove wetlands is greatly reduced

STRATEGY OF IMPLEMENTATION	MEASURABLE INDICATORS	MEANS OF VERIFICATION	KEY ASSUMPTION
OUTPUT 3 Maintain and enhance traditional knowledge and skills that will enable communities to value and sustain resource utilization	1) Change in perception and management of coastal and wetland mangrove system	1) Interviews and Monitoring Report 2) Training and Awareness Reports 3) Publication of key traditional knowledge and skills to enhance value, conservation and management of coastal wetland mangrove forests	1) Access and availability of traditional knowledge and skills 2) Communities welcome, appreciate and willing to participate in the revival of traditional knowledge and skills
Output 4: Strengthen coordination of policy guidelines through improving implementation of coastal and wetland mangrove regulations	1) By the end of the first 6 months key institutions have been identified and their responsibilities evaluated 2) By the end of first year consultative workshop to identify levels of co-ordination, collaboration and networking among key institutions has taken place 3) Review licencing system for coastal and mangrove wetlands 4) Development and obtain Cabinet Approval for Code of Conduct for Sustainable management of mangrove ecosystem 5) Cost benefit analysis for different management options	1) Project progress and workshop report 2) Report on Review of Licensing system with recommendation 3) Report on Cost benefit analysis with recommendations 4) Publication of Code of Conduct	1) Key institutions policy implementers at the municipal and district assembles involved in coastal and mangrove wetland management and conservation are willing to collaborate 2) Representatives of key institutions and municipal and district assemblies attend workshop 3) Communities in coastal and mangrove wetlands attend workshop 4) Fuel wood sold in retail outlets is sourced illegally 5) There are only two options to consider for cost benefit analysis of illegal trade, to improve monitoring and surveillance or place a moratorium on mangrove harvesting.

2.2 Objectives

2.2.1 Development objective and impact indicators

The development objective of the project is to rehabilitate degraded coastal and mangrove wetland while improving the livelihoods of local communities through the **enhancement of such systems with species diversity and mix** closely resembling their occurrence in nature. The project therefore aims to support and implement workable framework and practical solutions to the adoption of sustainable forest management systems and conservation of coastal forests in Fiji at community level.

Indicator of the impact of the above development objective may be through the degree of mainstreaming project activities into the target communities; the physical evidence and extent of rehabilitation of degraded coastal and mangrove wetland areas; and the formulation of a comprehensive and exhaustive analysis of issues contributing to the formulation of a policy framework to support the sustainable management of coastal and mangrove wetlands.

2.2.2 Specific objective and outcome indicators

Specific project objectives include the need to better understand challenging issues and concerns pertaining to better and improve management of coastal and mangrove wetlands; rehabilitation of coastal and mangrove wetlands and the generation of alternative livelihoods that would take the pressure away from natural capital in coastal and mangrove wetlands.

Outcome indicators under the specific objective includes the development and formulation of a project monitoring framework to continuously monitor and evaluate its impact, efficiency and effectiveness against the purpose of the project, implementation programs, project personnel, financial administration and others. By the end of the project one of the key indicators will be the total area rehabilitated under the project as well as the number of alternative livelihood interventions that are mainstreamed into participating communities. A less quantitative outcome indicator will involve the publication of relevant succinct reports that outline appropriate policy measures that will ensure the sustainable management of coastal and mangrove wetlands. At the same time, reports of the cost benefit analysis on the best option for tracking and arresting illegal harvest, conversion and sale of fuel wood would provide a clear linkage to the policy guideline and legislation framework.

The project development and specific objectives supports the International Tropical Timber Agreement (ITTA 2006) through addressing Article 1 sub-elements (c), (j), (m), (n), (q) and (r). In particular the project supports the ITTO Action Plan 2013 – 2018 in the field of reducing deforestation and forest degradation and enhancing environmental services in Tropical Forests. The project objectives are also aligned to the ITTO 2013 -2014 work plan to support countries to reduce emissions from forest degradation and deforestation as well as to track illegal trade of timber.

PART 3. DESCRIPTION OF PROJECT INTERVENTIONS

3.1 Outputs and activities

3.1.1 Outputs

Output 1: A suite of alternative livelihood options is available for communities to adopt, decreasing over dependence on coastal and mangrove wetland resources for sustenance and livelihood.

Indicators

1) By the end of first year at least 4 local communities are guided to make informed decisions on the most suitable alternative livelihood option for adoption through participatory development of Landuse Plan.
2) By the end of the first year, at least 4 communities are trained on their preferred livelihood options.
3) By the end of the first year at least 4 communities become better informed of the importance of coastal and mangrove wetlands.
4) By the end of the third year at least 4 communities have adopted and implement livelihood options.

Output 2: Degraded and deforested coastal mangrove wetlands are rehabilitated through afforestation and reforestation using appropriate native species.

Indicators

1) By the end of the third year 100ha of deforested wetlands rehabilitated.
2) By the end of the first year 30 individuals are trained on species identification, seed collection and nursery techniques for raising native species
3) By the end of the third year a guideline for degraded coastal mangrove wetland restoration is published.

Output 3: Maintain and enhance traditional knowledge and skills that will enable communities to value and sustain resource utilization

Indicators

1) Change in perception and management of coastal and wetland mangrove system

Output 4: Strengthen coordination of policy guidelines through improving implementation of coastal and wetland mangrove regulations

Indicators

1) By the end of the first year key institutions have been identified and recommendations have emerged from consultation outlining responsibilities and institutional linkages between legislated responsibilities with clear roles and responsibilities, identify levels of co-ordination, collaboration and networking.

2) By the end of first year, recommendations emerge from consultative stakeholder workshop to identify key policy issues, hopes and aspirations on the sustainable management of coastal and mangrove wetlands.

3) By the end of the second year, executing agency has adopted a reviewed licencing system for utilization of fuel wood sourced from coastal and mangrove wetlands.

4) By the end of the third year, the executing agency adopts the revised licensing, monitoring and surveillance system for fuel wood.

3.1.2 Activities

Output 1:

Activity **1.1**: Conduct 4 community workshops on the importance of coastal and mangrove wetlands, workshops to reach all communities in Target communities

Activity **1.2:** Conduct **4** Participatory Learning Appraisals in representative communities to assist villagers to assess their own situation and identify the best and most appropriate alternative source of livelihood to adopt.

Activity **1.3:** Establish 4 model areas to demonstrate alternative livelihood options selected by communities documenting processes involved for publication and distribution to other interested communities.

Activity **1.4:** Establish media programs for public education on the importance of coastal and mangrove wetlands

Output 2:

Activity 2.1: Conduct 4 training workshops to build capacity of communities in the establishment of plant nursery

Activity 2.2: Conduct 4 training workshops to build capacity of communities to collect seeds, manage and maintain (soil mix and related aspects) of plant nursery

Activity 2.3: Conduct 4 training for planting of seedlings and rehabilitation of degraded and deforested coastal and mangrove wetlands.

Activity 2.4: Conduct 4 training workshops to assist communities to formulate community policy, laws and regulation to maintain and monitor planted areas to ensure its sustainability in the long term

Activity 2.5: Document and publish guidelines for coastal and mangrove wetland restoration

Output 3:

Activity 3.1: By the end of first year, traditional knowledge and skills for harvesting and preservation of key food sources found in mangrove ecosystems are documented.

Activity 3.2: By the end of the third year, 4 communities are trained to appreciate and implement traditional knowledge and skills for harvest and preservation of key food sources from coastal and mangrove systems.

Activity 3.3: By end of second year, information gathered in Activity 3.1 above is published for wider dissemination among communities that live within coastal and mangrove wetlands outside the project site.

