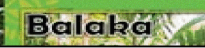


STOCKTAKE REPORT



Prepared for
DEPARTMENT OF ENVIRONMENT
Ministry of Local Government, Urban Development, Housing and Environment



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Vokai

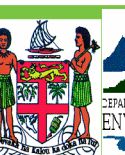


TABLE OF CONTENT		
<u>LABEL</u>	<u>TOPIC</u>	<u>PAGE Nos.</u>
PART A	List of Acronyms	5
PART B	List of Boxes	6
PART C	List of Tables	7
PART D	Acknowledgement	6
PART E	Background and Stocktake Process	8 - 9
PART F	References	95
PART G	Annex: 1.0: Consultant Strategic Planning – Phase 1 Stocktake	90 - 98
	1.1 Inventory of Legislations and Acts	99 - 116
	1.2 Inventory of Stakeholders	
	1.3 Inventory of Projects and Initiatives under UNFCCC, UNCCD and CBD	
PART 1	The United Nations Framework Convention on Climate Change (UNFCCC) (by Dr Paulo Vanualailai)	9 - 31
1.1	Introduction	9
1.2	National Obligation under the UNFCCC	12
1.3	National Activities under the Convention.	19
1.4	Legislations	23
1.5	National Committee	24
1.6	Regional Activities under the UNFCCC	24
1.7	Kyoto Protocol	26
1.8	Concluding Remarks	31

PART 2	The United Nations Convention to Combat Desertification (UNCCD) (by Leone Limalevu)	32 - 57
2.1	Introduction	32
2.2	Country Activities under the Convention	36
2.3	Summary of Relevant Policies	39
2.4	Regional Activities under the UNCCD	47
2.5	Current Resource Status of the National Focal Point	49
2.6	Currently Identified Capacity Needs and Projects proposed by the National Focal Point.	51
2.7	Concluding Remarks	57
PART 3	The United Nations Convention on Biological Diversity (by Dr P.J. Kailola)	58 – 87
3.1	Introduction	58
3.2	National Obligations under the Convention	59
3.3	National Activities under the Convention	63
3.4	Key Legislation and Support	80
3.5	Regional Activities under the CBD	81
	Cartagena Protocol on Biosafety	86
	Concluding Remarks	87

PART A: LIST OF ACRONYMS

AIA – Advance Informed Agreement; **ALTA** – Agricultural Landlords and Tenancy Agreement; **AusAID** – Australian Government overseas aid programme; **BCH** – Biosafety Clearing House; **BI** – Birdlife International; **FAB** – Fijian Affairs Board; **BQA** – Bilateral Quarantine Agreement; **CBD**-Convention on Biological Diversity; **CBO** – Community-based Organisation; **CI** – Conservation International; **CITES** – Convention on International Trade in Endangered Species; **COP**-Conference of Parties; **CRISP** – Coral Reef Initiative in the South Pacific; **DOE** -Department of Environment; **FLMMA** – Fiji Locally Managed Marine Areas (network); **FMAC** – Fiji Marine Aquarium Council; **FPCL** – Fiji Ports Corporation Limited; **FSC** – Forest Stewardship Council; **FSPI** – Foundation of the Peoples of the South Pacific International; **GCRMN** – Global Coral Reef Monitoring Network; **GEF** – Global Environment Fund; **GLOMIS** – Global Mangrove Database and Information System; **GTZ** – German Technical Cooperation Agency; **IAS** – Institute of Applied Sciences; **ICM** – Integrated Coastal Management; **IOI** – International Oceans Institute; **ISSG** – Invasive Species Specialist Group; **ITTO** – International Tropical Timber Organisation; **IUCN** – International Union for the Conservation of Nature; **JICA** – Japan International Cooperation Agency; **LMMA** – Locally Managed Marine Areas (network); **MES** – Mamanuca Environment Society; **MOU**-Memorandum of Understanding; **MPA** – Marine Protected Area; **MRD** – Department of Mineral Resources; **MSc** – Master of Science; **NBSAP** – National Biodiversity Strategy and Action Plan, Fiji Islands; **NCSA** – National Capacity Self Assessment; **NFMV** – NatureFiji/MereqetiViti; **NGO** – Non-Government Organisation; **NTF** – National Trust of Fiji; **PABITRA** – Pacific Asian Biodiversity Transect; **PACE** – Pacific Centre for Environment and Sustainable Development; **PICCAP**-Pacific Islands Climate Change Assistance Program; **PILN** – Pacific Invasive Learning Network; **PIU** -Project Implementation Unit; **POP** – Persistent organic pollutants; **SBWG** – Sovi Basin Working Group; **SIDS** – Small Island developing States; **SOPAC** – Pacific Islands Applied Geosciences Commission; **SPC** – Secretariat of the Pacific Community; **SPREP** – Pacific Regional Environment Programme; **SPRH** – South Pacific Regional Herbarium; **SPRIG** – South Pacific Regional Forest Genetic Resources Group; **UNCA** – Upper Navua Conservation Area; **UNCBD** – United Nations Convention on Biological Diversity; **UNCCD** -United Nations Convention to Combat Desertification; **UNDP** – United Nations Development Programme; **UNEP** – United Nations Environment Programme; **UNFCCC** -United Nation Framework Convention on Climate Change; **USA** – United States of America; **USP** – The University of the South Pacific; **WCS** – Wildlife Conservation Society; **WHO** – World Health Organization; **WI-O** – Wetland International Oceania; **WMO** -World Meteorological Organization; **WWF (FCP)** – World Wide Fund for Nature, Fiji Country Program; **WWF (SPP)** – World Wide Fund for Nature, South Pacific Program

PART B: LIST OF BOXES

Box 1.	Commitments for Non-Annex 1 Parties as set out in Article 4
Box 2	Article 12. Communication of Information Related to Implementation

PART C: LIST OF TABLES

Annex 1-0	Strategic Planning for Stocktaking Process
Annex 1-1	Legislations and Acts
Annex 1-2	Inventories of existing stakeholders
Annex 1-3	Listing of Projects implemented under three Rio Convention
Annex 1-4	Summary of stakeholders meeting (Western)

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PART D: BACKGROUND

Over the past decades, capacity constraint has been identified as a biggest obstacle to sustainable development. In January 2000, the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP) launched the Capacity Development Initiative so to identify priority issues and capacity development needs in a number of regions and countries. Some findings were:

- capacity development needs at the overall systems levels;
- the existence of synergies across Conventions in terms of capacity needs; and
- the need for programmatic approaches to capacity development that are nationally driven and reflect country priorities.

In May 2001, the GEF approved the provision of funding for countries to undertake self assessment capacity building needs, with emphasis on cross-convention synergies in capacity building activities, thus the birth of the National Capacity Self Assessment (NCSA) concept. The NCSA is designed as a powerful and flexible tool to help each countries examine its capacity in a more holistic and integrated fashion.

Fiji has not examined its capacity needs across the three “Rio” Conventions thus the NCSA Project is expected to address this gap and to be able to identify capacity needs and constraints. The NCSA project starts implementation starting October 2007 up till March 2009 by the Department of Environment as the executing agency. The NCSA project will provide an opportunity for Fiji to “conduct a thorough self-assessment and analysis of national capacity needs, priorities and constraints with respect to meeting global environmental management objectives”. The stocktaking exercise aims to provide a baseline situation for each of the thematic areas of the three Conventions: biodiversity, climate change, desertification/land degradation; and will form the basis of the thematic assessments to follow.

STOCKTAKE PROCESS

The Stocktake process for Fiji was conducted according to the Strategic Plan attached as Annex 1-0. The stocktake process was carried out by the three consultants’; Dr Paulo Vanualailai, Dr Patricia Kailola, Mr. Leone Limalevu and coordinated by the National Project Coordinator, Ms Senivasa Waqairamasi of the National Capacity Self Assessment Project at the Department of Environment.

The aim of the Stocktake process is to list all related initiatives (ongoing and previous) with short description of each exercise. The Stocktake process is intended to be broad and inclusive. It should be able to consider, at least briefly, *all* that has been accomplished related to each Convention. The stocktake aims to ensure that the NCSA builds all past experience, all lessons learnt, and all existing country-specific analyses. It should be able to list a short description of major projects, relevant legislations and documents produced through related work under the three thematic areas of climate change, biodiversity and land degradation.

The Stocktake process was carried out in the time period of 4 weeks starting 3rd June and ended 30th June, 2008 in which a Draft Stocktake Report was produced. The Stocktake Report was finalised in August, 2008.

The Stocktake Report has produced baseline information with an account of what Fiji has done to address UNFCCC, UNCCD and CBD convention obligation. It attempts to list key stakeholders who are implementers, key projects and initiatives addressing the three thematic areas of the convention, reports compiled for the convention and legislations in place in Fiji ect.

The Stocktake Report will be expanded upon and form basis for the next few phases of the NCSA Process which includes (In-depth Thematic Assessment, Identification of Crosscutting Issues and drafting of a National Action Plan with set of action and recommendation for further implementation).

The Stocktake Report is prepared by the three local consultants assisting with the NCSA Project at the Department of Environment; Dr Paulo Vanualailai on UNFCCC, Mr Leone Limalevu on UNCCD and Dr Patricia Kailola on CBD. The Stocktake Report was compiled by the NCSA Project at the Department of Environment.

PART 1: THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC) AND ITS KYOTO PROTOCOL (by Dr Paulo Vanualailai).

1.1 INTRODUCTION

At the first World Climate Conference (WCC), in 1979, Scientists began to express anthropogenic influence for increasing concern over the rising emission of greenhouse gases in the atmosphere affecting global climate. In light on this, the United Nations General Assembly in 1988 agreed to a resolution, to protect global climate for present and future generations of mankind. “Two years later, in 1990, the United Nations General Assembly passed a resolution, formally launching negotiations on a climate change convention. In May 1992, the United Nations Framework Convention on Climate Change (UNFCCC) text was adopted and the Convention opened for signature in June at the Earth Summit, held in Rio de Janeiro. The UNFCCC entered into force in March 1994 (Fisher E, 2004). Fiji signed the convention at its launch in 1992 and ratified it in 1993.

1.1.1 Objective

The objective of the Convention is “the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system” (Fisher E, 2004). The Convention covers all greenhouse gases not covered by the Montreal Protocol with the focus being on the following:

- Carbon dioxide
- Methane
- Nitrous Oxide
- Hydrofluorocarbons
- Perfluorocarbons
- Sulphur hexafluoride

The tasks taken in this report at the national level are as follows:

- Review of existing legislations that has specific sections which can be aligned for the implementation of the convention (Annex 1-1)
- Inventory of existing stakeholders in government, non- governmental organizations (NGOs), statutory bodies and private sector (Annex 1-2)
- Re-alignment exercise to define stakeholders status under the convention
- Identification of stakeholders status outlined in their KPI, corporate goals and strategic plans

1.1.2 Commitment under the Convention

The Convention divides countries into three main groups, with commitments varying according to their classification. Annex 1 Parties include the industrialized countries that were members of the Organization for Economic Co-operation and Development (OECD) in 1992 along with countries with economies

transition (EIT). Annex 1 Parties consist of OECD members of Annex 1 excluding the EIT Parties. These Parties are required to provide funding to developing country Parties to undertake emissions reduction activities and to help them to adapt to the adverse effects of climate change (Fisher E, 2004). The third group is the Non-Annex 1 Parties and includes the developing country Parties. The commitments for developing country Parties, including Small Island Developing States (SIDS) are set out in Box 1 and include:

- Develop, periodically update, publish and make available to the Conference of the Parties, in accordance with Article 12, national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies to be agreed upon by the Conference of the Parties;
- Formulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, and measures to facilitate adequate adaptation to climate change;
- Take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions.
- Cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods.

Box 1. Commitments for Non-Annex 1 Parties as set out in Article 4

1. All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall:

(a) Develop, periodically update, publish and make available to the Conference of the Parties, in accordance with Article 12, national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies to be agreed upon by the Conference of the Parties;

b) Formulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, and measures to facilitate adequate adaptation to climate change;

(c) Promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors;

- (d) Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems;

-
- (e) Cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods;
- (f) Take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change;
- (g) Promote and cooperate in scientific, technological, technical, socio-economic and other research, systematic observation and development of data archives related to the climate system and intended to further the understanding and to reduce or eliminate the remaining uncertainties regarding the causes, effects, magnitude and timing of climate change and the economic and social consequences of various response strategies;
- (h) Promote and cooperate in the full, open and prompt exchange of relevant scientific, technological, technical, socio-economic and legal information related to the climate system and climate change, and to the economic and social consequences of various response strategies;
- (i) Promote and cooperate in education, training and public awareness related to climate change and encourage the widest participation in this process, including that of non-governmental organizations; and
- (j) Communicate to the Conference of the Parties information related to implementation, in accordance with Article 12¹.

Box 2. Article 12. Communication of Information Related to Implementation

1. In accordance with Article 4, paragraph 1, each Party shall communicate to the Conference of the Parties, through the secretariat, the following elements of information:

- (a) A national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, to the extent its capacities permit, using comparable methodologies to be promoted and agreed upon by the Conference of the Parties;
- (b) A general description of steps taken or envisaged by the Party to implement the Convention; and
- (c) Any other information that the Party considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its communication, including, if feasible, material relevant for calculations of global emission trends.

¹ Article 12 defines the required elements of information.

1.2 NATIONAL OBLIGATION UNDER THE UNFCCC

1.2.1 Initial National Communication

Fiji's initial National Communication was completed in 2005 and has been prepared in accordance with guidelines issued following the 2nd Conference of Parties (COP2) to the treaty. It was funded by the Global Environment Facility, implemented by South Pacific Regional Environmental Programme (SPREP) and executed by the national focal point, the Fiji Department of Environment (now the Ministry of Environment).

In accordance with Article 12 of the Convention, the initial National Communication contains *inter alia*:

- A national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using the Intergovernmental Panel on Climate Change (IPCC) 1996 Revised Guidelines for National Greenhouse Gas Inventories;
- Vulnerability and adaptation issues; and
- National policy and actions.

The national communication was initially drafted in 1997, but due to the incompleteness of the many projects that were carried out under the initial three years term; the write-up was delayed until 2005. The problem with the national communication was the absence of concurrent projects inclusion into the report which was implemented at regional level after Fiji signed the convention in 1992. These are mostly technical and scientific programmes which was outside of DOE's capacity.

1.2.2 National Inventory of Anthropogenic Emissions by Sources and Removals by Sinks.

Fiji's first Greenhouse Gas Inventory for 1991 was developed from 1995 to 1997. Several factors caused delays in the process of developing this inventory. One of the major causes was the difficulty of obtaining information from other government organizations and the private sector due to lack of quantitative and qualitative data gathering.

This inventory describes in detail which assumptions were made, which should facilitate the development of any future inventories. These are primarily based on the six major greenhouse gases covered in the Kyoto Protocol, namely:

- carbon dioxide,
- methane,
- nitrous oxide,
- hydrofluorocarbons,
- perfluorocarbons and
- sulphur hexafluoride

The main sources of major greenhouse gases in Fiji were found to be:

- Carbon dioxide from burning of fossil fuel and biomass
- Methane – emission from animal and human wastes and flooded rice fields
- Nitrous oxide from burning of biomass and incomplete combustion of fossil fuels.

Issues identified are:

- A lot of information on emission of moisture content of wet and dry areas is based on assumptions, this need to be verified in a more detailed analysis.
- Gaps identified are the following areas; Moisture content in dry and wet seasons is yet to be specified areas, but the caloric values in the area of fuelwood, copra and baggage are based on wet seasons
- The energy sector is the major source of GHG emissions in Fiji, with emissions dominated by the transport and energy industries. Therefore, to have a significant reduction in the national emissions of GHG gases, mitigation measures will need to target the release of carbon dioxide from this sector.
- Compared to global net emission, Fiji is insignificant and therefore has capacity to solve its own domestic problem whilst on the other hand, specific focus and emphasis should be realigned to the area of vulnerability assessment and adaptation (mitigation options).