Output 4:

Activity 4.1: Consult all stakeholders through three workshops to collate key issues on coastal and mangrove wetland areas to strengthen and streamline existing policy and legal framework for coastal and mangrove wetlands with specific focus on linkages, co-ordination, collaboration and networking among key institutions.

Activity 4.2: Undertake a cost benefit study on the extent of illegal trade in fuel wood sourced from coastal and mangrove forests and make recommendations aligned to National Forest Policy 2007

Activity 4.3: Review the licensing, monitoring and surveillance procedures for the harvest and sale of fuel wood sourced from coastal and mangrove forests and recommend appropriate changes to the Department of Forest

Activity 4.4: Develop, advocate and streamline the approval of a Code of Conduct for Sustainable Management of Mangrove Ecosystems through relevant Government Agencies

3.2 Implementation approaches and methods

The project will collaborate with all stakeholders directly and indirectly interested in the Rewa Delta. The project will use participatory approach to engage with stakeholders and develop a consensus based vision for the policy framework, community based livelihood options and rehabilitation work. The processes involved in mobilizing community participation in the discourse of the above issues will be progressive and clear documentation will be made to record successes and failures. Publications from the project will be advocated for use by other communities facing similar challenges of resource depletion and mitigating against deforestation and climate change. The following activities will be taken to implement the project.

Policy consultation

Existing policy documents, policies and regulatory frameworks that relate to the management of the coastal and mangrove wetlands in Fiji would be reviewed through desk study and literature review. After the compilation and identification of weaknesses (gap analysis) experts and relevant stakeholders' opinions would be sought through focus group workshops. Focus group meetings will target the wider communities in the Rewa Delta; in particular the people of the Target communities. In addition, communities in **the** coastal and mangrove wetlands Ba, Tavua, Macuata, Kadavu as well as 14 Provincial Offices and local administrators, Government Officers, business communities and other interested individuals.

Awareness Creation and Capacity Building:

Participatory workshops will be convened in selected communities to sensitize members on the relevance of the project and in particular the importance of wetlands and the potential threats they face as well as the need for sustainable utilisation. The workshops will use tools of PRA/RRA which will be two modes. There will be focal group discussions with identified groups like women's groups, farmers and youth groups as well as public forums for community members.

Economics of Wetlands Conservation and Utilisation

The economics of wetlands conservation and sustainable utilisation will be studied with emphasis on fuel wood. The traditional use of coastal and mangrove wetlands is mainly in the extraction of non-wood products. This component of the project will also involve an economic survey of fuel wood coastal and mangrove wetlands resources. This study will involve the assessment of the market demand and supply situation as well as harvesting, monitoring and surveillance issues related to production to assess options for improving management.

Reforestation of Degraded Coastal and mangrove wetlands

Degraded coastal and mangrove wetlands will be rehabilitated with specific wetland species such as *Calophyllum inophyllum, Myristica casteinofolia, Inocarpus fagiferus, Terminalia cattapa, Barringtonia asiatica, Heriteria littolaris, Xylocarpus moluccensis, Rhizophora samoensis, R. stylosa, R. x selala, Bruguiera gymnorrhiza.* These would be achieved through

addressing the need to conserve and protect the natural resources along the Rewa Delta and to safeguard the livelihood, rights and social well-being of the forest fringe communities of the project sites. Equitable representation will be promoted across gender among project beneficiaries. The mentioned coastal tree species will be planted by the application of techniques developed by the Department of Forestry and Conservation International Fiji. In the selected sites, mixed species planting will be the mode of rehabilitation to closely follow natural habitats distribution and dispersal. One particular consideration will be to match species to suitable sites to enhance survival and development.

3.3 WORK PLAN

Outputs/ Activity	Responsible party	Year 1				Year 2				Year 3			
		Quarter				Quarter				Quarter			
		1	2	3	4	1	2	3	4	1	2	3	4
Output 1: Local communities are trained and empowered to implement activities linking livelihoods improvement to reduce overdependence on coastal wetland resources													
Activity 1.1: Community workshops on the importance of coastal and mangrove wetland	DOF,CI												
Activity 1.2: Community training PRA workshop to assist communities to initiate identified livelihood options in communities	DOF/ SPC / CI /												
Activity 1.3: Training workshops to assist local communities to adopt and implement identified livelihood options	DOF/IAS/ /CI/ SPC												
Activity 1.4: Organise media programs for public education	IAS/ CI												
Output 2: Degraded areas rehabilitated and guidelines for restoring degraded coastal and mangrove wetlands developed													
Activity 2.1: Community training on tree seed collection, nursery techniques and establishment of nursery	DOF/ USP/CI												
Activity 2.2: community training on planting of seedlings	DOF/CI/SPC												
Activity 2.3: training workshop to assist communities to formulate community policy, laws to maintain, monitor and ensure survival of planted trees	IAS/CI												
Activity 2.4: Guidelines for wetland restoration developed	DOF/IAS/CI/SPC												
Output 3: Maintain and enhance traditional knowledge and skills that will enable communities to value and sustain resource utilization													
Activity 3.1: Collate traditional knowledge and document skills sets needed for harvest and preservation of key food/timber sources from coastal and wetland mangrove systems	CI/DOF												
Activity 3.2 : Conduct community training to disseminate and build capacity for uptake of knowledge and skills gathered	CI/DOF												
Activity 3.3: Publish for wider dissemination information gathered from Activity 3.1 above	CI/DOF												
Output 4: Develop a framework to support existing mangrove policy and legislation													
Activity 4.1: Consultative workshop to identify levels of co-ordination, collaboration and networking among key institutions – and collate key issues on coastal and mangrove wetlands	All Key stakeholders												
Activity 4.2: Undertake a cost benefit study on the extent of illegal trade in fuel wood sourced from coastal and mangrove forests and make recommendations aligned to National Forest Policy 2007	IAS/SPC												
Activity 4.3: Assessment of fuel wood licensing system to identify challenges and status of illegal sale of fuel wood; make recommendation for future management based on cost benefit analysis	SPC/CI												
Activity 4.4: Develop, advocate and streamline the approval of a Code of Conduct for Sustainable Management of Mangrove Ecosystems through relevant Government Agencies	SPC,CI												

3.4 BUDGET

3.4.1 Master Budget

All project activities will cost **US$387,511.00** of which **26%** project personnel, **7%** on sub-contracts, 4% on travel, 12% on Capital items and **40%** on core project activities. Subcontracts will involve field activities that required specialised skills such as species identification GIS expertise to provide landuse maps **and awareness raising.** Activities are focused on Output **1 &** 2 where degraded wetland areas are enriched and rehabilitated with guidelines for restoring degraded coastal and mangrove wetlands developed for the greater benefit of all communities living in and around wetland riparian zones on Fiji. Detail of the budget is outlined in Annex 4.

3.4.2 Consolidated budget by component (in US$)

Category	Description	Total	Year 1	Year 2	Year 3
10	**Project personnel**				
11	National experts (Long term)	36,000	12,000	12,000	12,000
12	Project coordinator	25,000	8,333	8,333	8,333
13	Project Assistant	0	0	0	0
14	Project Driver	0	0	0	0
15	Local labour (nursery attendants)	12,000	4,000	4,000	4,000
16	National Consultants (short term)	0	0	0	0
16.1	National Consultant (Socio-economist)	0	0	0	0
17	Finance and Administration	21,900	7,300	7,300	7,300
19	**Component Total**	**94,900**	**31,633**	**31,633**	**31,633**
20	**Sub-contracts**	25,000	10000	15000	
29	**Component Total**	**25,000**	**10,000**	**15,000**	**0**
30	**Travel**				
31	Daily Subsistence Allowance				
31.1	Duty Travel National Experts (DSA)	1,500	500	500	500
31.2	Duty Travel Supporting Staff (DSA)	800	267	267	267
31.3	Duty Travel Driver (DSA)	0	0	0	0
32	Duty Travel (Fuel)	10,000	3,333	3,333	3,333
33	Local Transport Costs	0	0	0	0
33.1	Transport and Accommodation (Institutional Reps)	3,000	1,000	1,000	1,000
33.2	Transport (Community Reps)	0			
33.3	Transport and Accommodation (Workshop participants)	0	0	0	0
39	**Component Total**	**15,300**	**5,100**	**5,100**	**5,100**
40	**Capital items**				
41	Premises	6,000	2,000	2,000	2,000
42	4WD vehicle	35,000	35,000	0	0
43	Computer and accessories (desktops, scanners, laptop,	3,000	1,500	1,500	0
49	**Component Total**	**44,000**	**38,500**	**3,500**	**2,000**
50	**Consumable Items**				
51	Livelihood tools and materials	24,000	8000	8000	8000
52	Nursery preparation tools and materials	16,000	8000	8000	0
53	Seedling production tools and materials	10,000	5000	5000	0
54	Planting materials and tools	25,000	10000	10000	5000
55	Spares (Vehicle maintenance)	5,000	1666.67	1666.67	1666.67
56	Office supplies	6,000	2000	2000	2000
59	**Component Total**	**86,000**	**34,667**	**34,667**	**16,667**
60	**Miscellaneous**				
61	Airtime charges and radio jingles	500	250	250	0
62	Incentives	0	0	0	0
62.1	Incentives for community members	0	0	0	0
63	Printing of guidelines	5,000	0	5,000	0
64	Meeting costs	0	0	0	0
64.1	Meeting	5,000	1,667	1,667	1,667
65	Workshop	9,000	3,000	3,000	3,000
66	Training costs	0	0	0	0
66.1	Training	10,000	2,000	4,000	4,000
66.2	Lunch and refreshments	6,000	2,000	2,000	2,000
66.3	Training materials	8,000	1,600	4,800	1,600
67	Auditing	5,000	1,000	3,000	1,000
68	Steering Committee meetings	3,000	1,000	1,000	1,000
69	**Component Total**	**51,500**	**12,517**	**24,717**	**14,267**
70	**National Management Costs**				
71	Executing Agency Management Costs (15% of overall budget)	10,035	3,345	3,345	3,345
72	Focal Point Monitoring				
79	**Component Total**	**10,035**	**3,345**	**3,345**	**3,345**
80	**Project Monitoring and Administration**				
81	ITTO Monitoring and Review	21,000	7,000	7,000	7,000
82	ITTO mid-term, final, ex-post evaluation costs	6,500	0	6,500	0
83	ITTO Programme Support Costs (12% of funds requested from ITTO)	33,276	10,000	13,276	10,000
89	**Component Total**	**60,776**	**17,000**	**26,776**	**17,000**
90	**Refund of Pre-project costs**				
100	**GRAND TOTAL**	**387,511**	**152,762**	**144,738**	**90,012**

3.4.3 ITTO budget by component (in US$)

Category	Description	Total	Year 1	Year 2	Year 3
10	**Project personnel**				
12	Project coordinator	25,000	8,333	8,333	8,333
13	Project Assistant		0	0	0
14	Project Driver	0	0	0	0
15	Local labour (nursery attendants)	12,000	4,000	4,000	4,000
16	National Consultants (Ecologist)		0	0	0
16.1	National Consultant (Socio-economist)		0	0	0
17	Finance and Administration	0	0	0	0
19	**Component Total**	**37,000**	**12,333**	**12,333**	**12,333**
20	**Sub-contracts**	25000	10000	15,000	
29	**Component Total**	**25000**	**10000**	**15000**	
30	**Travel**				
31	Daily Subsistence Allowance				
31.1	Duty Travel National Experts (DSA)	1,500	500	500	500
31.2	Duty Travel Supporting Staff (DSA)	800	267	267	267
31.3	Duty Travel Driver (DSA)	0	0	0	0
32	Duty Travel (Fuel)	10,000	3,333	3,333	3,333
33	Local Transport Costs				
33.1	Transport and Accommodation (Institutional Rep	3,000	1000	1000	1000
39	**Component Total**	**15,300**	**5,100**	**5,100**	**5,100**
40	**Capital items**				
42	4WD vehicle	35,000	35,000		
43	Computer and accessories (desktops, scanners,	3,000	1,500	1,500	
49	**Component Total**	**38,000**	**36,500**	**1,500**	**0**
50	**Consumable Items**				
51	Livelihood tools and materials	24,000	8000	8,000	8,000
52	Nursery preparation tools and materials	16,000	8000	8000	
53	Seedling production tools and materials	10,000	5,000	5,000	
54	Planting materials and tools	25,000	10000	10,000	5,000
55	Spares (Vehicle maintenance)	5,000	1667	1,667	1,667
56	Office supplies	6,000	2000	2,000	2,000
59	**Component Total**	**86,000**	**34,667**	**34,667**	**16,667**
60	**Miscellaneous**				
61	Airtime charges and radio jingles	500	250	250	
62	Incentives	0			
62.1	Incentives for community members	0	0	0	0
63	Printing of guidelines	5,000		5,000	
64	Meeting costs	0			
64.1	Meeting	5,000	1,667	1,667	1,667
65	Workshop	9,000	3,000	3,000	3,000
66	Training costs	0			
66.1	Training	10,000	2000	4,000	4,000
66.2	Lunch and refreshment	6,000	2,000	2,000	2,000
66.3	Training materials	8,000	1600	4800	1,600
67	Auditing	5,000	1000	3000	1,000
	Steering Committee meetings		0		
69	**Component Total**	**48,500**	**11,517**	**23,717**	**13,267**
70	**National Management Costs**				
71	Executing Agency Management Costs (15% of		-	-	-
	overall budget)		-	-	-
72	Focal Point Monitoring		10,000.00	15,000.00	
79	**Component Total**	**-**	**10,000.00**	**15,000.00**	**-**
80	**Project Monitoring and Administration**				
81	ITTO Monitoring and Review	21,000	7,000	7,000	7,000
82	ITTO mid-term, final, ex-post evaluation costs	6,500		6,500	
83	ITTO Programme Support Costs (12% of funds	33,276	10000	13276	10000
	requested from ITTO)				
89	**Component Total**	**60,776**	**17,000**	**26,776**	**17,000**
90	**Refund of Pre-project costs**				
100	**GRAND TOTAL**	**310,576**	**127,117**	**119,093**	**64,367**

3.4.4 Executing Agency Budget by Component (in US$)

Category	Description	Total	Year 1	Year 2	Year 3
10	**Project personnel**				
11	National Experts	36,000	12,000	12,000	12,000
13	finance Administration	21,900	7300	7300	7300
19	**Component Total**	**57,900**	**19,300**	**19,300**	**19,300**
20	**Sub-contracts**				
29	**Component Total**				
30	**Travel**				
40	**Capital items**				
41	Premises	6,000	2,000	2,000	2,000
49	**Component Total**	**6,000**	**2,000**	**2,000**	**2,000**
50	**Consumable items**				
59	**Component Total**				
60	**Miscellaneous**				
68	Steering Committee meeting	3,000	1,000	1,000	1,000
69	**Component Total**	**3,000**	**1,000**	**1,000**	**1,000**
70	**National Management Costs**				
71	Executing Agency Managem	10,035	3345	3345	3345
	budget)				
72	Focal Point Monitoring	0	0	0	0
79	**Component Total**	**10,035**	**3,345**	**3,345**	**3,345**
EXECUTING AGENCY/HOST GC		**76,935**	**25,645**	**25,645**	**25,645**

3.5 Assumptions, risks, sustainability

3.5.1 Assumptions and risks

In developing the project certain assumptions have been made. These include;

- the need to restore degraded wetland ecosystems will be supported by the target communities, population of the greater Rewa Delta, partner Government agencies, and Provincial Administration in the Province of Rewa and Tailevu;
- the Government and Provincial Offices will provide technical assistance to ensure timely and effective implementation of project activities;
- seeds and vegetative materials for timber propagation are locally available.