One of the most important contributions to the establishment of the Fiji CDM project is the final result of the inventory data which shows the quantum of Fiji's contribution to the global GHG emission. This data was never utilized for the post Kyoto protocol commitment in the set up of the CDM unit at DOE. The data which quantify the total amount of Fiji's fossil fuel consumption provides the opportunity for carbon trading in the initial phase from 2002-2007. Fiji misses out on this opportunity, in particular in the area of renewable energy and fossil fuel switch.

1.2.3 Vulnerability and Adaptation

Issues identified here include:

- Fiji is an oceanic island nation and due to the coarseness of the spatial resolution, there is inadequacy of existing general circulation models (GCM) in forecasting possible climate change scenarios in Fiji since small-scale weather systems are non-existent in the models
- Lack of historical quantitative and quantitative scientific data, provides restrictions for appropriate assessment and analysis, thus is a need for additional funding to conduct in depth vulnerability analysis “in most areas, in particular coastal zones, water resources, agriculture and the health sector” is imperative.

- Apart from this, there should be a realignment of related stakeholders in academic and technical institutions to provide human and financial resources to gather, store, and analyse existing data (e.g. Capacity building of Fiji Meteorology Department).
- The need for implementing appropriate integrated approach in resource management and governance (especially issues dealing with complex land tenureship)
- The need for additional finance resources to implement the appropriate adaptation options in coastal zones, water resources, agriculture and the health sector

Adaptations which are implemented on outdated information are very much prone to failures. Moreover adaptations based on very little or scarce baseline scientific information are also prone to failures. The problem is compounded due to the lack of technical expertise in human resource, and lack of funding opportunities. Integrated management approach to alleviate constraints by seeking funding assistance from related stakeholders were never aggressively pursued by the DOE.

1.2.4 National Policy and Actions on Climate Change

A number of capacity issues were identified in this chapter and include:

- Lack of expertise/knowledge in implementing test methodologies and establishing baseline conditions at the national level with focal point of implementation (e.g., Ministry of Environment MoE).
- Lack of country-specific data and inadequate/inappropriate statistics for simulation models despite existence of technical support governmental, academic institutions, regional crop agencies and ;
- Lack of public awareness of climate change issues and inadequate sensitization to anthropogenic factors that exacerbate vulnerability with critical stakeholders such as agriculture, tourism, health, forestry and fishery in government and private sectors
- Lack of information and public awareness provided avenues for inadequate private sector support, demonstrated lack of commitment to climate change issues in the area of renewable energy sources, and landuse management for carbon trade market
- There is very little utilization of academic, research or regional environmental institutions to provide substantive support in the process; (lack of coordination, lack of manpower due to lack of finance for continual project implementation at the focal point).
- Need to strengthen policy coordination and institutional support to satisfy regular reporting requirements implicit in the National Communication process (this is relevant in the drafting of the Fiji Climate Change Policy).

There were a number of recommendations and actions taken such as:

- Establishment of an Inter- disciplinary Committee which include the national focal point for climate change, biodiversity and desertification, representatives of the energy sector, both public and private, the relevant government Ministries and agencies engaged in sustainable development policy planning, as well as institutions like the University of the South Pacific and Institute of Applied Science. This was formed in 1994.
- Public Awareness to fully engage all stakeholders, including the private sector and community organizations: and in particular the engagement of NGOs such as WWF, WCS, PCDF & Live & Learn Etc. to support the MoE in implementation of its obligation under the convention was also activated in

1994 (e.g., engagement of the main local newspapers Fiji Times for periodical publications of CC brochures for children).

- Establishment of a consortium of Scientific and Research Institutions to consolidate and enhance the knowledge base in the related branches of science (using of crop regional crop agencies such as SOPAC, USP, SPREP & SPC).

In the first communication the following has been observed:

“Overexploitation of resources and unsustainable management practices will affect the socio-economic fabric of Fiji as well as reducing the resilience of the environment and increasing its vulnerability to the adverse effects of climate change. Therefore the Fiji government has developed and will be developing various sustainable management policies with the realization that such policies will be the most beneficial response strategy to help cope with climate change and other environmental and socio-economic problems. This strategy is in line with the Principles contained in Article 3 of the UNFCCC, which refers to the development of policies and measures related to sustainable development, by parties, to protect the climate system against human-induced change, and these should be integrated with national development programme” (Fiji national communications 2005).

It furthermore states that “Fiji’s sustainable development policies are categorized under six broad areas”, namely:

- Macro Economic Stability;
- Natural Resource Utilization;
- Physical Infrastructure;
- Social Development and Affirmative Action;
- Protection of the Environment; and
- External Relations.

1.2.5 PICCAP

A Regional Pacific Climate Change Project (PICCAP) financed by GEF and executed by SPREP in close collaboration with the UNITAR-administered CC: TRAIN was implemented by the South Pacific Regional Environmental Programme (SPREP) in with a 3-year lifeline to support island countries to their national obligations under the UNFCCC from 1997-1999. PICCAP was specifically designed to carry out specific goals such as:

- Formulation of the National climate change committee (NCCC) in 1998.
- committee facilitates the work of a technical team comprising a National PICCAP Project Coordinator and technical staff drawn from relevant sectors to participate in the CC:TRAIN training programme: and
- for NCCC to advise the government on matters relating to climate change during the UNFCCC process
 - drawing on expertise within key government departments and
 - overall for the purposes of reporting and future monitoring and as is required by the UNFCCC guidelines 1994 was used as the base year for the Greenhouse Gas

1.2.6 Other Key initiatives identified during stocktake

- All Key initiatives other than the above carried out by critical stakeholders are listed in Annex 1-3. These include the following table 1.3.6

Table 1.3.6 FIJI PROJECTS INITIATED UNDER IMPLEMENTATION OF UNFCCC			
Project Title	Donor Agencies	Implemented by	Year of Implementation
The South Pacific Sea Level and Climate Monitoring Project (SPSLCMP)	AusAID	SOPAC/Geoscience Aus.,NTC,MC	2006-2010(4th phase)
The South Pacific Sea Level and Climate Monitoring Project (SPSLCMP)	AusAID		2001-2005(3rd phase)
South Pacific Sea Level & Climate Monitoring Project (SEAFRAME)	AusAID	SOPAC	1992 - 31 December 2010
Kabara Climate Witness Project	WWF US/WWF Indonesia	WWF	ongoing
Reducing Community Risk against Climate Change Disasters in the Pacific	NA	WWF	2007-2008
Pacific Island Climate Update (ICU) Bulletin	NA	SOPAC	ongoing
Pacific Island Climate Data Rescue (PI CDR) Project	NA	SOPAC	Ongoing
Pacific Hydrological Cycle Observing System Project (Pacific HYCOS)	NA	SOPAC	Ongoing
Rainwater Harvesting Pilot Project	NA	SOPAC	Ongoing
Fiji's Seasonal Rainfall Prediction Model	AusAID	FMS	ongoing
Sustainable Growth Initiative: Fiji Water Project	Fiji Water	CI	Ongoing 1/1/2008
Adaptation to Climate Change in the Tourism sector in Fiji Islands	GEF/SCCF	UNEP	Ongoing 2007
Piloting Climate Change Adaptation to Protect Human Health (PCCAPHH)	GEF/SCCF	UNDP / FSM	Ongoing 2007
Climate Change Adaptation in Rural Communities of Fiji	AusAID	IAS/PACE-SD,USP	Ongoing 2006
Water Shortages in Bavu, Western Viti Levu	AusAID	IAS/PACE-SD,USP	Ongoing 2006-2009
Coastal Erosion and Water Problems in Votua, South West Viti Levu	AusAID	IAS/PACE-SD,USP	Ongoing 2006-2009
River Bank Erosion and Inundation in Buretu, Southeastern Viti Levu	AusAID	IAS/PACE-SD,USP	Ongoing 2006-2009
Coastal Erosion & Inundation in Navukailagi, Lomaiviti	AusAID	IAS/PACE-SD,USP	Ongoing 2006-2009

Project Title	Donor Agencies	Implemented by	Year of Implementation
River Bank Erosion & Flooding in Korotasere, Vanua Levu	AusAID	IAS/PACE-SD,USP	Ongoing 2006-2009
Water Problems in Druadrua Island, Vanua Levu	AusAID	IAS/PACE-SD,USP	Ongoing 2006-2009
Integrated Methods and Models for Assessing Coastal Vulnerability and Adaptation to Climate Change in the Pacific Countries (AIACC) -Navua town& Natadola area	START	PACE-SD(USP),IGCI(UoW),USP Geography Department	Completed 2004
Climate Change Variability - Community Relocation Project	APN	IAS/PACE-SD(USP),(UoW)	Completed 2005
Investigating rates of floodplain sediment accretion in tropical Pacific island river basins	USP,University of South Pacific	USP Geography Department, in collaboration with USP Physics Department, University of Guelph in Canada and Fiji's Public Works Department (PWD)	ongoing from 2002
The impact of tropical cyclones on river flows, morphology and sedimentation in Fiji	USP,University of South Pacific	USP Geography Department, in collaboration with University of Guelph in Canada and Fiji's Public Works Department (PWD)	ongoing
Water quality assessments Water Wastage Study	JICA	IAS,USP	ongoing
USP -NASA/NOAA Ozone Project	USP/NASA/NOAA	PACE-SD, and USP's Chemistry Department	ongoing from 1997
USP-NIWA NZ Greenhouse Gas project	USP,NIWA	PACE-SD, and USP's Chemistry Department	ongoing from 1994
Ozone and Methane Project	NASA	Professor Koshy Kanayathu,PACE-SD and USP Chemistry Department	ongoing
El Nino and Sugar Project	START/NOAA	Professor Koshy Kanayathu,PACE-SD and USP	2001-2002
ODS-Ozone Depleting Substance	MLFS via UNEP	DOE	ongoing
Butoni Windmill Farm (Sigatoka)	CDM	FEA	Completed
Wailoa Basin Hydropower		FEA	Completed
Nadarivatu Renewable Energy EPC Project	IRBD and EIB	FEA	Ongoing
Rural Electrification Scheme	Fiji Gov/FEA	FEA/Dept of Energy	Ongoing
ADB/CIDA Climate Change Adaptation in the Pacific (CLIMAP) Program	Canadian Cooperation Fund for Climate Change	Asian Development Bank, Pacific Department	2002-2004
CIDA Capacity Building for the Development of Adaptation Measures in Pacific Island country	CIDA	SPREP,National Gov.	Jan 02-Mar 05

Project Title	Donor Agencies	Implemented by	Year of Implementation
Biofuel Projects in Taveuni and Vanua Balavu, Fiji	SPC(Rural Energy Development Programme),Fiji Government through DOE & French Embassy	SOPAC	2000 &2001
Establishment of a Climate Change Unit within the Department of Environment	Fiji Gov	DOE	proposed project
Promotion of Renewable Energy	CDM	Dept of Energy	proposed project
National vulnerability and adaptation assessment study – Phase II	SPREP		proposed project
Watershed management project for the sugarcane drought-prone areas	Fiji Govt	Landuse Department	proposed project
Integrated Coastal Zone Management Programme for Fiji	UNDP/GEF	IAS-USP	proposed project
Vaturu (Nadi) Hydro Project	CDM	SEL	Now trading at CDM 5/1/2004
Wainikasou (Wainimala-Naitasiri) Hydro Projects	CDM	SEL	Now trading at CDM 5/1/2004
PACCLIM	IGCI/SPREP	USP	Ongoing 6/21/1995
FIJICLIM	IGCI/SPREP/World Bank	USP	Ongoing
Renewable Energy Hybrid Power Systems, Nabouwalu, Bua	GEF/UNDP	Fiji Gov & Japan Gov	ongoing
Pacific Islands Greenhouse Gas Abatement through Renewable Energy Project (PIGGAREP)	GEF/UNDP	UNDP/SPREP	Ongoing 7/1/2007
(PICCAP):Climate Change Enabling Activity, Fiji			
Pacific Islands Renewable Energy Programme (PIREP)	GEF/UNDP	SPREP,Fiji Gov, Pacific Island Forum Secretariat, SOPAC, SPC, USP	May 03-Dec 05 (extended to Aug 06)
Community climate change and energy reduction program, Fiji	GEF	Soqosoqo ni Marama,Macuata	Ongoing 2007

1.3 NATIONAL ACTIVITIES UNDER THE CONVENTION

1.3.1 Key Stakeholders implementing work addressing UNFCCC and projects

Key stakeholders in governmental departments, NGOs, statutory bodies and private include the following;

- Department of Energy,
 - Inventory of emissions in fuels
 - Development of renewable resource alternatives

- Ministry of Agriculture and Landuse,
 - Stocktake of animal stock for methane production
 - Land zoning and planning for sustainable and integrated management

- Fiji Sugar Cane Corporation (Annex 1-4)
- Fiji sugar cane growers council (Annex 1-4)
- Native Land Trust Board
 - Leasing of native reserve land (de-reservation of native land for economic development)
 - Legislation pertaining to conservation of natural resources owned by indigenous with emphasis on sustainability and proper management
 - Identification of governing legislation paradigm (Annex 1-5)

- Fiji Pine commission and Tropik Woods
 - Reforestation programmes on talasiga grassland
 - Sustainable management of harvested logs designed for fuelwood
 - Aligning more to sustainable logging code of practice and are guided by the Fiji code of logging

- Forestry Department
 - Practices code of logging practices
 - Forestry cover and inventory

- Ministry of Tourism
 - Strategic Assessment of Fiji Tourism Master Plan
 - Environmental Accreditation and Certificate under Green Globe 21
 - Polluter Pay principle was streamlined into the departure tax executed by AFL
 - Environmental user taxation was adopted by Ministry of Finance and executed by FIRCA as Bed Tax for Hoteliers
 - Impact of Tourism in Yasawa on the Socio-cultural, economic and environment context

- Fiji Hotel Association plus some local NGOs
 - Have incorporated waste management strategies for its solid and liquid waste management
 - Coastal zone management for coastal development

- Fiji Meteorological Services
 - The Fiji Meteorological Service (FMS) is in the process of reviewing and formalizing its climate-observing network known as the National Climate Monitoring Network (NCMN). The main purpose of NCMN is to improve and enhance the climate observing network for Fiji in order to improve or complement climate variability and trends studies. FMS is also in the process of establishing a Meteorological GIS Environment for Risk Reduction. The visual spatial distribution of the stations will allow FMS to identify and fill gaps in the observing network. This whole process will further improve FMS's drought and climate forecasting system (National communication, 2005). This is still ongoing but very little scientific analysis to produce near to accurate national forecasting scenario on climate change has yet to be realized.

- Ministry of National planning
 - They are the focal point of WSSD and facilitate strategic planning on MDGs for government.
 - The major theme, in the Plan of Implementation, contains targets and timetables to spur action on a wide range of issues, including halving the proportion of people who lack access to clean water or proper sanitation by 2015, to restoring depleted fisheries to the preserving biodiversity by 2015, and phasing out of toxic chemicals by 2005.

- Ministry of Foreign affairs (MoFA)
 - Sign the convention on behalf of the Fiji Government
 - Relevance of the convention to Fiji's capacity should be the criteria to accept or refuse signature and ratification
 - Exchange of information is very important and interaction with secretariat of the convention
 - Advice to the Government regarding the formulation and implementation of its foreign and trade policies.