It is further assumed that the Executing Agency will provide access to seeds of various species that are considered important by the communities but not readily available in the local vicinity. It is also assumed that the Department of Agriculture will provide support services on the supply of **crops** that are naturally found in coastal and mangrove wetland areas.

Risks involved with project include bush fires and illegal extraction by community members not directly involved with the project; lack of buy-in by relevant Government agencies such as the Department of Lands and Provincial Office resulting from non-alignment of project goals to the strategic development goals of such agencies; and lack of seeds and propagating material for reforestation and rehabilitation.

A key activity to mitigate the above risks is to ensure that there is wide spread awareness of the project by the general public, not only the target group of the project **but neighbouring** communities and municipalities. Community awareness will be through posters that will be put up in the area, media release and awareness workshops. In addition, community members will be encouraged to police the planted sites and follow existing village by-laws to prosecute offenders. The Executing Agency will undertake awareness among Government agencies to ensure that strategic development goals are aligned to the project goals. With information available from the MESCAL (Fiji) project, the Executing Agency currently have leverage to build up support from other Government agencies on the urgency of addressing the key problems identified in this project. It is further assumed that the Executing Agency will provide access to seeds of various species that are considered important by the communities but not readily available in the local vicinity. It is also assumed that the Department of Agriculture will provide support services on the supply of relevant crops that are naturally found in coastal and mangrove wetland areas.

3.5.2 Sustainability

To ensure sustainability of project outcomes under the project, local communities will be involved at different stages of project implementation. This will ensure that there is a sense of ownership which will help guarantee that the project is sustained.

The project will contribute to strengthening existing Land-use Policy and mangrove policy developed under MESCAL. The project will also support the Fiji National Forest Policy through advocating for the permanent conservation of mangroves to provide for sustainable customary use and sustenance of coastal fisheries. In addition, the project will contribute to the restoration of degraded wetlands and improving livelihoods of communities as important concerns for government and community leaders.

The Executing Agency will ensure mainstreaming of project activities into their strategic development and annual plans.

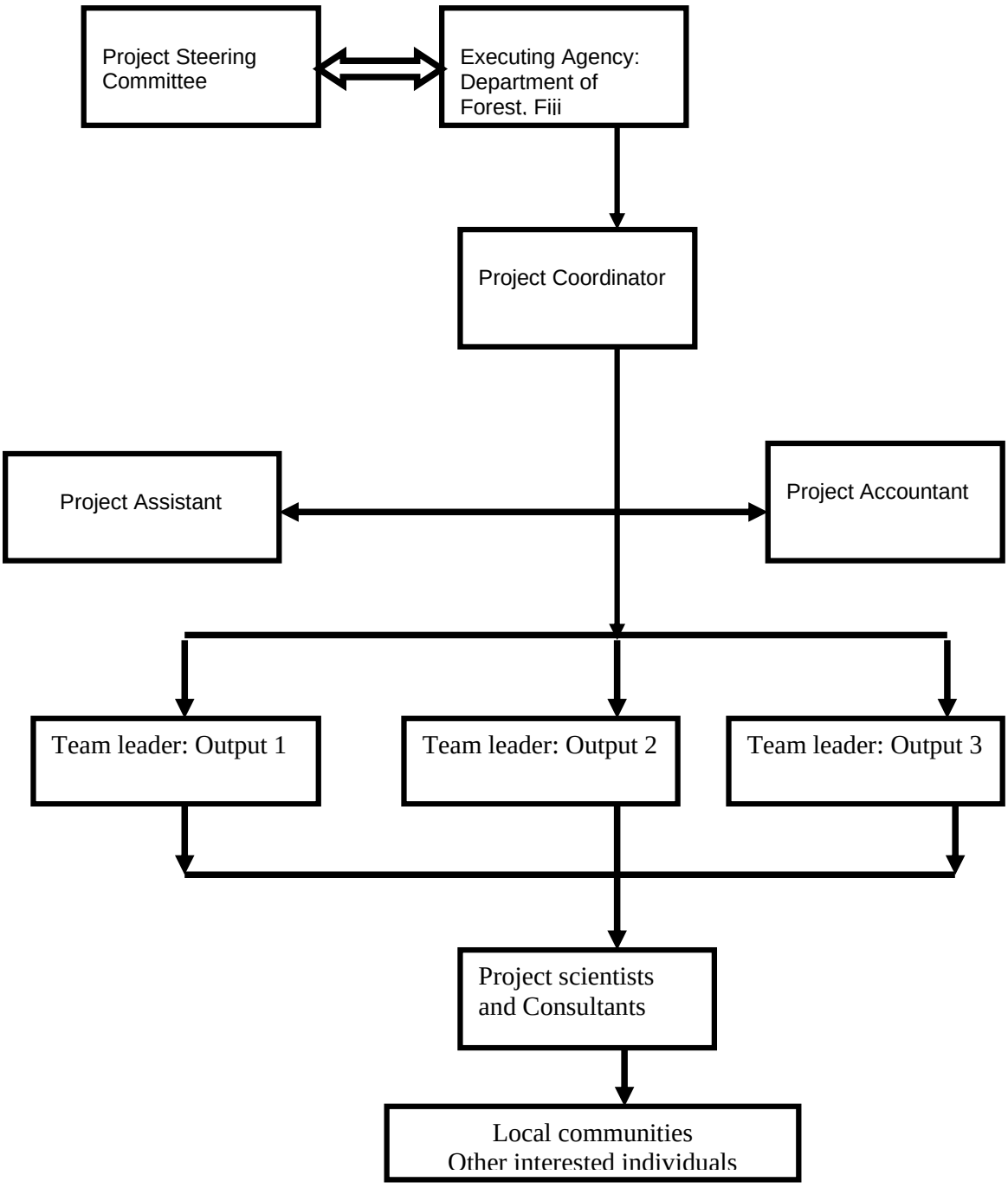
It is imperative for long term sustainability that the project has the support of government, traditional chiefs and emerging leaders of the communities. Mainstreaming project outcomes into the short-medium term plans of the Executing Agency, relevant Government Departments such as the Department of Lands and Survey and other partner organisations. Social agreements with partner agencies will be entered into as and when relevant. At the same time the University of the South Pacific (USP/IAS) and the Secretariat of the Pacific Community (SPC) are regional organisations that will remain in Fiji and the Pacific Region ensuring uptake of project activities and amplification after the project phase.

PART 4. PART 4 IMPLEMENTATION ARRANGEMENTS

4.1 Organization structure and stakeholder involvement mechanisms

The project will be executed by the Department of Forest and supported by collaborating partners who will be part of the Steering Committee. The Steering Committee is responsible for ensuring the Executive Agency aligns its activities and deliverables to the project proposal. The project organisation structure is outlined in Figure 2.

Figure 5: Project Organisational Structure



4.1.1 Executing agency and partners

The Department of Forestry, Fiji is responsible for research, development and coordination of the forest sector stakeholders from industry players, community members and resource owners. The Department of responsible for monitoring stakeholder activities as well as implementing forestry development programs, promoting training and skills development, the conservation and protection of forest resources and the sustainable development of the forest sector to become a major contributor to the national economy. Details of key partners are outlined in Appendix I.

4.1.2 Project management team

The Project Management team within the Department of Forest consist of the Conservator of Forest and two Deputy Conservator. While the Executing Agency head will be the Conservator of Forest, the Deputy Conservator Operations will be responsible for the Project Coordinator who is therefore responsible for the day to day operation of the project. The Executing Agency's Project Management Team will work closely with the Project Steering Committee.