- Ministry of Land and Mineral Resources
 - Most of the land and marine natural resources falls under the prerogative of this institution
 - Focal point to provide license to mine and extract natural resources

- Department of Water and Sewerage
 - Impact of sea level rise will induce high inflows and infiltration (I&I) at high tide increase salinity levels and reduce treatment efficiency. E.g., in the central Suva area I&I is possibly as high as 90% in wet weather. If water can infiltrate the sewerage system then it can also leak out and pollute the local environment (ADB, 2007).

- Ministry of Fijian Affairs (FAB)

This is a very important institution that administers and governs the welfare of the indigenous people who owns the majority of the land resources especially the land in Fiji.

- Awareness programmes to inform resource and landowners is a very important task that the government has to undertake to integrate into the economic paradigm
- Ministry of Finance
 - Responsible for budgetary allocation of governmental funds
 - Greater role facilitation would be anticipated once a shift of economic paradigm from tourism to carbon trading takes places.
 - Expenditures will be controlled by increasing productivity & accountability in the use of government resources on clearly stated priorities.
- Fisheries Department
 - The Department has been closely working with WWF for conservation of the –qoliqoli areas and in 2003, The National Biodiversity Strategic Action Plan (NBSAP) identified priority marine areas for protection, as well as recommends the establishment of a representative network of Marine Protected Areas (MPAs) in ecological and biological sites. WWF Fiji was part of the coalition of national stakeholders that produced the NBSAP.
- Ministry of Health
 - Protecting health from climate change is very relevant and is designed to put health at the centre of Government policies on global warming Fiji, like all the other small island states, is concerned with the undesirable effects of global climate change that will see impact of natural disasters such as hurricanes, cyclones, rising sea levels and flooding.
- Ministry of Regional Development and DISMAC
 - Resource based economic developments such as rice, copra, sugar, cocoa, cassava, vanilla, ginger, and pineapple etc are vital to the subsistence and economic livelihood of rural dwellers and the changing weather pattern nowadays has made it difficult to predict if any natural disaster is approaching Fiji which has been a crippling factor to development of these resources
- Ministry of Labour (OHS)
 - Occupational Health & Safety regulations were develop based on the concept of the "duty of care". The primary objective is to create a proactive OHS risk management culture with all potential risk creators in the labour market to ensure that those who create the risks in the workplace and those who work with them have the primary responsibility to solve them (rather than relying on Government Inspectors as encouraged in the former statutory and administrative arrangements).
- Public Service Commission
 - The purpose of the Public Service Commission is to promote excellence in public service delivery. To achieve this, the PSC has the statutory powers to review the Machinery of Government in order to ensure its efficiency and effectiveness in fulfilling Government's public sector management objectives.

The PSC also has the Constitutional and Statutory powers to be the central personnel authority in the Public Service. Following the delegation of much of its Constitutional authority to Departments, the PSC focus is now on Strengthening Leadership Capacity in Departments and developing a Human Resource Management Framework for the Public Service workforce that ensures continuing innovation and improvement in Public Service delivery.

- Public Works Department
 - Monitoring and evaluation of maintenances and upgrading of governmental infrastructures such as roads, bridges, wharves, jetties, water reservoirs, sewerage treatment plants, sewer lines, have a major impact on the terrestrial and marine habitats.
- Ministry of Social Welfare
 - The Department of Culture and Heritage provides policy advice on issues related to the safeguarding and enhancement of cultural and natural heritage, in tangible and intangible, moveable and immovable forms. This ensures the protection and management of Fiji's national heritage, flora, fauna and national amenities; archaeological sites and cultural heritage collections and the development of the crafts and arts sector.
- Ministry of Transport Works and Energy
 - The Department of Culture and Heritage provides policy advice on issues related to the safeguarding and enhancement of cultural and natural heritage, in tangible and intangible, moveable and immovable forms. This ensures the protection and management of Fiji's national heritage, flora, fauna and national amenities; archaeological sites and cultural heritage collections and the development of the crafts and arts sector
- World Wide Fund For Wildlife (WWF)
 - Support DOE in the area of Increasing resilience, raising awareness, public outreach, and climate outreach
- Partners in Community Development (PCDF)
 - Work with Pacific communities through people-centered programs to foster self-reliance within a changing world. This mission statement is translated into action on the ground through the work of their country affiliates and community partners. The focus of PCDF work at national and regional level is the local community. The overarching aim is to encourage community members to take responsibility for their own development. This involves assisting them identify self-determined priorities and goals and to assert their right to influence and access public services and decision-making processes

There are many stakeholders in government, NGO's, statutory and corporate bodies and private sector these are identified in Annex 1-5. One of the main issues arising out from discussions during stocktaking is the lack of coordination; lack of awareness and segmented corporate goals of each institution makes implementation very difficult and confusion at national level, let alone at grass root level.

1.4 LEGISLATION

There is no legislation governing the major thematic area of Climate change except Fiji's Climate change Policy that in generic explains the governing policy for implementation through institutional legislation and framework (Table 1.5). Existing environmental legislation such as the Fiji Environmental Management Act is yet to include specific acts and legislations critical to climate change issues (Annex 1-1)

The following lists are some of the related policies that can be utilized and be realigned to the convention:

- ❖ Irrigation Act
- ❖ Civil aviation act (chapter. 174)
- ❖ Civil aviation authority of Fiji act (chapter. 174a)
- ❖ Civil aviation (security) act
- ❖ Civil aviation reform act
- ❖ Petroleum Act
- ❖ Land Drainage act (chapter. 143)
- ❖ Dumping and countervailing duties act
- ❖ Fiji tourist commission and visitors bureau act (chapter. 104)
- ❖ Birds and Game Protection Act
- ❖ Native Land Trust Act
- ❖ Fijian Affairs Act
- ❖ Fiji's Rural Electrification Policy
- ❖ Fiji Logging Code of Practice.
- ❖ Forestry Act
- ❖ Environment Management Act
- ❖ State Lands Act
- ❖ Rural Land Use Policy
- ❖ The Subdivision of Lands - Residential and Industrial Act
- ❖ Mining Act
- ❖ Mineral (Exploration and Exploitation) Bill
- ❖ Marine Act (Amendment Decree)
- ❖ Marine Insurance Act (Chapter. 218)
- ❖ Marine Spaces Act (Chapter. 158a)
- ❖ Marine Spaces (Foreign Fishing Vessels) Regulations
- ❖ Marine Spaces (Territorial Seas) (Rotuma & its Dependencies) ORDER
- ❖ Maritime and Ports Authority of Fiji Islands Act
- ❖ National Trust for Fiji Act
- ❖ National Trust Of Fiji (Amendment) Act
- ❖ Rivers and Streams Act (Chapter. 136)
- ❖ Roads Act (Chapter. 175)
- ❖ Litter Decree
- ❖ Public Health act
- ❖ Fiji Convention Listed Legislations
- ❖ Legislation

- ❖ Fiji Tourism Development Act
- ❖ Sustainability Bill
- ❖ Ozone Depleting Substances Act
- ❖ Natural Disaster Management Act
- ❖ Fiji's Rural Electrification Policy
- ❖ Mineral (Exploration and Exploitation) Bill
- ❖ National Code of Logging Practice
- ❖ Mining Act
- ❖ Town & Country Planning Act
- ❖ Lands Act
- ❖ Landuse Management Policy
- ❖ Land Conservation and Improvement Act
- ❖ Agricultural Landlords and Tenants Act
- ❖ Dumping and countervailing duties act

1.5 NATIONAL COMMITTEE

A Climate Change steering body has been established since 1994, one of its aims is to coordinate, supervise and monitor national obligations under the convention (Annex 1-6). Specific considerations have been focused in the assessment of relevant stakeholders' legislation in government, private sector, NGO's, statutory bodies and community based organizations (CBOs).

1.6 REGIONAL ACTIVITIES UNDER THE UNFCCC

1.6.1 A brief on what's happening in the region to address Climate change and meet Obligations under UNFCCC

- **SOPAC**

SOPAC established a vulnerability index for climate vulnerability and assessment in the Pacific.

- **USP/PACE**

The University of the South Pacific, Faculty of Islands and Oceans, developed PACE (USP/FIO/ PACE), Pacific Center for Environment and Sustainable Development established in 2001 focussing on three areas; i) training and education, ii) research consultancy and iii) publication and outreach and networking. Also for "Greenhouse gases and aerosols, At present, for academic purposes, USP measures concentrations of methane, carbon monoxide and non-methane hydrocarbons, as well as aerosol properties in the atmosphere. Measurements of the complete chemistry of the atmosphere over Fiji have been conducted by NASA in 1997 and 1999" (National Communications, 2005). Most of what PACE is doing at times overlaps with existing works done by School of Geography, USP, and Chemistry Department, these departments and schools have differentiated specific goals with little integration and coordination at all.

- **Stratospheric ozone monitoring**

Measurements of ozone are conducted at the Laucala Bay campus of USP for academic purposes. This is a joint project between NASA and the USP Chemistry Department. Activity includes the monitoring and archiving measurements of stratospheric and tropospheric ozone, including vertical profiles and other trace species, aerosols and UV-B monitoring (National Communications, 2005). Most of these data are not utilized with relevant stakeholders to adequately response to the reporting obligation of Fiji. These are restricted only to the USP chemistry department.

- **Sea-Level Monitoring**

The National Tidal Facility (NTF) of the Flinders University of South Australia, with assistance from the Fiji Meteorological Service and Marine Department, is responsible for sea-level monitoring; using the equipment based at the Suva and Lautoka wharves. This monitoring of sea level is funded and managed by the South Pacific Sea Level and Climate Monitoring Project developed as a response to concerns raised by members of the South Pacific Forum countries about the potential effects of the Greenhouse Effect on climate and sea level in the region (National Communications, 2005). Fiji has 3 tidal gauges, producing very good tidal data periodically on a more comprehensive level; however utilization of these data for scientific interpretation is yet to be realized.

- **Hydrology**

The Public Works Department (PWD) Hydrology Section operates 56 Water Level Recording Stations and well over 100 rain gauges throughout Fiji. These are in addition to and complementary to the Fiji Meteorological Service rainfall stations. USP conducts rain and surface-water chemistry analyses on a periodic basis mainly for teaching and learning, and conducts collaborative research with the PWD in areas such as floods, droughts and natural disasters (National Communications, 2005). In depth analysis of these data are not well utilized at national and regional context, most are used for simple simulation and forecasting scenarios which lacked solid scientific assessment and analysis.

- **Climate Change and Variability Scenario Generation/Modeling**

‘Climate change is likely to have substantial and widespread impacts in the Pacific Island Countries, including the Fiji Group, affecting sectors as varied as health, coastal infrastructure, water resources, agriculture, forestry and fisheries. In August, 1999 the South Pacific Regional Environment Program (SPREP) with the assistance of the International Global Change Institute (IGCI) (Waikato University, New Zealand) produced a climate change computer modeling program known as the PACCLIM (Pacific Island Climate Change) proto-type model. The computer modeling is used to create scenarios to predict climate change and sea level rise in the Pacific. IGCI, SPREP and the World Bank funded the creation of the FIJICLIM an offshoot of the PACCLIM, a computer modeling scenario generator to be used to predict climate changes and sea level rise in Fiji. But the modeling still needs to be further developed for Fiji to have any significant contribution to climate change mitigation’ (Limalevu, 2008).

- **Oceans**

At present sea surface temperatures are not monitored in Fiji, but satellite data from National Oceanic and Atmospheric Administrations (NOAA) and Need to have this in full-- ORSTOM are available on the World Wide Web. Periodic in-situ measurements of sea surface temperature and water chemistry are

conducted by USP for academic research. A brief oceanographic survey was conducted in the 1990s for marine disposal of mining waste in the Beqa Passage, south of Viti Levu (National Communications, 2005). SOPAC has technical assistance in monitoring specific sites such as Tuvalu and Kiribati for sea surface temperatures relating to sea level changes.

1.7 KYOTO PROTOCOL

At the first Conference of the Parties (COP) to the Convention, held in 1995, it was agreed by Parties that the Convention by itself was not sufficient to address the problems of climate change and a decision was taken to start negotiations for legally binding and more detailed commitments for industrialized countries. At the third COP held in 1997 in Kyoto, Japan, the Kyoto Protocol² was adopted. The Protocol has legally binding emission targets for industrialized countries. The Protocol's rules were clarified in detail in the 2001 *Marrakesh Accords*. The Protocol has not yet entered into force as the requirements are not only those 55 Parties to the Convention are Parties to the Protocol but also that the 55 Parties must incorporate Parties included in Annex I which accounted in total for at least 55 per cent of the total carbon dioxide emissions for 1990. Presently there are 100 Parties to the Protocol, but the required emission percentage from Annex 1 Parties has not been met. Fiji acceded to the Protocol in September 1998.

1.7.1 Commitments.

Of relevance to developing countries are articles 10 and 12. Developing countries commitments³ under Article 10 as stated in the Protocol are:

All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, without introducing any new commitments for Parties not included in Annex I, but reaffirming existing commitments under Article 4, paragraph 1, of the Convention, and continuing to advance the implementation of these commitments in order to achieve sustainable development, taking into account Article 4, paragraphs 3, 5 and 7, of the Convention, shall:

(a) Formulate, where relevant and to the extent possible, cost-effective national and, where appropriate, regional programmes to improve the quality of local emission factors, activity data and/or models which reflect the socio-economic conditions of each Party for the preparation and periodic updating of national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies to be agreed upon by the Conference of the Parties, and consistent with the guidelines for the preparation of national communications adopted by the Conference of the Parties;

(b) Formulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change and measures to facilitate adequate adaptation to climate change:

- Such programmes would, *inter alia*, concern the energy, transport and industry sectors as well as agriculture, forestry and waste management. Furthermore, adaptation technologies and methods for improving spatial planning would improve adaptation to climate change.

(c) Cooperate in the promotion of effective modalities for the development, application and diffusion of, and take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies, know-how, practices and processes pertinent to climate change, in particular to developing countries, including the formulation of policies and programmes for the effective transfer of environmentally sound technologies that are publicly owned or in the public domain and the creation of an enabling environment for the private sector, to promote and enhance the transfer of, and access to, environmentally sound technologies;

^{2&3}

Extracts are taken directly from Fisher E, 2004, which forms similar principles of commitments of non annex 1 countries.

(d) Cooperate in scientific and technical research and promote the maintenance and the development of systematic observation systems and development of data archives to reduce uncertainties related to the climate system, the adverse impacts of climate change and the economic and social consequences of various response strategies, and promote the development and strengthening of endogenous capacities and capabilities to participate in international and intergovernmental efforts, programmes and networks on research and systematic observation, taking into account Article 5 of the Convention;

(e) Cooperate in and promote at the international level, and, where appropriate, using existing bodies, the development and implementation of education and training programmes, including the strengthening of national capacity building, in particular human and institutional capacities and the exchange or secondment of personnel to train experts in this field, in particular for developing countries, and facilitate at the national level public awareness of, and public access to information on, climate change.

Suitable modalities should be developed to implement these activities through the relevant bodies of the Convention, taking into account Article 6 of the Convention;

(f) Include in their national communications information on programmes and activities undertaken pursuant to this Article in accordance with relevant decisions of the Conference of the Parties; and

(g) Give full consideration, in implementing the commitments under this Article, to Article 4, paragraph 8, of the Convention.

Some of these commitments are being addressed by the regional initiatives mentioned under the Convention.

1.7.2 The Clean Development Mechanism

Under the Kyoto Protocol are provisions for three innovative mechanisms which allow developed countries to meet their commitments as cost-effectively as possible by "buying" or generating emission reduction credits in other countries. However Annex 1 Parties are still required to take domestic actions to reduce emissions. The three mechanisms are:

1. **Joint implementation** (under Article 6) provides for Annex I Parties to implement projects that reduce emissions, or remove carbon from the air, in other Annex I Parties, in return for emission reduction units (ERUs).
2. **The Clean Development Mechanism (CDM)** defined in Article 12 provides for Annex I Parties to implement projects that reduce emissions in non-Annex I Parties, in return for certified emission reductions (CERs), and assist the host Parties in achieving sustainable development and contributing to the ultimate objective of the Convention.
3. **Emissions trading**, as set out in Article 17, provides for Annex I Parties to acquire units from other Annex I Parties. These units may be in the form of assigned amount units (AAUs), removal units (RMUs), ERUs and CERs

The ERUs, CERs, AAUs and RMUs are the accounting equivalents of the "assigned amount" referred to in the provisions of Article 3⁴

In October-November 2001 the Conference of the Parties to the UNFCCC reached agreement on implementation rules (part of the "*Marrakech Accords*") for these mechanisms. The Protocol's provisions on the mechanisms were considerably expanded and include decisions which set out the principles, nature, scope and operational rules for all three mechanisms; a system of registries; and provision for businesses, non-governmental organizations and other legal entities to participate in the three mechanisms, under the responsibility of their governments.

The CDM is the only mechanism which involves non Annex 1 Parties and takes place between an Annex 1 Party and a non Annex 1 Party. The CDM is expected to facilitate implementation of sustainable development projects in developing countries, and transfer of environmentally friendly technology from the developed countries to developing countries.

Obligations under the Protocol and as elaborated in the *Marrakech Accords* include the designation of national authorities by Parties seeking to be involved in CDM projects. The Ministry of Environment operates as Fiji's national authority for the CDM.

1.7.3 National and Regional Activities Relevant to the CDM

- **Kyoto Protocol's Article 12: on Clean Development Mechanism (CDM)**

Annex 1 Countries have carried out actions within (domestic) to reduce emission, but if they cannot meet their designated Emission Reduction Allocation, the Kyoto Protocol provides a way out for them- which are stipulated as Kyoto Flexible Mechanisms (e.g. Clean Development Mechanism).

What it does?

Provides Annex 1 countries (e.g. N.Z, Japan and EU countries etc) emission credits to those who invest in emission reduction projects in a developing country (non-Annex Countries, e.g. Fiji). Foster sustainable Development in developing countries (e.g. Hydro Projects, Coco-diesel, and Re-afforestation)

Annex 1 countries (N.Z, Japan) therefore can trade with non-Annex countries (Fiji). The commodity of trade is carbon, which referred under KP as Certified Emission Reduction Units (CER), and Removable Units (RUs). This economic activity is what we refer to as Carbon Trading.

⁴ Taken from UNFCCC website

The demand outweighs the supply for the commitment period. Research indicated the following:

-Japan shortfall is 1 Billion credits

-U.K Current Requirement-109 million credits and increase to 500 million credits in 2008.

-N.Z shortfall of 127 million credits.

Indication of the Market has seen substantial Price Growth.

Price Growth:

(a) Jan 05	-	EU\$6.25mtCO ₂ e
(b) Jan 06	-	EU\$26.65mtCO ₂ e
(c) Jan 07	-	EU\$32.50mtCO ₂ e
(d) Jan 08	-	AuD\$48 -\$200mtCO ₂ e

Carbon Trading is basically a derivative of Biodiversity Economics. There are multiple means of income generation through the use of Biodiversity:

- (a) Payment of ecosystem services
- (b) Compensation of forest owners
- (c) Carbon Sink

Opportunities and Recommendation

- (1) Ensure that biodiversity is viewed as an economic commodity
- (2) Ensure eco-friendly biodiversity economics are promoted
- (3) Government to be proactive in sourcing and participating in these novel markets.
- (4) Under CDM Fiji will not outlay fund or need to Loan Fund-so it's a good avenue to realize MDG, Poverty Alleviation & Rural Development, let alone foreign exchange.

1.7.4 The Department of Energy

- Rural Electrification Programmes - *Purchasing of diesel and Fiji Electricity Authority (FEA) hybrid system*

The Ministry of Energy (MoE) is involved with CDM related programmes; it has undertaken solar and micro-hydro assessment and feasibility studies in the north (Vanualevu) installing 700 solar systems including mini Hydro in Nabouwalu, Bua and Wailevu in Tunuloa, Cakaudrove. There is a hybrid system commissioned in 1997 which was carried out in Nabouwalu, Bua using Solar, wind and diesel generator to provide electricity. MoE worked with FEA to implement rural electrification purposes.

- Green Extensions involves rural electrification:

This project involves village communities paying 10% and government pay the rest 90% for the total cost. This includes connection, FEA monitoring and wiring.

- A biogas project from cattle and piggery farming for cooking purposes has been carried out.

This includes the initial assessment, design and training to engage capacity building. In Navakawau, Taveuni, *coconut husk* to provide electricity for coconut drier are also being utilized, but these are being phased out since 1980s, except for a sole farmer (Mr. Andrew Tarte).

- Ethanol for alternative fuel involve projects that blends coconut and diesel oil (Biodiesel: 50/50)

The current biodiesel fuel now utilized in Fiji is imported from Philippines this comes under the Bio-fuel initiative. The purpose of this is to encourage the private sector for ethanol production.

1.7.5 National Fisheries Authority (NFA)

In 2006, in Papua New Guinea (PNG), the NAF, working in association with the private sectors commenced initial trials of hand operated oil presses and the testing of a small Chinese made coconut oil powered engine which is rigged to an outboard propulsion system. This project is a one year long work to assess the potential coconut oil and coconut oil bio-fuel as fuel alternative. This is to carry a range of trials ranging from village level oil production to commercial oil production. The option for engine conversion to allow engine operation on pure coconut oil and will also look at oil refining to produce a bio-fuel which can drive standard diesel engines.

1.7.6 Issues:

- I. Very little work has been carried out to facilitate this very important element of the Kyoto protocol except that most of the initiatives are being undertaken by the private sector.
- II. No clear mandate from secretariat (focal point)
- III. Lack of coordination between critical stakeholders and government
- IV. No regular arrangement and monitoring
- V. Emission inventory was voluntary carried out by Australian Youth Programme
- VI. Non-sustainability of project under CDM in the Pacific

1.8 CONCLUDING REMARKS

During stocktaking, one of the major issues that seems to be generated from most of the stakeholders meeting and discussion is the lack of information and awareness in regard to the Fiji's obligations under the convention. Many are doing their own work and there is very little coordination amongst the stakeholders to align themselves together in a system manner to implement these obligations. This in my opinion is the major hurdle in light of other pending issues such as lack of human and financial resources.

Management models to allow proper facilitation and implementation of Fiji's obligation to the convention such as the:

- Integrated resource and management based on a "Bottom-up, top-down approach" and;
- Integrated coastal zone management are theoretically available with very little implementation.

However lack of local initiative due to human and financial constraints affects implementation.

Another related issue to this, is the lack of institutional realignment of policies, procedures and processes to allow greater participation from the stakeholders and also dissemination of important information for public awareness. Coupled with the lack of legislative act as a basis for compliance by the private sector, in particular the transportation, forestry, oil, agriculture, energy and fisheries sectors.

Lack of quantitative and qualitative technical and scientific data to fully assess the impact of climate change in Fiji and the region, in particular sea level changes and its impact on low lying coastal areas of both the atoll and volcanic islands makes policy and decision making difficult for appropriate mitigation and adaptation options. More research into the oral literature of the local residents in regard to their traditional and historical knowledge of their surrounding would be the best option for further scientific exercises. Collation of academic papers that aligns disciplines such as geology, oceanography, geography, geophysics and meteorology etc to explain coastal process and climate variability would be an option for a more comprehensive approach for the explanation of climate change, this is a contemporary issue in the academic area.

Under UNFCCC, very little work has been carried out to take advantage of the Kyoto Protocol CDM projects in the carbon trading market. This is very crucial and important to Fiji, as the year 2008-2010 are the most crucial periods for non annex 1 countries to take advantage of in the economic sector. Recent studies have shown that the carbon trade market is currently worth globally US\$30billions a year, and this trend will likely to continue in the future to the tune of US\$100billion by 2010 (Carbon Strategic Global, 2008).

Overall Fiji stands to benefit a lot from the CDM initiative because it has the following areas:

- No transport logistic-direct to market-compete on same terms as all other nations
- National resource wealth
- Traditional owners
- Biodiversity

- It is imperative that in depth assessment of stakeholders in this thematic area has to be carried out in order to fully define the national obligations capacity to implement its defined obligations.

PART 2: THE UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION (By Leone Limalevu)

PART 2: THE UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION (UNCCD)

2.1 INTRODUCTION

2.1.1 Objective

As follows is the objective of the Convention as stated under Article 2 of the Convention.

1. The objective of this Convention is to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels, supported by international cooperation and partnership arrangements, in the framework of an integrated approach which is consistent with Agenda 21, with a view to contributing to the achievement of sustainable development in affected areas.
2. Achieving this objective will involve long-term integrated strategies that focus simultaneously, in affected areas, on improved productivity of land, and the rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level.

2.1.2 Principles

As follows are the guiding principles of the Convention as stated under Article 3 of the Convention.

In order to achieve the objective of this Convention and to implement its provisions, the Parties shall be guided, inter alia, by the following:

- (a) the Parties should ensure that decisions on the design and implementation of programmes to combat desertification and/or mitigate the effects of drought are taken with the participation of populations and local communities and that an enabling environment is created at higher levels to facilitate action at national and local levels;
- (b) the Parties should, in a spirit of international solidarity and partnership, improve cooperation and coordination at subregional, regional and international levels, and better focus financial, human, organizational and technical resources where they are needed;
- (c) the Parties should develop, in a spirit of partnership, cooperation among all levels of government, communities, non-governmental organizations and landholders to establish a better understanding of the nature and value of land and scarce water resources in affected areas and to work towards their sustainable use; and

(d) the Parties should take into full consideration the special needs and circumstances of affected developing country Parties, particularly the least developed among them.

2.1.3 General Obligation

As follows are the general obligations of the Parties to the Convention as stated under Article 4 of the Convention.

1. The Parties shall implement their obligations under this Convention, individually or jointly, either through existing or prospective bilateral and multilateral arrangements or a combination thereof, as appropriate, emphasizing the need to coordinate efforts and develop a coherent long-term strategy at all levels.

2. In pursuing the objective of this Convention, the Parties shall:

(a) adopt an integrated approach addressing the physical, biological and socio-economic aspects of the processes of desertification and drought;

(b) give due attention, within the relevant international and regional bodies, to the situation of affected developing country Parties with regard to international trade, marketing arrangements and debt with a view to establishing an enabling international economic environment conducive to the promotion of sustainable development;

(c) integrate strategies for poverty eradication into efforts to combat desertification and mitigate the effects of drought;

(d) promote cooperation among affected country Parties in the fields of environmental protection and the conservation of land and water resources, as they relate to desertification and drought;

(e) strengthen subregional, regional and international cooperation;

(f) cooperate within relevant intergovernmental organizations;

(g) determine institutional mechanisms, if appropriate, keeping in mind the need to avoid duplication; and

(h) promote the use of existing bilateral and multilateral financial mechanisms and arrangements that mobilize and channel substantial financial resources to affected developing country Parties in combating desertification and mitigating the effects of drought.

3. Affected developing country Parties are eligible for assistance in the implementation of the Convention.

2.1.4 Obligations of affected country Parties

As follows are the obligations of affected country Parties as stated under Article 5, in addition to their obligations pursuant to article 4 of the Convention.

Parties undertake to:

(a) give due priority to combating desertification and mitigating the effects of drought, and allocate adequate resources in accordance with their circumstances and capabilities;

(b) establish strategies and priorities, within the framework of sustainable development plans and/or policies, to combat desertification and mitigate the effects of drought;

(c) address the underlying causes of desertification and pay special attention to the socio-economic factors contributing to desertification processes;

(d) promote awareness and facilitate the participation of local populations, particularly women and youth, with the support of nongovernmental organizations, in efforts to combat desertification and mitigate the effects of drought; and

(e) provide an enabling environment by strengthening, as appropriate, relevant existing legislation and, where they do not exist, enacting new laws and establishing long-term policies and action programmes.

2.1.5 National Focal Point for the Convention

Institutional Arrangements

The National Focal Point for the Convention is the Land Use Section of the Land Resources Planning and Development Division of the Ministry of Agriculture, Sugar and Land Resettlement. The contact person is Mr. Osea Bolawaqatabu, Acting Principle Research Officer of the Land Use Section.

National Obligation under the Convention

As follows are the general guidelines related to the national action programmes under Article 10 of the Convention.

1. The purpose of national action programmes is to identify the factors contributing to desertification and practical measures necessary to combat desertification and mitigate the effects of drought.
2. National action programmes shall specify the respective roles of government, local communities and land users and the resources available and needed. They shall, inter alia:
 - (a) incorporate long-term strategies to combat desertification and mitigate the effects of drought, emphasize implementation and be integrated with national policies for sustainable development;
 - (b) allow for modifications to be made in response to changing circumstances and be sufficiently flexible at the local level to cope with different socio-economic, biological and geo-physical conditions;
 - (c) give particular attention to the implementation of preventive measures for lands that are not yet degraded or which are only slightly degraded;
 - (d) enhance national climatologically, meteorological and hydrological capabilities and the means to provide for drought early warning;
 - (e) promote policies and strengthen institutional frameworks which develop cooperation and coordination, in a spirit of partnership, between the donor community, governments at all levels, local populations and community groups, and facilitate access by local populations to appropriate information and technology;
 - (f) provide for effective participation at the local, national and regional levels of non-governmental organizations and local populations, both women and men, particularly resource users, including farmers and pastoralists and their representative organizations, in policy planning, decision-making, and implementation and review of national action programmes; and
 - (g) require regular review of, and progress reports on, their implementation.
3. National action programmes may include, inter alia, some or all of the following measures to prepare for and mitigate the effects of drought:

- (a) establishment and/or strengthening, as appropriate, of early warning systems, including local and national facilities and joint systems at the subregional and regional levels, and mechanisms for assisting environmentally displaced persons;
- (b) Strengthening of drought preparedness and management, including drought contingency plans at the local, national, subregional and regional levels, which take into consideration seasonal to interannual climate predictions;
- (c) establishment and/or strengthening, as appropriate, of food security systems, including storage and marketing facilities, particularly in rural areas;
- (d) establishment of alternative livelihood projects that could provide incomes in drought prone areas; and
- (e) development of sustainable irrigation programmes for both crops and livestock.

4. Taking into account the circumstances and requirements specific to each affected country Party, national action programmes include, as appropriate, inter alia, measures in some or all of the following priority fields as they relate to combating desertification and mitigating the effects of drought in affected areas and to their populations: promotion of alternative livelihoods and improvement of national economic environments with a view to strengthening programmes aimed at the eradication of poverty and at ensuring food security; demographic dynamics; sustainable management of natural resources; sustainable agricultural practices; development and efficient use of various energy sources; institutional and legal frameworks; strengthening of capabilities for assessment and systematic observation, including hydrological and meteorological services, and capacity building, education and public awareness.

2.2 COUNTRY ACTIVITIES UNDER THE CONVENTION

2.2.1 Status of Fiji's National Communication to the UNCCD Secretariat

As mentioned earlier, Fiji became a signatory to the convention in August 26th 1998. Since then, it has submitted four National reports to the UNCCD secretariat. The first national report was submitted in 2000, the second in 2002 and the third in 2006. The National Action Plan (NAP) was submitted in 2007.

The following information appears under the UNCCD Secretariat Data Base

Fiji Status

**Country
Name:**

Ratification status of the Convention for this country:

Date of Signature	Date of Accession	Date of Entry into Force
----	Aug 26 1998	Nov 24 1998

National Reports:

Year of submission
2000
2001
2002
2006
2007

National Focal Points for the Convention:

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2.2.2 Key Stakeholders Implementing Work Addressing UNCCD

The key stakeholder for the UNCCD is the National Coordinating Body (NCB), which is the Land Conservation Board (LCB).