4.1.3 Project steering committee

The steering committee will comprise of:-

i. Executing Agency – Department of Forest.
ii. Representative of International Tropical Timber Organization (ITTO)
iii. Representative of Donor Country
iv. Representative of the Ministry of Lands and Mineral Resources, Fiji
v. Representative of Ministry of Agriculture, Fiji
vi. Representative of the Department of Environment Fiji
vii. Representative of the Secretariat of the Pacific Community
viii. Representative of Provincial Councils of Rewa and Tailevu
ix. Representative of the iTaukei Lands Trust Board
x. Representative of local communities
xi. Representative of the University of the South Pacific
xii. Representative of Conservation International

The mandate of the Steering Committee includes;

- Direct the Executing Agency on site selection and project implementation;
- Review and monitor project work plans and related activities;
- Ensure alignment of the project activities to support Government Policies and Strategic Development;
- Ensure that community interests are addressed as well as the full participation of local communities.

4.1.4 Stakeholder involvement mechanisms

Stakeholder involvement will be through the steering committee level, project initiation workshop and local community levels. Representatives from various organisations with interests in wetland management and mangrove conservation are listed as part of the steering committee. The project Steering Committee (PSC) will offer important interventions during project implementation.

The PSC will appoint a technical committee that will provide the platform for consultative mechanism that will engage a wider stakeholder apart from those present in the Steering Committee. The Technical Committee will provide critique to the technical aspects of the project such as site and species selection in addition to other technical aspects.

At the start of project, there will be a project initiation workshop which will bring together relevant organisations and other stakeholders at different levels of governance to offer the platform for further deliberations which will shape the project. Stakeholders at the local community level will be involved during the implementation since they will take active part in most of the field activities.

4.2 Reporting, review, monitoring and evaluation

i) Reporting

a) Project progress reports: The Executing Agency will prepare and submit progress reports in accordance with ITTO guidelines every six months from the date of project commencement. Each reports will be reviewed by the Executing Agency and approved by the Steering Committee before submission to ITTO.

b) Project completion report: The Executing Agency will prepare and submit project completion report to ITTO three months after completion of project. This report will be compiled by the project coordinator, reviewed by the Executive Agency and the Steering Committee before submission.

c) Project technical report: Project technical reports will be prepared by project staff responsible for technical aspects of the project. These will be compiled by the project coordinator, submitted to the Executing Agency for review. The report will go through an additional review and approval by the Steering Committee before submitted by the Executing Agency to ITTO.

ii) Review and monitoring

The project will be subject to periodic technical review and monitoring in accordance with policies and procedures of ITTO. The Steering Committee will take the lead role in review and monitoring of the project ensuring that it is a continuous process, inexpensive and minimum interference to project implementation. The Steering Committee will continuously review and monitor project implementation through reviewing reports prepared by the Executing Agency for submission to ITTO.

iii) Evaluation

The project will be evaluated regularly by the Project Steering Committee. The main purpose of the evaluation is to assess the efficiency, effectiveness and impact of the project to target communities. Specific areas that the Steering Committee will evaluate include project purpose and program effectiveness, project staff, financial administration, and responsiveness of the target group. In particular, the Steering Committee will evaluate project objective on its relevance to the problem and sustainability of the impact of the project on target communities. It will evaluate project inputs and operation to assess the effectiveness of the project as well as evaluating project outputs and results to assess the efficiency of the project. The Steering Committee will be undertaking regular review of the project throughout the

project cycle with the overall evaluation on amplification of the project activities to other coastal and mangrove wetlands in Fiji and the Pacific Island Region.

4.3 Dissemination and mainstreaming of project learning

4.3.1 Dissemination of project results

The results and lessons learnt in the project will be disseminated through the following means;

1) Media programs: as part of major activities for the project programs will be launched on both community-based and national radio stations to create awareness on the importance of wetlands and the threats they face. Subsequently the lessons learnt will also be shared on these same platforms.
2) Final workshop will be organised at the end of the project to disseminate the results to stakeholders
3) Guidelines for restoration will be published to serve as guide for future reforestation efforts.
4) Policy briefs: recommendations from the project will be developed into policy brief for relevant policy makers and implementers.
5) Scientific publications will be made in journals.

4.3.2 Mainstreaming project learning

The Executing Agency will ensure that policy makers and implementers will have access to guidelines and policy briefs prepared from lessons learnt through the project implementation are envisioned to mainstream project results into the national strategy.

The representatives of the steering committees will facilitate mainstreaming project outcomes into short and medium term plans at the national level aimed at sustainable wetland resource management.

Lessons learnt from the project will also be mainstreamed into climate change mitigation and adaptation policies at national level. The project would provide support for such policy programs through the establishment of demonstration sites. The demonstration site will also provide the platform for wider amplification processes at the national scale.

Annex 1. PROFILES OF THE EXECUTING AND COLLABORATING AGENCIES

Executing Agency

Department of Forestry

Goals: To increase Forest sectors contribution to GDP by 1% through small micro and medium enterprise and downstream processing.

Objective: to formulate and implement policy initiatives and administration of the regulatory framework to facilitate Sustainable Forest Management in all types of forest, including coastal and mangrove wetlands.

Expertise: Research and developments, facilitating the development of infrastructure, coordinating the activities of stakeholders and stakeholders agencies, monitoring and the implementation of forestry development programs, promoting training and skill development, promoting the conservation and protection of forest resources and encourage local participation and entrepreneurship in value adding and down streaming process for local and export markets.

Collaborating Agencies

1) **Conservation International**

Goals: To enable significant and equitable improvements in human wellbeing, by helping society adopt the conservation of natural capital as the center piece of development. !!!

Objectives: CI's strategy is to serve as a trusted advisor to decision makers at all levels to help societies establish healthy, sustainable economies (HSEs) that secure nature's ability to provide enduring human wellbeing, as described by our six "securities." (The six securities are climate, freshwater, food and health security; cultural services; and species contributions.)

Expertise: In Fiji, CI team has field experience in engaging communities to consider and commit to putting aside a portion of their land (both forested or degraded) for protection and rehabilitation. CI Fiji team is made up of Foresters, Plant Ecologists, Agricultural Scientist and a Marine Specialist. The team work well together and have successfully secured the first 99 year conservation lease for the Sovi Basin Protected Area, the last remnant low land forest in Fiji and declared a Key Biodiversity Area as well as an Important Bird Area. CI Fiji has been planting degraded grasslands in the north-east end of Viti Levu with native timber tree species under a carbon offset project. At the same time, CI Fiji will commence work towards engaging community consensus for the expansion of the Wabu/Tomaniivi Nature and Forest Reserve in the North-east of Viti Levu.

Externally funded projects:

a. Sovi Basin Protected Area, Naitasiri, Viti Levu
b. Yaqara Conservation Area, Ra, Viti Levu
c. Greater Tomaniivi, Viti Levu

2) Institute of Applied Science, University of the South Pacific (USP)

Goals: To contribute to the development of the member countries of USP in the scientific, technical and resource areas. USP is a regional University owned by 12 Pacific Island countries.

Objectives: To make the expertise of the USP more widely available in the region.