This includes:

- (1) Ministry of Agriculture, Sugar and Resettlement (MASLR);
- (2) Ministry of Lands;
- (3) Department of Environment (DOE);
- (4) Ministry of Works;
- (5) Ministry of Forests;
- (6) National Disaster Management Office (NDMO);
- (7) Native Land Trust Board (NLTB);
- (8) Fiji Sugar Commission; and
- (9) NGO Representative

The LCB meets four times a year.

Apart from the NCB, there are other stakeholders at the operational level. These include: Regional Intergovernmental Organisations ((University of the South Pacific (USP), Secretariat of the Pacific Community (SPC), Secretariat of the Pacific Applied Geosciences Commission (SOPAC), South Pacific Regional Environment Programme (SPREP)), German Technical Cooperation (GTZ), Donor Agencies (UNDP, European Union).

The other stakeholders are the National Landcare Working Committee and the NGO Landcare Steering Committee. The National Landcare Working Committee include representatives from: NLTB; DOE; Forestry Department; MASLR; Ministry of Provincial Development; USP, EU/SPC/DSAP and the SPC/GTZ PGRFP, Ministry of Works; Ministry of Finance, Ministry of Education and Representative of the NGO Landcare Steering Committee.

The NGO Landcare Steering Committee consists of various NGO's such as the World Wide Fund, PCDF, Conservation International, FSPI, Live and Learn and other environmentally based NGO's.

2.2.3 Formulation of National Action Plan to Combat Desertification

Fiji's Draft National Action Plan on Combating Desertification was submitted in 2006. The purpose of the national action plan was to identify the factors contributing to desertification / degradation and practical measures needed to combat it. Further it seeks the commitment of the stakeholders in ensuring the mainstreaming of this into Fiji's strategic plans.

Fiji's NAP provides for the following:-

- Long term strategies to combat desertification /degradation and to mitigate the effects of drought, emphasizing implementation and integration into national policies for sustainable development;
- Allows for modifications in response to changing circumstances and is sufficiently flexible at the local level to cope with different socio-economic, biological and geo-physical conditions;
- Gives particular attention to the implementation of preventative measures affected areas and areas with degradation potential;

- Enhancement of national capabilities in national climatologically/ meteorological and hydrological monitoring as a means of providing early warning systems for drought;
- Promotion of policies and strengthening of institutional frameworks to promote partnerships, corporation and coordination between the government, donors, local populations and groups and facilitates information and technology access to all; and
- Provides for effective participation of government, local populations both men and women, non-government organizations, particularly resource users and their representative organizations in policy planning, decision-making, implementation, monitoring and evaluation of national action plans.

2.2.4 Identified causes of land degradation in Fiji

The relevant explanations of the causes of land degradation are outlined in the Fiji NAP.

Direct Causes of Land Degradation

- (1) Deforestation*
- (2) Unsustainable logging*
- (3) Intensive sloping land cultivation*
- (4) Intensive flat land cultivation*
- (5) Improperly managed commercial livestock farming*
- (6) Reclamation of freshwater swamps*
- (7) Reclamation of mangrove swamps*
- (8) Ad Hoc urban development*

Indirect causes of land degradation

- (1) Demographic changes*
- (2) Pressure on the production base*
- (3) Over dependence on the sugar industry*
- (4) Non application of appropriate technologies*
- (5) Lack of physical infrastructure*
- (6) Weak institutional infrastructure*
- (7) Lack of proper water resources policy*
- (8) Inappropriate land use in watersheds*
- (9) Inappropriate land use in the coastal margins*
- (10) Ineffective information dissemination*
- (11) Complex Land Tenure system*
- (12) Poverty*
- (13) Poor local control, responsibility and incentive because of central government control*

2.3 SUMMARY OF RELEVANT POLICIES AND PROGRAMMES

2.3.1 National Strategic Plan related to Environmental Sustainability

“Ensuring environmental sustainability” is the seventh MDG, which provided a framework for integrating the principles of Sustainable Development into national policies, thus ensuring availability of safe drinking water, improving sanitation, and reducing other social ills such as poverty and unemployment.

Achieving sustainable development, while overcoming environmental challenges such as deforestation, land degradation, logging of watersheds, over-exploitation of terrestrial and aquatic biological resources, improper waste management and pollution control, impact of climate change, and the attitude of people in terms of the unsustainable use of their resources, is a central challenge to governments of small island states such as Fiji.

Increasing population, urbanization, industrial, agricultural, and other economic development have placed increasing pressure on coastal zones leading to loss of habitat and affecting ecological processes. This is a result of coastal development, pollution, increased water demand from freshwater lenses, over exploitation of resources and other related issues. The absence of consistency monitoring of development within coastal zone development makes it difficult to assess the extent and seriousness of damage and degradation in coastal zones of Fiji.

The Ministry of Environment, in partnership with other Government Ministries and Departments, Institutions NGOs and through donor funding, has implemented various environment programmes throughout Fiji related biodiversity conservation, sustainable biological resource use, climate change, waste and pollution, development control and other programmes related to Fiji's obligations under region and multilateral agreements. The production of Fiji's Biodiversity strategy and Action Plan, National Land Use Policy (Land Use Department 2005), the First National Communication on Climate Change Strategic Actions (2005), Environment Management Act (EMA) 2005 and the scheduled Litter Act for 2008 will provide a framework for sustainable management of land and water resources.

Development Constraints and Challenges

The major environmental problems include: deforestation, land degradation, air and water pollution, inappropriate refuse disposal, climate change and sea-level rise, outdated legislation and its inadequate enforcement, and limited public awareness. It is hoped that the implementation of the Environment Management Act and related programmes, and allocation of adequate resources, will assist in addressing some of these issues.

2.3.2 Relevant Policies and Plans

As follows is a list of relevant policies and plans described under the NAP for the purpose of addressing issues related to the control or mitigation of desertification. The details of these policies and plans can be found in the 2007 Fiji NAP.

(1) Drought Mitigation and Early Warning System Management

This is related to the National Framework for Risk Management and Disaster Management, under the National Disaster Management Office (NDMO).

(2) Review of the Land Conservation and Improvement Act

The Land Conservation and Improvement Act is currently under review. This is the principle legislation that governs land use and land conservation. The first phase of the review was from November 2007 to January 2008. A stakeholder consultative workshop was conducted in January 2008. The legislation currently is with the Solicitor General's office for legal drafting. Thereafter, a series of consultative meetings/workshop would be held before a final version would be submitted to Cabinet by the end of 2008.

The review also highlights the institutional strengthening of the Land Use Section, both financial and human resources, to effectively serve as the secretariat of the Board, as stipulated under the Act.

3) Environment Management Act of 2005.

They key features of the EMA 2005 are:

- The setting up of a National Environment Council (NEC) to coordinate the formulation of environment related policies and plans;
- The requirement for Environment Impact Assessments to be binding on all parties, including Government;
- Permits to discharge waste and pollutants into the environment;
- National Resource Inventories, National Resource Management Plan, National State of the Environment Report, and the National Environment Strategy; and
- Declarations, enforcement orders, stop work notices will ensure environmental compliance according to laws.

(4) National Rural Land Use Policy and Plan

In November, 1998 a review on the rural land use in Fiji began with the assistance of the South Pacific Community/ Pacific German (GTZ) Forestry/Agroforestry Program. This resulted in the formulation of a National Rural Land Use Policy. The National Rural Land Use Policy document was endorsed by Cabinet on the 22nd of June, 2005. This policy document will be used as the guide for the formulation of the National Rural Land Use Plan or National Land Use Plan.

(5) Fiji Forest Policy Statement

The formulation and endorsement by Cabinet in 2005, of the Fiji Forest Policy was an important step in achieving consensus of all stakeholders on policies and implementation measures towards conservation and sustainable management of the Nation's forest resources.

(6) Watershed Management Master Plan

In August, 1996 the Japanese International Cooperation Agency (JICA) began a two year study on the watershed management and flood control for the four major river systems namely; the Rewa, Ba, Nadi and the Sigatoka rivers. The study was carried out in order to formulate the basis of a Master Plan for the Watershed Management and Flood Control for all the major river system in Fiji. The study ended in October, 1998 with a coherent Watershed Master Plan for the country.

(7) National Natural Disaster Management Plan

Fiji is susceptible to variety of natural hazards such as the tropical cyclones, floods, storm surges, landslide, drought, earthquakes, tsunami and forest fires. In recognizing the need, the Government of Fiji (GOF) formulated a National Plan for Natural Disaster Management under the Natural Disaster

Management Act of 1998. The plan seeks to strengthen coordination, collaboration and resources mobilization amongst stakeholders in the prevention, mitigation and handling of natural disasters.

Collaborating institutions includes: the Earthquake Seismology Section of the Mineral Resources Department responsible for monitoring earthquakes in Fiji and the South Pacific; the Meteorological Service within which is the Regional Specialized Meteorological Center for the South Pacific; the National Building Code to reduce vulnerability to cyclones and earthquake shocks; and relevant Non Government Agencies, such as the Red Cross, Foundation of the People of the South Pacific, Fiji Council of Social Services, Salvation Army, Save the Children Fund, churches and others with international partners such as the Food and Agriculture Organisation (FAO) of the United Nations.

(8) Climate Change Vulnerability and Adaptation Assessment and Strategic Plan.

Fiji is a signatory to the UN Framework on Climate Change therefore it is obliged to provide a National Communication document that includes information on climate change vulnerability and adaptation implementation policies and strategies.

The adaptation strategies identified include;

- improved understanding of the coastal dynamics through data collection exercise and monitoring programs. Structural or bio-engineered coastal protection projects inquire site specific data and analysis before being considered
- examination of coastal protection options for reducing erosion risk
- land use planning
- protection of mangrove and reefs which are natural protection system
- adequate pollution control, to prevent reef die-off
- use of setbacks from shoreline and low lying areas in the construction of buildings and
- mangrove replanting in degraded areas.

(9) National Biodiversity Strategy and Action Plan (NBSAP)

The NBSAP was prepared through the Department of Environment which is also the National Focal Point for the United Nation Convention for Bio- Diversity in 1999. After consultation with different stakeholders at different levels from local to national, a strategy was formulated on conserving the genetic, species and ecosystem diversity of the country. It focuses on six focal areas;

- community support-awareness, involvement and ownership
- improving knowledge
- developing protected areas
- species conservation
- control of invasive species and
- capacity building and strengthening

The strategy observes that Fiji has only a rudimentary system of protected areas and that it is time to create "site of national significance program" that would provide legal protection and establish management plans. It also identifies institutional and capacity building as a very vital aspect of the commitment.

(10) Mangrove Management Plan

In 1985, a Mangrove Management Plan for Fiji was formulated. It contains a characterization, policies and maps of the mangrove location, types and use zones for the main islands of Viti Levu, Vanua Levu, Ovalau, Gau and Kadavu.

This document is still being used for decision- making purposes on foreshore reclamation of mangrove by the Department of Land and Surveys.

2.3.3 Relevant Scientific and Technical Programmes

There are approximately fourteen (14) relevant national programmes addressing issues related to the control or mitigation of land degradation. The details of these programmes can be found in the 2007 Fiji NAP.

(1) Soil Surveys and Soil Correlation Program

The program was carried out from 1981 to 2001 where the National Soils Surveys was completed by 1985 and the soils were classified according to the International Soil Taxonomy based on the USDA system which is currently being used as the international standards as the primary system with soil series. These has also being correlated to Fiji National Soil Classification System which locally known as Twyford and Wright (1965).

After the soil surveys, the soil mapping exercise for Viti Levu, Vanua Levu, Taveuni, and several islands in the Lau Group were carried out and completed at the scale of 1: 50,000. This information will be the basis for agro-technology transfer of research and scientific data based on soil types regionally, sub-regionally or nationally, identification of soil types or series and its chemical components for fertilizer recommendation purposes, the land use capability classification and crop suitability assessment for the nation, where the matching of land use/ crop types and land capability is very important if productivity and sustainable land management goals are to be met.

(2) Soil and Crop Evaluation Project.

The Soil and Crop Evaluation Project was a five year project that had been jointly funded by Fiji, New Zealand and Australia. It began in June, 1993 with an overall objective to contribute to self sufficiency in Fiji of food crops, and an increase in export earnings by definition and demonstration of crop nutrient requirements on the soil suitable for sustainable cropping systems in Fiji.

(3) Geographical Information Systems

In 1994 with the assistance of the AUSAID of Australia, the NZODA of New Zealand and the Fiji Government through the Soil and Crop Evaluation Project established the MAFF Geographical Information Systems and it was housed under the Land Use Planning Section of the Research Division and now of the Department of Land Resources Planning and Development. To date the Land Use Section have digitized and have stored the database of Taveuni Island and the two main island of Viti Levu and Vanua Levu and several small islands in the Lau Group.

The Land Use Section have also imported information such as the cadastral mapping systems, roads, river systems, native land mapping systems, forest inventory, geological information and other information from data custodians such as the Native Land Trust Board, Forestry Dept. Fiji Land Information Systems and others. These stored databases are retrieved, manipulated and analyzed for different outputs according to the needs of the clients, to make informed quality decision for the sustainable uses of their resources.

(4) Participatory District / Tikina Based Land Use Plan

In late 1999 the Land Use Section of the Research Division and later of DLRPD took the initiative to establish a participatory land use planning approach as a pilot project in the Bemana District in the province of Nadroga, in collaboration with the Extension Division of MASLR, Native Land Trust Board, Ministry of Fijian Affairs, Ministry of Fisheries and Forests, civil societies such as the WWF and the Foundation of the People of the South Pacific (USP), resources owners and other stakeholders

This would be the basis of future integrated or holistic approach to land resources planning, development and management programs. It emphasis the importance of a bottom up approach to land use planning and one of its main objective is to establish local land care groups, to empower communities to efficiently and effectively develop and manage their resources and create land stewardship amongst the resources owners and users.

(5) Integrated Agriculture Development Program

In early 2001 the integrated agriculture development program was endorsed by MASLR and carried out as a pilot project with assistance from Regional Development, Cooperative Dept, Health Dept., Native Land Trust Board, Fijian Affairs Board, Environment Dept. and other stakeholders focusing on bottom up or participatory approach to land development and management.

A pilot project was carried out in the District/Tikina of Toga in the Province of Rewa, Central Division. The program was initiated by the MASLR and fully supported by the Commissioner Central who is the head of administration in the Division, thus the formation of the Central Division Integrated Development Team (CDIDT).

The members of the CDIDT are from the various government and non- government agencies in the Division, who shared the view that agricultural development needs to be planned, implemented and monitored in an integrated or multi-sectoral way. This is to ensure a more balanced approach to development as well as optimal using of available resources through the mobilizing of both human and financial resources to be able to accomplish community development projects within the Division.

(6) Agroforestry Program

The Fiji/German Project supported agroforestry in Fiji under the German bilateral program from 1987-1994. The project focuses on the agroforestry practice with alley cropping and moved to regional multi-lateral program in 1995. The Agroforestry project was established within the MAFFA's Extension Division and then transferred to the Land Use Section of the Research Division and now of Department of Land Resources Planning and Development (DLRPD) in February, 1997 to assist clients to adopt the advocated agroforestry practices.

Regional organizations such as the German Technical Corporation (GTZ) and the Pacific Regional Agriculture Program (PRAP) assisted DLRPD on agroforestry research. The research on *Erythrina subumbrans* (*Drala*) and *calliandra* leguminous tree variety as a soil fertility improvement species was tested out on acid soils of the uplands of Fiji. Other research activities includes the surveys of traditional agroforestry practices in Fiji, of which information was gathered and documented to assist the DLRPD provide a range of technologies that could be adapted to meet the conservation and economic needs of the people.

(7) Awareness and Training on Sustainable Land Management

The Land Use Section of LRPD, the Research and Extension Division of MAFF/MASLR, other Ministries, NGOs and civil society such as the Foundation of the People of the South Pacific, University of the South Pacific, WWF and others have jointly carried out awareness and training on land degradation, disseminating information on sustainable development and transferring of low cost sustainable land management technologies for sloping land farmers as well as for the school children and other stakeholders. The long-term vision is to set up land husbandry/care groups in various communities in Fiji to empower communities to oversee the sustainable development and management of their natural resources.

(8) Transfer of Sustainable Land Management Technologies (SLMT)

In 1997 when the Commodity Development Framework program was implemented, the result of the IBSRAM/ Pacificland and Agroforestry on farm research program were transferred to farmers' field throughout the Central, Eastern, Western and Northern Division of Fiji. Recognizing the effectiveness of vetiver grass, pineapple with the inclusion of leguminous and nitrogen-fixing tree species such as *calliandra*, *erythrina* and *gliricidia* on contours to act as living barriers, nutrient pumps as well as hedgerows. This program is similar to the Sloping Agriculture Land Technology (SALT) Program implemented in the Asian countries. Altogether 300 farmers have adopted the low cost sustainable land management technologies all over Fiji and more have been waiting for technical assistance.

The program needs the support of donor partners to assist in the dissemination and implementation of the SLMT program to reduce or minimize land degradation.

(9) Drought Mitigation

In 1998, Fiji experienced the worst drought since rainfall records began in 1942, it recorded low rainfall than usual in October to April wet season. Damages to agricultural crops was estimated at US\$10 million. Food and Agriculture Organisation assisted with planting material and inputs while the Government of Finland supported the drought mitigation and preparedness training and awareness program. The government of Fiji assisted the sugar cane farmers by providing US\$ 21 Million for crop rehabilitation program.

(10) Land Use Options in the Fiji Sugar Industry

In light of the ongoing international trade reforms, Fiji faces major challenges as it addresses its obligation under the World Trade Organization. The challenges are particularly acute in the face of current reforms in the European Union and USA agricultural sector and the expected loss of the preferential access for the Fiji sugar to these markets.

The AUSAID through the Australian Center for International Agricultural Research (ACIAR) funded a project beginning in January, 1999, with an overall goal to assist Fiji Government, the Fiji Sugar Industry and most importantly the small holder sugar cane farmers to better adjust to expected reduction and eventually loss in the preferential access to EU and USA markets. It also needs to prepare itself to compete with other sugar exporting countries in the world market.

Therefore the assessment of land currently under cane should be carried out to identify land most suitable for sustainable cane production and land unsuitable for cane but suitable for other land uses such as for crop diversification on crops such as pineapple, mangoes, pawpaw, pigeon peas, floriculture, livestock grazing, forestry and other uses. In other words, using the land according to its capability for sustainable production.

This is also a strategy to encourage the Fiji Sugar Industry to improve its economic, social and environmental performance through voluntary initiatives, taking into account initiatives such as that is set by the International Organization for the Standardisation (ISO) standards.

The program was shelved during the political impasse of May 2000, but the program has resumed with low intensity.

(11) Land Capability Classification

In 1977 the Fiji Ministry of Agriculture Fisheries and Forest adopted a Land Use Capability Classification Guideline which was adopted from the New Zealand version of the USDA Land Use Capability Guideline. Land use capability classification surveys are carried out by the Land Use Section, DLRPD for feasibility studies on land resources, to assess the capability of that land to sustain production for different uses.

Land use capability is a systematic arrangement of the different kinds of lands according to those properties that determine its capacity for permanent sustained production. The word "capability" is used in the sense of "suitability for productive use" after taking into account the physical limitations the land may have.

This capacity depends largely on the physical qualities of the soil and the environment, these are frequently far from ideal, and the difference between the ideal and the actual is regarded as limitations imposed by these soil qualities and the environment.

These limitations affect the productivity of the land, the number and complexity of corrective practices needed and the type and intensity of the land use. The degree of limitations can be assessed from (a) susceptibility to erosion, (b) steepness of slope, (c) liability to flooding, wetness, or drought, (d) salinity, (e) depth of soil, (f) soil texture, structure and fertility, (g) stoniness, and (h) climate.

(12) Integration of Sustainable Land Management (SLM) and Sustainable Forestry Management (SFM)

In early 2000 The SPC/GTZ Regional Project for Forestry and Agroforestry in collaboration with the Department of Land Resources Planning and Development (MASLR) and the Forestry Department of Ministry of Fisheries and Forests (MFF) have integrated the sustainable land management (SLM) and the sustainable forestry management (SFM) technologies as a pilot project, in collaboration with the Extension Division of MASLR, Cooperative Department, Fijian Affairs Board(FAB), Native Land Trust Board(NLTB), Fiji Forest Industry (FFI), land owners and other stakeholders, by using Drawa Block, an area that consists of five (5) villages and covers more than 8,500 hectares of virgin forest in Vanua Levu(second largest island in Fiji).

The project has assisted in the formation of a Landowners Committee and a SFM/SLM Working Committee. The members comprises of senior members from; NLTB, FAB, MASLR, Forestry Depart., Cooperative Dept. FFI including the Chairman of the Landowners Committee. The Landowners Committee has begun with the advocacy for the formation of Land Care groups within the project area.

The synergies derived from combining the sustainable land management and sustainable forestry management initiatives augers very well with the idea of integrating the United Nation Convention to Combat Desertification/Land Degradation, United Nation Convention for Bio-Diversity and the United Nation Framework for Climate Change principles.

(13) Integrated Coastal Resources Management

The Institute of Applied Science (IAS) of the University of the South Pacific based in Fiji, the University of Rhode Island Coastal Resources Center, USA and the Government of Fiji are working in partnership and have initiated a program known as the Integrated Coastal Management for Fiji which was launched after a National Workshop held in April, 2002.

The coastal areas are of vital importance to Fiji society and its national development. Most of the urban centers and vast majority of villages are located on the shore, along with much of the population, agriculture, industry and commerce. Therefore as result of population increase, rapid coastal development and increasing utilization of coastal resources these has resulted in various impacts on the coastal environment which includes; loss of habitat and biodiversity, inappropriate solid waste management, mismanagement of chemical wastes, pollution of air and water ways, land degradation etc.

The initiative includes the involvement of all government ministries such as the Ministry of National Planning, Ministry of Agriculture, Sugar and Land Resettlement, Ministries of Fisheries and Forests, Ministry of Fijian Affairs, Ministry of Lands and Mineral Resources, Ministry of Works and Energy, the Non Government Agencies like the Native Land Trust Board, National Trust, Ports Authority of Fiji, Civil Societies such as the World Wild Fund for Nature (WWF), Foundation of the People of the South Pacific (FSP), University of the South Pacific(USP), resources owners and users. The programs have also identified the Coral Coast of Fiji as is pilot project area.

(14) Development of Landcare Groups

The successful implementation of the National Rural Land Use Policy and Plan depends very much on a delivery framework that combines top down and bottom up approach to facilitate communication between communities and government agencies. There is a need for a coordinating mechanism whereby government programs are complemented and strengthened by activities of the groups of stakeholder at community level.

At community levels resources owners and users need to be organized and empowered to plan and manage their resources, in order to provide the bottom up input necessary in the interactive resources management. A mechanism to facilitate this is through the group based concept where the resources owners and users are organized into local resources management groups, widely known internationally as the Landcare Groups.

2.4 REGIONAL ACTIVITIES UNDER THE UNCCD

There are five programmes that have been implemented at the regional level to address land degradation and meet obligations under UNCCD

(1) Soil Loss Research and Development of Sustainable Land Management Technologies

The International Board for Soil Research and Management (IBSRAM)/ Pacificland Network Program was established in 1991 to assist in the soil loss research as well as to develop and disseminate appropriate technologies for their sloping agricultural lands. The program was initially funded by the Asian Development Bank and in the later years by AusAid. It ended in December, 1999, but continued with internal funding from the Fiji government.

The program is a joint effort between the Department of Land Resources Planning and Development, Extension and Research Division of MASLR, resources owners and users. The technologies identified were being assessed against the farmer's current practice. It includes vetiver grass strips, pineapple hedgerows and other crops such as kava or leguminous tree species that were selected collaboratively by the researchers and farmers. For example soil loss rate on a ginger plot where no conservation is practiced yielded more than 50 tons per hectare per year compared to the soil loss index in the tropics of 13.5 ton per hectare per year. But in the ginger plot where the low cost sustainable land management technologies such as vetiver grass as hedge rows were practiced it yielded less than one (1) ton per hectare per year of soil loss.

(2) Pacific Regional Agriculture Program

In 1993 the PRAP/ European Union Project 1- for Farming System in low lands assisted the Land Use Section of Research Division and now of DLRPD with the agroforestry research by using *Erythrina subumbrans* as a fertility improvement species in collaboration with the SPC/GTZ Regional Forestry and Agroforestry Program. The research was carried out on acidic upland soils. The program also collated information on traditional agroforestry practices in Fiji.

One of the important contributions of the PRAP Project was the capacity building aspect of mainstreaming Participatory Rural Appraisal (PRA) into the agricultural program. PRA is a practical approach to creating a context where local people or communities can identify, discuss and solve their own problems. The involvement of communities or land users or resources owners from the planning to the implementation of the projects is very important if the projects are to be sustainable. Therefore the people's participation is crucial and this empowers them to make good informed decision on the balancing of resources development and conservation.

(3) Climate Change and Variability Scenario Generation/Modeling

Climate change is likely to have substantial and widespread impacts in the Pacific Island Countries, including the Fiji Group, affecting sectors as varied as health, coastal infrastructure, water resources, agriculture, forestry and fisheries. In August, 1999 the South Pacific Regional Environment Program (SPREP) with the assistance of the International Global Change Institute (IGCI) (Waikato University, New Zealand) produced a climate change computer modeling program known as the PACCLIM (Pacific Island Climate Change) proto-type model. The computer modeling is used to create scenarios to predict climate change and sea level rise in the Pacific.

IGCI, SPREP and the World Bank funded the creation of the FIJICLIM an offshoot of the PACCLIM, a computer modeling scenario generator to be used to predict climate changes and sea level rise in Fiji. But the modeling still needs to be further developed for Fiji to have any significant contribution to climate change mitigation.

(4) Development of integrated farming approaches for sustainable crop production in environmentally-constrained systems in the Pacific region (CROPPRO Project).

In November, 2001 the European Community CROPPRO three years funded project was launched in Suva, Fiji, with an overall objective to develop an integrated farming approaches for sustainable crop production in environmentally constrained systems in the South Pacific region, aiming at increasing crop productivity and decreasing land degradation.

The research program was being carried out in three Pacific Island Countries namely Samoa, Tonga and Fiji. The Fiji component is being managed by the Department of Land Resources Planning and Development in collaboration with Eco-consultant (Fiji), MAF (Tonga), University of the South Pacific, Alafua Campus, Samoa and METI, Samoa, Alterra Green World Research Institute, the Netherlands, Hort-Research (NZ) and University of Louvain- Belgium.

(5) Development of Sustainable Agriculture Project.

Development of Sustainable Agriculture (DSAP) is a regional project being implemented in 10 Pacific Island Countries. The project is funded by the European Union and its main purpose is to increase sustainable agricultural production on farm families in participating countries. The main strategy for achieving this emphasis is the dissemination of technologies based on the farmer livelihood needs and building national institutional capacity in the use of participatory approaches in sustainable agriculture development.

The key target outputs are as follows;

- Improved systems to identify farmers' production problems and solutions
- Appropriate technologies identified.
- Participatory extensional skills upgraded for National Research and Extension staff
- Appropriate technologies scaled up and promoted.
- Enhanced capabilities in extension communications.

2.5 CURRENT RESOURCES STATUS OF THE NATIONAL FOCAL POINT

The Land Use Section of the Department of Agriculture currently comprises nineteen (19) staff. Two of the staff are funded by the SLM Project. Recently, with the down sizing of the civil servants, the Public Service Commission had withdrawn two positions, resulting in the drop of the number of staff from twenty one (21). The nineteen staff are stationed in the three major divisions, the Central Division (11), Western Division (3), and Northern Division (5).

Of the thirteen (13) professional and technical staff, two are degree holders, while six are diploma holders (Diploma in Tropical Agriculture) from the Fiji College of Agriculture.

There are in total eight (8) vehicles, Central Division (3), Western Division (2) and Northern Division (3). All of the vehicles were purchased prior to the year 2000.

The Land Use Section is the Secretariat of the Land Conservation Board. There is no budgetary allocation for the Board to fulfill its obligations under the Land Conservation and Improvement Act. For the years since the Secretariat was shifted to the Land Use Section, the Section's operational funds have been used to support the work of the Board.

The national government provides mainly operational funds, while capital funds are minimal. There were no capital fund allocated for 2007 and 2008. Most of the past and current projects were and are externally funded.

Table 1. Fiji Government Budgetary Allocation for the UNCCD Focal Point

Year	1	1	1	2	2	2	2	2	2
	9	9	9	0	0	0	0	0	0
	9	9	9	0	0	0	0	0	0
	7	8	9	0	1	2	3	4	5
Amount	3	2	2	2	2	1	1	1	1
	0	0	0	0	0	2	0	0	0
FS000 .00's	0	0	0	0	0	0	0	0	0

Year	2006	2007	2008
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Amount	100	Nil	Nil**
FS000.00's			

** 2008-nil only funds from Venezuela Grant and GEF Medium Size Project/ Sustainable Land Management (SLM) project

Venezuela Grant: \$99,000 US (This is a 2 year project scheduled for 2007 – 2009. The Focal Point received the funds late in 2007 and actually started using the fund in 2008)

GEF/UNDP SLM project: 475,000 US (This is a 4 year project scheduled for 2008 – 2011)

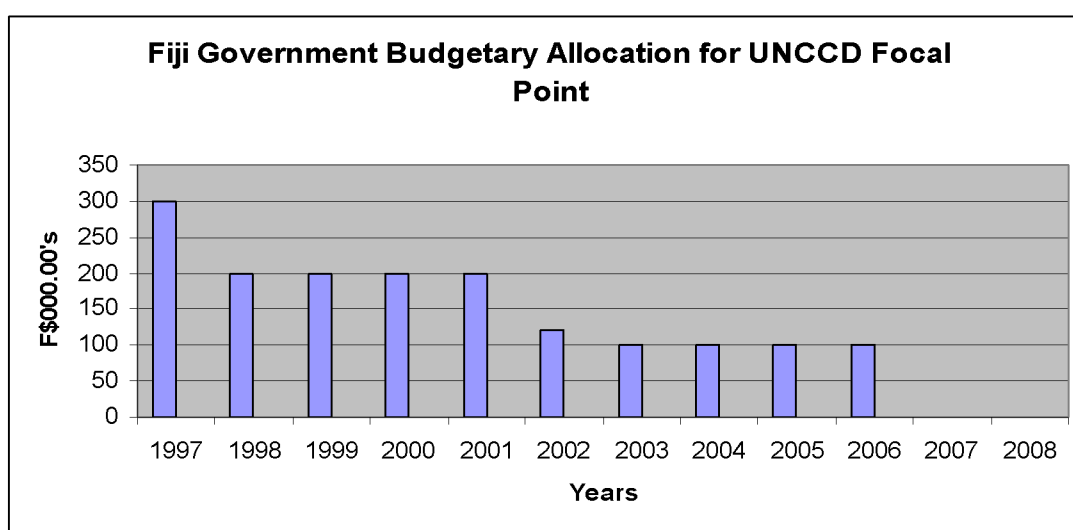


Table 2. Funding sources of some relevant projects implemented by the UNCCD Focal Point and other relevant stakeholders

	Name of Project	Project implemented within the frame of NAP/SRAP/RAP	Timeframe	Partners Involved	Overall Budget - F\$ (approximate)
	Sustainable Land Management	NAP	1997 - 2007	Fiji Government	\$100,000.00 (annually)
	Name of Project	Project	Timeframe	Partners	Overall

		implemented within the frame of NAP/SRAP/RAP		Involved	Budget - F\$ (approximate)
	Development of Sustainable Agriculture in the Pacific (DSAP)	SRAP	2004 - 2008	SPC/Fiji Government	\$600,000.00
	Development of Integrated Farming Approaches (CROPPO)	RAP	2002 - 2007	EU/ Fiji Government	\$250,000.00
	Watershed Management	NAP	Ongoing	Fiji Government	\$1 million
	Climate Change Adaptation Program	SRAP	2003 - 2005	SPREP/Fiji Government (CDAMPIC)	\$120,000.00
	Slopeland Farming Program (Extension component of SLM)	NAP	2005 - Ongoing	Fiji Government	\$100,000.00
	Tikina Based Profile	NAP	2004 - 2006	Fiji Government	\$250,000.00
	Farming Assistance Scheme	NAP	1997 - Ongoing	Fiji Government	1997 – 2005 (\$4 million) 2006 – 2008 (\$4 million)
	Sustainable Forest Management	SRAP	1994 - 2007	SPC/GTZ/Fiji Government	\$2 million

[Note: NAP – National Agricultural Programme, RAP – Regional Agricultural Programme, SRAP – Sub-regional Agricultural Programme.]