Expertise: The institute's South Pacific Regional Herbarium is a member of the Australasia (Australia and New Zealand) Network of Herbaria. Recently (2003) it acquired the whole Solomon Island Herbarium collection (30K specimens) into its holding. The Herbarium and Environment unit of the institute will continue to work with major international conservation organizations and funders (e.g. the consortium of Herbaria worldwide (Index Herbarium. Holmgren, P.K. et al. (1990)); American Natural History Museum, Conservation International, WWF, Wetland International, AUSAid, NZAid, Catherine and John Macarthur Foundation, Moore Foundation etc.) to achieve protection status of unique species and biodiversity rich areas in Fiji and the Pacific.
In the last six years through its capacity building training program in taxonomy (botany, phycology, ornithology, entomology, freshwater and marine ichthyology, ecology, herpetology, coral taxonomy) researchers at the herbarium together with collaborators from other institutions (local and international) have discovered and described 15 new species to science (4 vascular plants, 7 freshwater species, 6 cryptogams) and many more species with new range extensions. The institute has organized and led more than 15 rapid biodiversity assessment surveys throughout Fiji with results written as professional technical reports and more lately into the CI RAP report format.
These researchers have also developed the ability to provide critical baseline biodiversity information necessary for the nomination of large areas of forest for protection, and the actual ex situ and in situ conservation of critically endangered species.
Represent the Ministry on all Biodiversity related program and activities and update the Minister on same.

Externally funded projects:

a. Coral Triangle Initiative

3) Secretariat of the Pacific Community

Vision: SPC's vision for the region is a secure and prosperous Pacific Community, whose people are educated and healthy and manage their resources in an economically, environmentally and socially sustainable way.

Mission: To help Pacific Island people position themselves to respond effectively to the challenges they face and make informed decisions about their future and the future they will leave for the generations that follow.

Expertise: SPC is the Pacific Island region's principal technical and scientific organization. It delivers technical, scientific, research, policy and training support to Pacific Island countries and territories in public health, geoscience, agriculture, forestry, water resources, disaster management, fisheries, education (community, TVET, standards and assessment), statistics, transport, energy, ICT, media, human rights, gender, youth and culture. SPC was established in 1947 as an international organization in 1947 and its working languages are English and French. Additional information is available at www.spc.int.

Annex 2. TASKS AND RESPONSIBILITIES OF KEY EXPERTS PROVIDED BY THE EXECUTING AGENCY

NAME:	Samuela Lagataki
EDUCATION:	Bachelor of Science (Australian National University)
CAREER/EXPERIENCE:	Department of Forest 1994- 2012
CURRENT OCCUPATION:	Conservator for Forest
RELEVANT WORK DONE:	Forest Management Information Systems
TASKS AND RESPONSIBILITIES ON THE PROJECT:	Executing Agency – responsible for the project delivery, coordination and collaboration among collaborating partners

NAME:	Susana Tuisese
EDUCATION:	Bachelor of Science (Australian National University) Master Environment Economics (University of Queensland)
CAREER/EXPERIENCE:	Department of Forest 1992-2007 Pacific Pine Chemicals 2008 Tropic Woods Industries Ltd. 2009 – 2011 Conservation International 2011 – 2012 Director CI Fiji
CURRENT OCCUPATION:	Forest Community Extension Work, Ethnobotany, Environmental Forestry
RELEVANT WORK DONE:	Collaborating partner to assist the Executing agency deliver project outputs with particular emphasis on workshop coordination and facilitation
TASKS AND RESPONSIBILITIES ON THE PROJECT:	

NAME:	Marika Tuiwawa
EDUCATION:	Bachelor of Science (University of the South Pacific) Master of Science (University of the South Pacific)
CAREER/EXPERIENCE:	Botany, Flora, Ethnobotany, Vegetation Ecology, Conservation Biology
CURRENT OCCUPATION:	Curator, South Pacific Regional Herbarium, Institute of Applied Science, University of the South Pacific
RELEVANT WORK DONE:	Flora Studies; Invasive plant species surveys, bio-security; assessments and monitoring; Vegetation Ecology studies; Community-based biodiversity conservation projects; Plantation forest and forestry certification; Training Tree Spotters; Botanical review of problematic taxa; Protection of large forest areas; Herbarium curation; Coordinate, Manage and Lead scientist on many biodiversity surveys in Fiji (Sovi Basin, Wabu, Monasavu, Ravilevu, Northern Lau, Gau etc), Botanical Team member to the Santo 2006 Biodiversity Expedition to Santo, Vanuatu; Guadalcanal Solomon Islands; PABITRA survey team to Samoa in 2003. Training and Capacity building (academia and technical)

TASKS AND RESPONSIBILITIES ON THE PROJECT:	– Ten people with MSc. with two currently on PhD and another two to follow. Collaborating partner to assist the Executing agency deliver project outputs with particular emphasis on technical aspects relating to community training and education on relevant species information.

Annex 3. TERMS OF REFERENCE OF PERSONNEL AND CONSULTANTS AND SUB-CONTRACTS FUNDED BY ITTO

TERMS OF REFERENCE DEVELOP POLICY FRAMEWORK

Duties:

1) Undertake desk-top analysis of existing policies and legislations relating to resources within coastal and mangrove wetlands to identify and conclude;
    a. Key challenges for sustainable management
    b. key stakeholders and linkages, coordination or existing management framework
    c. licensing, monitoring and surveillance of non-timber products such as fuel wood
    d. cost benefit of management options to improve fuel wood chain of custody and supply chain management
2) Conduct community and wide based stakeholder workshops to collate key issues as perceived by stakeholders on coastal and mangrove wetlands
3) Collate findings and present appropriate recommendations on the policy framework to develop coastal and mangrove wetland policies and legislation with special and separate section on the improving the management of fuel wood

Responsibilities:
Collaborate with the Executing Agency to coordinate implementation of project activities and provide necessary information and reporting to the Steering Committee

Competencies:
Understand local conditions pertaining to issues surrounding coastal and mangrove wetlands, as well as the mechanisms of local and provincial administration to be able to effectively coordinate community workshops at community level in Viti Levu and Vanua Levu.

TERMS OF REFERENCE COMMUNITY AWARENESS AND LIVELIHOOD

Duties: Undertake community awareness workshops using PRA tools to meaningfully engage with community members on a journey of self-discovery by the communities. Key deliverable will include:

1) Design and document appropriate awareness package suitable to the target community
2) Field Test the package in one community, review and amplify awareness raising among all target communities
3) Design , document and implement community driven training on most suitable and appropriate livelihood option selected by community. Livelihood option may range from planting of root crops, fuel wood (to replace current mangrove fuel wood sources), establishment of brackish water aquaculture (mud crabs, milk fish etc.).
4) Design and implement training package on establishment of community nursery from seed collection, treatment, nursery germination and propagation to out planting.
5) Publish awareness package and livelihood training material for future use by interested communities around Fiji and the Pacific Island Region.

Responsibilities: Collaborate with the Executing Agency to coordinate implementation of project activities and provide necessary information and reporting to the Steering Committee

Competencies: Ability to successfully communicate in the iTaukei language, proven record of working with communities in the past, a good understanding of the ecology of coastal and mangrove wetlands and traditional uses of resources found in these areas.

TERMS OF REFERENCE REHABILITATION AND RESTORATION OF DEGRADED COASTAL AND MANGROVE WETLANDS

Duties: Undertake desk-top analysis of existing ecological diversity, threats, risk and potential replacement plant species in coastal and mangrove wetlands to identify and conclude;

1) Zoning of coastal and mangrove wetlands for each of the 4 communities in Target communities
2) Identification of species mix in each zone
3) Representative field survey of existing species and relevant species that communities can select to rehabilitate and restore degraded landscapes
4) Design and implement training on community planting to rehabilitate and restore degraded areas in coastal and mangrove wetlands
5) Publish training material for future use by interested communities around Fiji and the Pacific Island Region.

Responsibilities: Collaborate with the Executing Agency to coordinate implementation of project activities and provide necessary information and reporting to the Steering Committee

Competencies: Knowledge on local species diversity and ability to translate to iTaukei language, knowledge on soil types and GIS land-use planning to ensure zoning is complementing national interest aligning to plans by all relevant Government agencies.