2.6 CURRENTLY IDENTIFIED CAPACITY NEEDS AND PROJECTS PROPOSED BY THE NATIONAL FOCAL POINT

2.6.1 Identified capacity needs and recommendations

As follows is a summary of recommendations and identified capacity needs that emanated from the latest review of the Land Conservations and Improvement Act.

- (1) Broaden the Focus of the Board and the Legislation to include the sustainable use and conservation of both land and water resources.*
- (2) Rename the current Land Improvement and Conservation Act to the Land and Water Resources Management Act and the name of the Board to the Land and Water Resources Management Board.*
- (3) Expand the statutory functions of the new Land and Water Resources Management Board.*
- (4) Appoint a skilled, respected and independent Chairperson to the Land and Water Resources Management Board.*
- (5) Expand the Membership of the Board to better reflect current stakeholder interests.*
- (6) Decisions made by the Board should be based upon a process of consensus decision-making.*

- (7) *The Board must be provided with the appropriate legislation, sufficient resources, and political will necessary to effectively fulfill its regulatory role.*
- (8) *Detailed Regulations are recommended which prohibit land management activities which lead to serious land and water degradation.*
- (9) *Mandate the Land and Water Resources Management Board with the responsibility for the development of a National Land and Water Use Plan.*
- (10) *Nadi Catchment Management Plan: the National Land and Water Use planning process should commence immediately through piloting the process within the Nadi Catchment of Ba Province.*
- (11) *Board-mandated land and water use planning processes should incorporate 'bottom-up' community-based planning processes.*
- (12) *Land and Water Use Plans should set clear environmental targets.*
- (13) *A National Environmental Targets Working Group should be set up immediately.*
- (14) *Adequate skilled and dedicated staff – Land and Water Conservation Officers - must be provided under the direction of the Land and Water Resources Management Board. This includes:*
- *Land and Water Compliance Officers;*
 - *Land and Water Planning Officers;*
 - *Land and Water Community Facilitators; and*
 - *General Manager/Executive Director*
- (15) *Provide Professional Training to Land and Water Conservation Officers and to extension and advisory officers employed by other agencies.*
- (16) *Provide initial financial incentives funding to landowners and farmers to implement sustainable land and water technologies.*
- (17) *The new Land and Water Resources Management Board should design and build its functional structure to support the activities of the Land and Water Planning Committees*
- (18) *External evaluation and auditing should be undertaken of the performance Land Water Resources Board.*
- (19) *The Board should Report Directly to the Minister for Primary Industry and, though the Minister, ultimately to a sub-Committee of Cabinet.*
- (20) *A Good Quality Agricultural Land Protection Policy and Zoning Maps should be developed urgently.*
- (21) *Seek a strong policy commitment from Fiji Sugar Corporation, NLTB, the Sugar Research Institute, and the Ministry of Agriculture that their field officers will incorporate a Sustainable Land and Water Management message into their extension and advisory services.*
- (22) *Forge closer cooperation between Land Use Section of MPI and the NLTB.*
- (23) *The existing legislative provisions to control the removal of sand, gravel, rocks and boulders from the bed and banks of rivers and streams should be applied immediately and comprehensively.*

2.6.2 Identified Projects

These projects have been identified under the national reports communicated to the UNCCD Convention. Funding and implementation of these projects will ensure that relevant stakeholders, including resource owners and users to sustainably managed land- based resources, thereby addressing the objectives of the UNCCD, besides supplying and meeting local and national socio-economic needs and aspirations.

Project 1: Development of an Institutional Capability for Integrated Land Use Planning

Objective: To establish an independent Land Use Authority, staffed with a range of appropriate expertise, having access to authority and direct support to the executive; the Authority having both the support of the rural people and authority and resources of government.

Activities:

- (1) Assess institutional constraints, land use and legislation policy,
- (2) Conduct extensive consultation with land users, government officials and the public at large,
- (3) Recommend preferred institutional model for facilitating land use planning,
- (4) Recommend human, financial and other resources required to support a Land Use Authority,
- (5) Develop strategic and business plans for the Authority,
- (6) Define job descriptions, roles and responsibilities and, based on a needs assessment, training programme, and
- (7) Establish the Land Use Authority and implement recommendations.

Project 2: National Land Use Planning

Objective: To prepare a participatory national land use plan based on physical land resource evaluation and extensive formal public consultation.

Activities:

- (1) Assess land use policy and legislation,
- (2) Select methodologies and develop approach,
- (3) Conduct formal public consultations,
- (4) Collate biophysical data from land resource surveys,
- (5) Evaluate land suitability and generate maps via GIS,
- (6) Evaluate and apply land use models from land information system,
- (7) Analyse environmental, economic and social impacts,
- (8) Develop and present viable land use options at public forum, and
- (9) Prepare the land use plan.

Project 3: National Land Zoning

Objective: To prepare a 1:25,000 scale national land zoning map (plus 1:5,000 scale zoning maps in the peri-urban areas) with definitions and guidelines for each zones as to rationalize location and direction of future non-rural land uses and to protect that class of land for food production.

Activities:

- (1) List the range of potential land uses,
- (2) Collate natural resource information in GIS,
- (3) Generate specific use-suitability and general land use maps from GIS,
- (4) Map recommended land zones and boundaries of protected areas,
- (5) Define land zones and guidelines for use within each zone,
- (6) Conduct extensive consultation with land users/owners, officials and the public at large, and
- (7) Publish various scale land zoning maps (national and peri-urban).

Project 4: National Contemporary Land Use Mapping

Objective: To produce a 1:50,000 scale contemporary land use map of the Republic using remotely sensed data and field survey techniques.

Activities:

- (1) Map contemporary land use using remote sensing techniques or image processing of satellite imagery,
- (2) Ground truthing and field mapping using GPS,
- (3) Upgrade GIS to handle raster data,
- (4) Training in image processing and image enhancement applications,
- (5) Digitize land use maps from 1968 and 1978 surveys,
- (6) Process, collate and interpret field and remotely sensed data,
- (7) Generate national contemporary land use map (1:50,000 scale), and
- (8) From GIS derive interpretative single-factor land use maps, statistical data and trends in land use.

Project 5: Integrated Rural Resource Database Development and Applications

Objective: To develop a computerized Land Resources Information System (LRIS), comprising thematic databases covering agroclimatic factors, soils, topography, vegetation and present land use, linked to a GIS to display combination of these, and other data in support of rational land use policy, planning and utilization.

Activities:

- (1) Provide explanation of concepts, discussion and agreement in details of the design,
- (2) Identify data sources, and agreement on responsibilities for data acquisition, verification and digitization (where appropriate),
- (3) Collect, collate, install databases and input data into GIS,
- (4) Integrate physical, socio-economic and cadastral information,
- (5) Install crop environmental requirements and production systems' databases and provision of suitable interface with the GIS,
- (6) Collect and input data,
- (7) Develop database of socio-economic information,
- (8) Adopt and apply systems of land evaluation, and
- (9) Estimate potential yields from combinations of products (crops), production systems, and land/climate units.

Project 6: Adaptive Research and Extension in Land Husbandry Technologies

Objective: To develop a well-resourced and integrated research and extension program comprising suitably qualified MAF staff conducting adaptive sustainable land management (SLM) and 'best practice' research and effectively disseminating ecologically sound and socially acceptable land husbandry technologies to land users through targeted and innovative techniques.

Activities:

- (1) Conduct extensive rural participatory meetings with farmers/land users to understand needs, problems and constraints,
- (2) Evaluate and recommend appropriate institutional model for SLM research and extension within MAF,
- (3) Assess training needs and development of training plan,
- (4) Design targeted research and extension program with implementation schedule and forward budgets,

(5) Further the consultative process with farmers and land users, and

(6) Implement program in concert with a media awareness program (project 7).

Project 7: National Sustainable Land Management, Education and Awareness Program

Objective: To create a high level of public understanding about land use policy and legislation, in particular specified land-husbandry and ‘best practice’ clauses in land leases with the purpose of reducing land degradation and increasing productivity from the land through sustainable land management (SLM).

Activities:

(1) Consult with the ‘market’ as to needs, then design a program to meet these,

(2) Prepare printed materials, brochures, information sheets, manuals, guidelines, handbooks and education program,

(3) Develop radio and video material to promote SLM practices,

(4) Implement structured education courses for farmers, women, NGOs, student of community groups,

(5) Provide support for organizations with interests in SLM,

(6) Prepare and distribute information packs as teaching aids for use in schools, and

(7) Conduct evaluation.

2.7 CONCLUDING REMARKS

In principle the underlying principle to which the Land Use Section of the Ministry of Agriculture exists is to ensure that Fiji's land resources is protected and utilized in a sustainable manner. This in some ways has assisted the Section in fulfilling some of the obligation as prescribed in the Convention.

To fully meet the obligations under the UNCCD Convention, the Focal Point will equally depend on the effective implementation of its own programs as well as relevant programmes coordinated by other relevant stakeholders. Therefore the Focal Point will need to effectively network, coordinate as well as collaborate with these relevant stakeholders. Some of the programmes identified herein include: Drought Mitigation and Early Warning System Management; relevant programmes implemented under the Environment Management Act of 2005; Sustainable Forest Management programmes; Watershed Management Master Plan; National Natural Disaster Management Plan; Climate Change Assessment and Implementation programmes; National Biodiversity Strategy and Action Plan (NBSAP) and the Mangrove Management Plan.

In this quest, the first step is to provide the necessary resources, both financial and human, to enable the Section to implement the necessary programmes as well as maintain them for maximum results to be realized on a nation-wide scale. The Thematic Assessment will elaborate further on these issues by identifying gaps and capacity constraints. These gaps and capacity constraints would be the basis for which a national action plan would be formulated and hopefully executed to enable Fiji to fully meet the obligations of the UNCCD.

THE UNITED NATIONS CONVENTION ON BIOLOGICAL DIVERSITY & THE CARTAGENA PROTOCOL ON BIOSAFETY (by P.J. Kailola)

3.1 INTRODUCTION

The objectives of the Convention on Biological Diversity (Article 1) are the

conservation of biological diversity,

sustainable use of its components, and

fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.

The principle of the Convention on Biological Diversity says that States have, in accordance with the Charter of the United Nations and the principles of international law, the

→ sovereign right to exploit their own resources pursuant to their own environmental policies, and

→ responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

The **obligations** of the parties to the Convention on Biological Diversity include the following:

a) cooperation between parties to the Convention;

b) developing national strategies, plans or programmes for the conservation and sustainable use of biological diversity and adapt for this purpose existing strategies, plans or programmes which shall reflect, inter alia, the measures set out in this Convention relevant to the Contracting Parties concerned,

c) integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies

d) identify components of biological diversity important for its conservation and sustainable use, monitor them, and identify any activities that may adversely affect those components;

e) develop a system of protected areas, together with guidelines for their development and management;

f) promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings;

g) promote sustainable sound developments;

h) rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies;

i) establish or maintain means to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology;

j) prevent the introduction of, control to eradicate, those alien species which threaten ecosystems, habitats or species;

k) respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities, embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity;

- l) develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations; and
- m) cooperate in providing financial and other support for in-site conservation.

The National Focal Point for the UNCBD is the Department of Environment. The Department

- a) facilitates and coordinates meetings within the department and with relevant stakeholders,
- b) acts as the Secretariat for the UNCBD
- c) acts as the national focal point for programs under UNCBD
- d) formulates policies as required under the obligations of the UNCBD,
- e) oversees and participates in implementation of policies and programs under the UNCBD,
- f) meets reporting requirements to the Secretariat of the UNCBD and
- g) facilitates access to funding for Fiji-based programs under the UNCBD
- h) advises the national Government on matters relating to biodiversity.

3.2 NATIONAL OBLIGATIONS UNDER THE CONVENTION

Preparation of a National Biodiversity Strategic Action Plan (under Article 6) and undertaking a National Capacity Self Assessment program are two of the primary obligations for Fiji under the CBD.

The first was completed in October 1999 but not endorsed by Cabinet until 2003; it was updated in 2006. The second obligation, the NCSAP, is underway.

Multi-lateral environment agreements associated with the UNCBD that Fiji has signed

- **Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).** Some of the obligations under CITES are to monitor and when necessary curtail trade in those species of wild flora and fauna that are in immediate or eventual danger of extinction due to a variety of factors, including their international trade. CITES appendixes list fauna and flora present in Fiji – some tree species, certain shells, coral, certain terrestrial fauna. CITES also encourages the promotion of international and national vernacular and scientific nomenclature of fauna and flora. Fiji became an accessory to CITES on 30 Sept 1997, entered into force, 29 Dec 1997².

Article VIII, paragraph 7, of the Convention requires each Party to submit an annual report on its CITES trade, containing a summary of information on, inter alia, the number and type of permits and certificates granted, the States with which such trade occurred, the quantities and types of specimens, and the names of species as included in Appendices I, II and III. According to the CITES website (see footnote), Fiji has submitted annual reports as follows: 23/12/03 (for 2002) ; none for 2003 ; 23/01/07 (for 2004); 23/01/07 (for 2005); 01/08/07 (for 2006).

Article VIII, paragraph 7, of the Convention also requires each Party to submit a biennial report on legislative, regulatory and administrative measures taken to enforce the Convention. Fiji has submitted

² <http://www.cites.org/eng/disc/parties/alphabet.shtml> - accessed June 2008

three reports – 2000, 2001, 2002. It has not submitted biennial reports (at least since 2003) as far as I have been able to trace.

- **Convention on Wetlands of International Importance especially as Waterfowl Habitat**, initiated in Ramsar, Iran, 1971 (now known as the Ramsar Convention). RAMSAR calls upon its Parties to recognize the interdependence of humans and their environment, and to consider the importance of the many ecological functions of wetlands, including flood control, nutrient cycling, and habitat for migratory wildlife and commercially important fish. Wetland losses are irreparable because of their economic as well as scientific and recreational values. Parties are instructed to develop national policies to decrease wetland losses and to recognize that migratory waterfowl are important international resources because of their seasonal movements. The overall intent of Ramsar is to enhance national policies and international coordination for the conservation of both wetlands and waterfowl. In Fiji, the RAMSAR Convention entered into force in Fiji on 11 August 2006. Fiji has one RAMSAR site (upper Navua Gorge) of 615 hectares.