ANNEX 4 – Detail Master Budget

Outputs/ Description	Budget Compo-nent	Quantity			Units	Unit cost US$	Total cost US$	ITTO			Executing Agency		
Activities		**YR1**	**YR2**	**YR3**				**YR1**	**YR2**	**YR3**	**YR1**	**YR2**	**YR3**
Output 1: Governance framework for coastal and mangrove wetlands improved													
Activity 1.1 Review of coastal and mangrove wetlands policy													
Duty travel one national experts (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
Duty travel driver (DSA)	31.3	5			day	0	0						
Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			
Activity 1.2 Identification of institutions involved in coastal wetland management and evaluation of responsibilities													
Duty travel two national experts (DSA)	31.1	20	16	13	person mnth	21.1538	1032.31	423.077	338.462	270.769			
National Consultants (short term)	11	10			day	500	5000	5000					
Duty travel drivers (DSA)	31.3	10			day	0	0	0					
Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			
Activity 1.3 Consultative workshop with key institutions to identify levels of coordination, collaboration and networking among institutions													
Venue - 2-day inter-institutional; workshop,20 participant	65	4	2.8	2.4	number occurance	625	5750	2500	1750	1500			
Facilitator	65.1	4	3	2	person	250	2250	1000	750	500			
Transport and accommodation: 20 participants	33.1	1	1	1		100	300	100	100	100			
Activity 1.4 Support inter-institutional coordination													
3 x 1-day meetings; 15 participants/meeting	64.1	15	15	15	Participant	53.3333	2400	800	800	800			

Output 2: Local communities trained and empowered to implement activities linking livelihoods improvement to reduce overdependence on coastal resources								0						
Activity 2.1 Organise workshop to create awareness of project in districts								0						
	Venue - workshops in participating districts; 50 participants/work shop	65	4	2.8	2.4	number occurance	625	5750	2500	1750	1500			
	Facilitator	65.1	4	3	2	person	250	2250	1000	750	500			
	Transport and accommo-dation for invited Govt.Officials	33.1	1	1	1	0	100	300	100	100	100			
	Lunch and refreshments	66.2	100	100	100	participant	3.33333	1000	333.333	333.333	333.333			
	Local transportation for community members	33.1	1	1	1	0	100	300	100	100	100			
Activity 2.2 Conduct outreach programmes in communities to educate members on wetlands importance and threats								0						
	Duty travel one national experts (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
	Duty travel 2 supporting staff (DSA)	31.2	20	16	13	day	20	976	400	320	256			
	Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			
	Lunch and refreshments	66.2	100	100	100	participant	3.33333	1000	333.333	333.333	333.333			
	Transport for invited heads of institutions	33.1	1	1	1	0	100	300	100	100	100			
Activity 2.3: Organise media programmes for public education on the importance of coastal and mangrove wetlands								0						
	Duty travel 2 national experts (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
	Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			
	Air time charges for media programmes	61	12	8		month	62.5	1250	750	500	0			
	Jingles	61	12	8	0	month	62.5	1250	750	500	0			

Activity 2.4 Form management groups and build their capacity								0						
	Duty travel 2 national experts (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
	Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			
	Lunch and refreshments	66.2	100	100	100	participant	3.33333	1000	333.333	333.333	333.333			
	Training materials	66.3	1000	600	400	Package	1.66667	3333.33	1666.67	1000	666.667			
	Incentive package for group members	62.1	5	5	5	participant	400	6000	2000	2000	2000			
Activity 2.5 Identify livelihood options appropriate for communities								0						
	One national consultant (Socio-economic expert)	16.1	10			day	500	9000	5000	4000				
	Duty travel one national expert (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
	Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			
Activity 2.6 Build the capacity of local communities in identified livelihood options								0						
	venue - Training for 150 community members in livelihoods	65	4	2.8	2.4	number occurance	625	5750	2500	1750	1500			
	Facilitator	65.1	4	3	2	person	250	2250	1000	750	500			
	Resource person	65.2	2	2	0	person	500	2000	1,000	1,000	0			
	Local transportation for community members	33.1	1	1	1	0	100	300	100	100	100			
	Training materials	66.3	1000	600	400	package	1.66667	3333.33	1666.67	1000	666.667			
	Training venue and Facilities	66.1	2	4	2	event	1000	8000	2000	4000	2000			
Activity 2.7 Assist communities to initiate livelihood options								0						
	Duty travel 2 national experts (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
	Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			

	Livelihood tools and Materials	51		14		community	714.286	10000	0	10,000	0			
Output 3: Degraded wetland areas rehabilitated and guidelines for restoring degraded coastal and mangrove wetlands developed								0						
Activity 3.1: Identify and select appropriate tree and bamboo species suitable for specific wetlands catchments								0						
	Duty travel two national experts (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
	Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			
Activity 3.2: Build the capacity of communities in the establishment and management of nurseries and plantations								0						
	Training of 150 community members in nursery and plantation mgt.							0						
	Facilitator	66.1	2	2	1	person	833.333	4000	1666.67	1666.67	666.667			
	Resource person		2	2	1	person	833.333	4000	1666.67	1666.67	666.667			
	Local transportation for community members	33.1	1	1	1	0	100	300	100	100	100	0	0	0
	Training materials	66.3	1000	600	400	package	500	3333.33	1666.67	1000	666.667			
	Training venue and facilities	66.1	2	4	2	event	1000	8000	2000	4000	2000			
Activity 3.3: Selection of suitable sites and establishment of nurseries in selected communities								0						
	Duty travel two national experts (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
	Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			
	Nursery attendants	15	10	10	10	person mnth	275	8250	2750	2750	2750			
	seedling produciton, tools and materials	52	14	14	14	community pkg	214.286	9000	3,000	3,000	3,000			
Activity 3.4: Selection of seeds and production of seedlings selected for rehabilitation								0						
	Duty travel two national experts (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
	Duty travel three supporting staff (DSA)	31.2	20	16	12.8	day	20	976	400	320	256			
	Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			

	Nursery attendants	15	10	10	10	person mnth	275	8250	2750	2750	2750			
	Seedling production toolsand materials	53	14	14	14	community pkg	214.286	9000	3000	3000	3000			
Activity 3.5: Establishment of plots and planting of seedlings								0						
	Duty travel two national experts (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
	Duty travel two supporting staff (DSA)	31.2	20	16	12.8	day	20	976	400	320	256			
	Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			
	Planting materials and Tools	54	14	14	11	community pkg	357.143	14000	5000	5000	4000			
	Incentive for community Members	62.1	5	5	5	participant	400	6000	2000	2000	2000			
Activity 3.6: Maintain and monitor plots established on degraded coastal and mangrove wetlands								0						
	Duty travel national expert (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
	Duty travel two support-ng staff (DSA)	31.2	20	16	12.8	day	20	976	400	320	256			
	Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			
Activity 3.7: Guidelines for wetlands restoration developed								0						
	Duty travel national expert (DSA)	31.1	20	16	13	day	21.1538	1032.31	423.077	338.462	270.769			
	Duty travel (fuel)	32	200	160	128	days	5.07692	2477.54	1015.38	812.308	649.846			
	venue - Training workshop on usage of guidelines: 150	65	4	2.8	2.4	number occurance	625	5750	2500	1750	1500			
	facilitator	65.1	4	3	2	person	250	2250	1000	750	500			
	Printing of guidelines	63	1000	0	0	number print	4	4000	0	4000	0			
Non-activity based expenses								0						

	Project Coordinator	12	12	12	12	person mnth	900	32400	10,800	10,800	10,800			
	Project Assistant	13	12	12	12	person mnth	700	0	0	0	0			
	Project Driver	14	12	12	12	person mnth	400	0	0	0	0			
	Finance and Administration	17	12	12	12	person mnth	500	21900				7300	7300	7300
	National Expert							45000				15,000	15,000	15,000
	Premises	41	1	1	1	year	2000	6000				2,000	2,000	2,000
	Steering Committee meetings	68	1	1	1	event	1000	3000				1,000	1,000	1,000
	4WD vehicle	42	1			unit	45000	45000	45,000					
	Spares/Vehicle maintenance	55	1	1	1	year	9000	6000	1,000	2,000	3,000			
	Office supplies	56	1	1	1	year	6000	7000	4,000	2,000	1,000			
	Computer and accessories (2 laptops, 2 desktops, printer,scanner, etc)	43	1			unit	10000	15000	15,000	0	0			
	Auditing	67	1	1	1	year	2200	3300	1,100	1,100	1,100			

ANNEX 5 – Meeting of the 46th Expert Panel for Technical Appraisal of Project Proposals

PD 696/13 Rev.1 (F) **Reforestation and Sustainable Management of Vulnerable Habitats and Forests in the Rewa River Mangrove System, Viti Levu (Fiji)**

Assessment by the Forty-sixth Panel

A) Overall Assessment

The Panel recalled the importance of restoring degraded mangrove ecosystems in the Rewa River Mangrove System, Viti Levu, Fiji in line with ITTO extended work on mangrove. The Panel noted that most of the specific recommendations of the Forty-fifth Expert Panel had been addressed in the revised proposal. However, the Panel was still concerned about weaknesses in the proposal. These include: weak presentation of the development objective in a very simple way; and weak presentation of the ITTO project budget with a high provision for the project personnel and no justification for the sub-contract. Moreover, the Panel underlined the importance of effective participation of local communities and mainstreaming project learning to the national level as a model mangrove ecosystem management area in the country.

B) Specific Recommendations

The proposal should be revised taking into account the overall assessment **and** the following:

1. Provide a larger map showing the project location in the country; *Refer to page 5& 11*

2. Further elaborate on how the project will build on the outcome of the on-going project on Mangrove Ecosystem for Climate Change Adaptation and Livelihood (MESCAL-Fiji);
   Refer to pages 7&8
   Change/Insertion: ***In such ecosystems, loss of traditional fruit and medicinal trees such barringtonia adulis, pometia pinnatae, inocarpus fargifa, were once common in their natural habitat and contributed to economic livelihoods among the local communities. In addition, the giant swamp taro (cyrtospema chamissonis), duruka (saccharum edule), wild yam (dioscorea nummularia) and sago palm (metroxyln vitiense) were once common in the freshwater swamp at the back of the mangrove but these species are now scarce due to overexploitation and loss of habitat. Habitat loss can be attributed to failed attempts for national rice schemes and the development of large irrigation systems aimed at converting swamp lands into arable land. The loss of such key edible species poses a threat to food security for local communities.***

3. Describe the expected contribution of the project to the implementation of the ITTO Mangrove Action Plan;
   Refer to page 9
   Change/Insertion: ***The project will ensure that components of the ITTO Mangrove Action Plan 2004-2009 will be put in place in Fiji to support sustainable management of mangroves. In particular scientific data collected from the MESCAL project will be the building block for the project implementation. For instance, one of the key findings from MESCAL is the extent of invasive species found in the back of the mangrove area. The project will focus on restoration and enrichment planting in these area. In addition, the MESCAL project identified excessive harvesting of Bruguiera and Rhizophora spp. as firewood and construction material; pointing to the urgent need for replacement and***

enrichment planting. The project will advocate the establishment of community woodlots to address the current demand among local communities in a sustainable manner. The MESCAL project also revealed the extent of invasive species in the mangrove forest such as Annona glabra. Such invasive species are crowding area that would be suitable for fruit trees such as Innorcarpus fagifer, Cocos nucifera, Dioscorea spp and others. The project will therefore enhance mangrove conservation, restoration, enrichment and sustainable management of the mangrove resources.

4. Further improve Section 1.4 (Expected outcomes at project completion) by elaborating what the target groups will be doing after project completion as a consequence of the project;

Refer to pages 13 & 14
Change/Insertion: *At project completion, degraded coastal and mangrove wetlands will be restored through rehabilitation* ***and enrichment*** *planting. In addition, it is envisaged that communities would have clear policies* ***and community based guidelines*** *in place to provide framework for utilization, management and monitoring of the rehabilitated areas.* ***An existing program within the iTaukei Affairs Board called the Yaubula Management Support Teams (YMST or Community based Resource Committees) will be strengthened through the project whereby the YMST will spearhead community management and monitoring of mangrove resources****. In addition, existing governance systems (Village Development Committees) will be strengthened through improving coordination and monitoring of wetland management and conservation.*

At the national level there are two main expectations including the formulation of a policy framework for coastal and mangrove wetlands and formulation of tracking mechanisms to arrest illegal trade of timber and fuel wood. ***The project will provide the platform to the Department of Forest to raise awareness on the procedures and processes involved with obtaining legal licenses to utilize mangrove. After the project the Department will continue to monitor and track illegal timber trade from mangrove resources.***

5. Further improve the problem analysis by focusing on the key problem related to the deforestation and degradation of costal and mangrove forests;
Refer to Fig 3, page 18

6. Ensure consistency for statements of Development and Specific Objectives and Output 1 between the logical framework matrix and Section 2.2;
Refer to page 20
Change/Insertion: ***To establish demonstration sites that will showcase effective policy programs and activities.***

Page 22: The development objective of the project is to rehabilitate degraded coastal and mangrove wetland while improving the livelihoods of local communities through the ***enhancement of such systems with species diversity and mix*** *closely resembling their occurrence in nature. The project therefore aims to support and implement workable framework and practical solutions to the adoption of sustainable forest management systems and conservation of coastal forests in Fiji at community level.*

7. Recalculate the ITTO Programme Support Costs (Sub-component 83) specified in the budget so as to conform with the new standard of 12% of the total ITTO project costs in accordance with the decision of the 48th Session of the ITTC;
Refer to page 33, 34, 35

8. Further refine the project title to capture an important aspect of the proposed project strategies relating to the effective engagement of local communities;
Refer to page 1

Change/Insertion: ***Community based restoration*** *and Sustainable Management of Vulnerable Forest of the Rewa Delta, Viti Levu, Fiji*

9. Include an annex that shows the recommendations of the 46th Expert Panel and the respective modifications in tabular form. Modifications should also be highlighted (**bold and underline**) in the text.

C) Conclusion

Category 1: The Panel concluded that the proposal could be commended to the Committee with incorporation of amendments.

ANNEX 6. RESPONSE TO RECOMMENDATIONS OF ITTO EXPERT PANEL

Recommendation of the 46th Expert Panel		Modifications
1	Provide a larger map showing the project location in the country	See page 5: Figure 1 See page 11: Figure 2
2	Further elaborate on how the project will build on the outcome of the on-going project on Mangrove Ecosystem for Climate Change Adaptation and Livelihood (MESCAL-Fiji);	See page 7,8
3	Describe the expected contribution of the project to the implementation of the ITTO Mangrove Action Plan;	See page 9
4	Further improve Section 1.4 (Expected outcomes at project completion) by elaborating what the target groups will be doing after project completion as a consequence of the project;	See page 13, 14
5	Further improve the problem analysis by focusing on the key problem related to the deforestation and degradation of costal and mangrove forests	See page 18:Figure 3
6	Ensure consistency for statements of Development and Specific Objectives and Output 1 between the logical framework matrix and Section 2.2	See page 20, 22
7	Recalculate the ITTO Programme Support Costs (Sub-component 83) specified in the budget so as to conform with the new standard of 12% of the total ITTO project costs in accordance with the decision of the 48th Session of the ITTC;	See page 4, 30, 33, 34, 35
8	Further refine the project title to capture an important aspect of the proposed project strategies relating to the effective engagement of local communities	See page 1
9	Include an annex that shows the recommendations of the 46th Expert Panel and the respective modifications in tabular form. Modifications should also be highlighted (**bold and underline**) in the text.	done