- **Protocol on Biosafety** initiated in Cartagena, Colombia, 2000 (see below, 3.6).

- Fiji has not signed the Convention on the Conservation of Migratory species of Wild Animals (whales and dolphins, sea birds). This Convention came into force in 1983 and aims to conserve terrestrial, marine and avian species throughout their migratory ranges. Countries that are parties to the Convention collaborate to conserve these migratory species and their habitats by (a) providing strict protection for endangered migratory species (those listed in Appendix I to the Convention); (b) establishing agreements to conserve and manage key migratory species (those listed in Appendix II); and (c) engaging in cooperative research activities.

- **Convention on International Plant Protection (IPPC).** The IPPC is an international treaty to secure action to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control. It is governed by the Commission on Phytosanitary Measures (CPM) which adopts International Standards for Phytosanitary Measures (ISPMs). The CPM has confirmed the International Phytosanitary Portal (IPP) as the preferred forum for national IPPC reporting and the exchange of more general information among the phytosanitary community. The IPPC Secretariat coordinates the activities of the Convention and is provided by the FAO. Fiji adhered to the IPPC on 10 August 2005.

- **The United Nations Framework Convention on Climate Change (1994)** The Convention on Climate Change sets an overall framework for inter-governmental efforts to tackle the challenge posed by climate change. It recognises that climate is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The convention was adopted on 11 December 1997 at the Third Conference of the Parties held in Kyoto, Japan – hence the name ‘Kyoto Protocol’. The protocol entered into force on 16 February 2005. As of May 2008, 182 parties have ratified the protocol. Under the Convention, governments (a) gather and share information on greenhouse gas emissions, national policies and best practices, (b) launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries, and (c) cooperate in preparing for adaptation to the impacts of climate change. Fiji ratified the convention on 17 September 1998.

- **The United Nations Convention on the Law of the Sea (UNCLOS).** Fiji signed the convention on 10 December 1982.
- **The United Nations Framework Convention on Climate Change (UNFCCC).** Fiji ratified the convention on 25 February 1993 and its first report was submitted in 2006.
- **Convention for the Protection of Natural Resources and Environment of the South Pacific Region and Related Protocols (1986).** The parties to this Convention aim to prevent, reduce and control pollution from all sources and enable legislation to control pollution in their national waters. The Convention also addresses dumping of toxic and hazardous waste and mining and coastal erosion. Parties to the Convention are obliged to establish protected areas for wild flora and fauna and to carry out environmental impact assessments. Fiji ratified both of these regional convention (dumping, and pollution emergencies) on 18 September 1989, and the Convention entered into force on 22 August 1990. Amendments to the protocol on dumping and additional protocols on pollution by oil and highly noxious substances has been ratified by Fiji as of October 2006.
- **Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters (1972).** London. Fiji signed in 1983]
- **The Vienna Convention for the Protection of the Ozone Layer & The Montreal Protocol on Substances that Deplete the Ozone Layer.** Fiji acceded to the Convention and Protocol on 23 October 1989. (www.unep.org, **Fiji was in non-compliance** for the controlled substance methyl bromide in 2003 and was required to submit a plan of action with time-specific benchmarks to ensure a prompt return to compliance.)
- **Convention for the Conservation of Nature in the South Pacific.** Fiji ratified this regional convention on 9 August 1989.
- **Convention for the Protection of the World Cultural and Natural Heritage (World Heritage, 1972).** The Convention aims to encourage the identification, protection and preservation of Earth's cultural and natural heritage. It recognises that culture is strongly related to the natural environment in which it develops. Fiji ratified the Convention on 21 November 1990. In 1999, Fiji submitted four properties to the Tentative List. Three of them are in the 'Cultural' category (Sovi Basin, 19,600 hectare basin sited in the Naitasiri Province, Viti Levu; Sigatoka Sand Dunes, 650 hectares west of the Sigatoka River mouth, Viti Levu; and the township pf Levuka on the island of Ovalau) and one in the 'Natural' category (Crested Iguana (*Brachylopus vitiensis*) Sanctuary on Yaduatabu Island south-west of Vanua Levu).
- **Washington Declaration on Protection of the Marine Environment from Land-based Activities (1995).** This Declaration addresses the interlinkages between the freshwater and marine environments and recognises that the major threats to the health, productivity and biodiversity of the marine environment result from human activities in coastal areas and further inland. The Declaration identifies a global plan of action. It is possible that Fiji has not signed this Declaration.

- **Convention for the prohibition of fishing with long driftnets in the South Pacific** (Wellington, 1989; Protocols I and II, Noumea, 1990). The Driftnet Convention consists of 14 Articles which essentially require nations and territories in the South Pacific to prohibit their own nationals from driftnet fishing and also to take measures, consistent with international law, to restrict driftnet fishing activities by distant water fishing nations in the region. The Convention was ratified by Fiji on 18 January 1994.

- **Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region** (Waigani, 1995). The Waigani Convention bans the importation to South Pacific Forum countries of hazardous and radioactive wastes (not part of the 1989 Basel Convention – which Fiji has not signed – on the control of transboundary movements of hazardous wastes and their disposal) and controls the transboundary movement and management of hazardous waste within the South Pacific region. It targets hazardous wastes, including radioactive and nuclear wastes, transported around the region's 38.5 million square kilometres of blue water, the biggest expanse of open ocean on the planet. Fiji signed the Convention on 16 September 1995, ratified it on 18 April 1996, and implemented it on 21 October 2001.

- **Stockholm Convention on Persistent Organic Pollutants (2004)**. The Convention aims to protect human health and the environment from the effects of persistent organic pollutants (POPs) with a range of control measures to reduce and, where feasible, eliminate POPs releases, including emissions of unintentionally produced POPs such as dioxins. The Convention also aims to ensure the sound management of stockpiles and wastes that contain POPs.

- There are currently twelve POPs listed in Annexes to the Convention. These are aldrin, chlordane, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, toxaphene, polychlorinated biphenyls, DDT, dioxins and furans. The Convention recognizes that there are other chemicals that could pose similar hazardous threats to human health and the environment, therefore other chemicals may be added in the future. The Convention urges parties to produce National Implementation Plans to guide national responses. Fiji ratified the Convention on 20 June 2001 and the Convention entered into force on 17 May 2004. Fiji has submitted one report (in 2006).

- **Convention on Combating Desertification (UNCCD)**. Fiji accessed to this UN convention on 26 August 1998.

- Fiji has signed up to the Barbados Declaration (1994). The Declaration affirms the importance of: human resources and cultural heritage, gender equity, the role of all major groups of society, the right of Small Island Developing States over their own natural resources, vulnerability to natural and environmental disasters, climate change and sea level rise, limited freshwater resources, special situation and needs of the least developed of those States, economic vulnerability, capacity building, constraints to sustainable development, and partnerships. The reduction and elimination of unsustainable patterns of consumption and production, and the provision of effective means for the implementation of the Rio Declaration's Programme of Action including adequate, predictable, new and additional financial resources.

- **Millenium Development Goals (MDG).** Several years ago, Governments around the world agreed on a set of common goals for developing countries, known as the Millenium Development Goals. These Goals are time-bound (have a set beginning and end date – 2015) and have established outcomes and achievements in order to tackle extreme poverty, hunger, disease, gender equality, education and environmental sustainability. As on of the signatories of the MDGs, Fiji has accepted all of its goals. The Goal for environmental sustainability (Goal 7) has two main targets (Target 9: integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources; Target 10: halve by 2015 the proportion of people without sustainable access to safe drinking water). Of particular interest in Target 9 is the requirement (among other things) for a higher percentage of land to be covered by forest and a greater area of protected areas. Target 10 also identifies improved sanitation as a requirement. Fiji’s performance on the MDG’s has been variable: on the one side its forest area has decreased (44.6% total land area) and less people have access to improved water sources and sanitation, while its national protected areas has increased (1.1% total land area).
- The Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the **Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks** (the Fish Stocks Agreement) was adopted on August 4, 1995. The Agreement aims to reverse the global trend of declining fish stocks and gives form and substance to this Convention’s mandate for States to cooperate in conserving and managing straddling and highly migratory fish stocks. The Agreement lays out general principles to be followed by States to conserve and manage the stocks in question, including a precautionary approach to fishery management, the use of regional organizations, strict fisheries enforcement and data collection and exchange. Fiji has not yet ratified this Agreement.

3.3 NATIONAL ACTIVITIES UNDER THE CONVENTION

Fiji activities under the CBD have been and are being performed by several stakeholders: Government, non-government organisations, academic institutions, community-based organisations, statutory bodies, private enterprises, regional non-government organisations, and some civil organisations and international donors.

GOVERNMENT

The Native Lands Trust Board, Departments of Environment, Forestry, Fisheries and the Fiji Affairs Board have carried our programs under the CBD – usually in conjunction with non-government organizations. The programs have included assessing Sovi Basin, management plans in nature reserves, forest policy and timber identification, integrated resource management plans, studies on fisheries resources, enabling legislation, producing awareness material and inventories of resources.

The departments of Health (Nutrition section), Town Planning, Lands, Education (Curriculum Development Unit - awareness), Rural Development, Tourism and Commerce also perform conservation activities as often minor parts of their major functions.

The **Department of Agriculture** carries out programmes with farmers on planting of native fruit trees and vegetables. It also regulates the clearing of land (e.g. riparian buffer zones) in agricultural areas. The Department also carries out awareness programs on safe use of agricultural chemicals.

The **Quarantine** section within the Department inspects incoming and outgoing shipments and passenger luggage for potentially harmful diseases and organisms and is the intercepting agency under CITES (see below). Fiji's Quarantine section has a bilateral quarantine agreement (BQA) with Australia and New Zealand pertaining to quality assurance for exported agricultural products (e.g. mango, breadfruit, eggplant, pawpaw).

The **Forestry Department** carries out a timber certification process. Fiji has a Code of Practice for logging (the first in the Pacific region; now emulated by neighbouring Melanesian countries) and this Code has been undergoing a review. The Code is allied to a legally-binding Forestry Decree, while the Forest Policy was revised in 2007. The Code of Practice establishes guidelines for sustainable logging practices. A process of forest certification is underway in Fiji along the lines of the international Forest Stewardship Council (see NatureFiji/MareqetiViti, below).

An inventory of national forests was carried out in 2007. There are two types of forest reserves in Fiji: 'forest' reserves (of which there are 16, totaling 29,800 hectares) and 'native' reserves (seven, totaling 574.2 hectares). There is also a protected forest in Serua, totaling 17,089 hectares. Drawa forest, in Vanua Levu, is managed under a strict sustainable logging practice which entails allocating quota on tree species and size.

The Department of Forestry works actively with several non-government organisations, including the Wildlife Conservation Society, World Wide Fund for Nature, Birdlife International, Conservation International, and the South Pacific Regional Herbarium.

The **Fisheries Department** is an active participant in the Fiji Locally Managed Marine Areas network (see FLMMA, below). It also works with the Pacific Regional Environment Programme (SPREP), the Secretariat of the Pacific Community (SPC) and other local and regional organisations in awareness raising (e.g. 'Year of the Turtle'; 'Year of the Coral Reef') and surveying (e.g. collaborating with the Society for the Conservation of Reef Fish Aggregations in conducting surveys and awareness raising in northern and eastern Fiji).

As part of its mandate to sustainably manage inshore fisheries resources, the Fisheries Department has been carrying out biodiversity assessments of the 410 qoliqoli in Fiji. It also monitors landings and exports of pelagic fishes (e.g. tunas) and other marine products from Fiji waters (e.g. trochus, aquarium fish, beche-de-mer) and performs inspections and licensing of commercial premises.

The **Department of Environment** performs a coordinating role with other environment-associated departments (as above) and develops and supports legislation and conventions relative to the environment and conservation activities.

NON GOVERNMENT ORGANISATION

Birdlife International

Mission/who they are: ‘BirdLife International is a global partnership of conservation organisations that strives to conserve birds, their habitats and global biodiversity’. It works with people in more than 100 countries and territories worldwide towards sustainability in the use of natural resources. The Fiji secretariat of Birdlife International commenced in 2003.

Activities:

Bird surveys at 20 forested sites in Viti Levu, 2003-06; Bird surveys at eight forested sites in Vanua Levu, 2003-04; Book/inventory: “Important Bird Areas (IBAs) in Fiji: Conserving Fijis Natural Heritage”, 2006; Report of the preliminary baseline survey of the terrestrial vertebrate fauna of the Waivaka catchments, Naomia, Viti Levu, 2003

Sovi Basin biodiversity survey, Viti Levu, 2005; Management plan, Ravilevu Nature Reserve, Taveuni, Cakaudrove, 2007; Management plan, Tomanivi Nature Reserve, Ba, 2007; Surveys on the endangered pink-billed parrot finch, 2003-04; Community training on identification, catch and release for petrels, 2005-06; Community training. Predator identification and protection of petrel burrows, Gau Island, 2005; Specialist training for community representatives on petrel identification and conservation, 2005.

More recently: Eradicating rats, invasive alien species (IAS) on Vatu-i-ra Island, 2006;

Vatu-i-ra Island declared rat-free early in 2008; Awareness raising program called Community-Based Conservation Groups at Fiji’s Key Conservation Sites initiated, 2006;

Eradication of rats from the seven islands in the Ringold Island group in north-eastern Fiji, 2008; Developing proposals with other NGOs (e.g. IUCN) to consider addressing legal impediments to establishing a network of protected areas in Fiji, 2008; Developing a proposal for empowering local people on their rights, 2008; Viwa Island – rat eradication project, 2008.

Conservation International (CI)

This NGO has its parent body in the U.S.A. The NGO’s *mission is* to ‘conserve the Earth’s living heritage – our global biodiversity – and to demonstrate that human societies are able to live harmoniously with nature. We safeguard valuable species, preserve the most important landscapes and seascapes, and support communities that care for and rely on Earth’s natural resources. To reach these goals, we focus on three strategies: dedicating ourselves to innovation, raising awareness about conservation, and maintaining business-like effectiveness.

Activities:

In Fiji, CI has assisted in creation of marine protected areas, raised environmental awareness in communities. Participated in a ‘Sovi Basin Workshop, Viti Levu - a direction forward’, 2005. It also has conducted surveys in association with the South Pacific Regional Herbarium and the Department of Forestry.

More recently: Protecting and conserving the Sovi Basin rainforest (with Fiji Water Foundation and the National Trust of Fiji), 2007-08. (No other information is forthcoming at this date).

Coral Reef Alliance

The website (www.coral.org) states that the Coral Reef Alliance (CORAL) was founded in 1994. It is a member-supported, non-profit organization dedicated to protecting coral reefs around the world for current and future generations. It

- works with communities to identify and soil conservation challenges,
- changes attitudes and behavior through education and training,
- provides resources to strengthen conservation efforts, and
- creates incentives for sustainable tourism.

CORAL focuses on three ‘fundamental catalysts for change:

- marine protected areas (MPAs);
- marine recreational tourism; and
- local communities. By “engaging stakeholders in these three groups, it builds partnerships that establish lasting changes and promote coral reef health around the world.”

CORAL began working in Fiji in 2003, where its main focus is the Kubulau marine conservation area, Namena Marine Reserve and the Taveuni Island Waitabu marine park. According to its website, CORAL has numerous partners in Fiji: Ministry of Forests and Fisheries, Ministry of Tourism, Namena marine reserve, Greenforce, Wildlife Conservation Society, several ‘recreation’ partners, US Peace Corps, Resort Support, Marine Ecology Consulting, Fiji Native Lands Trust Board and the Bouma National Heritage Park.

Econesian Society

This is an informal society in Fiji made up of university undergraduate and post-graduate students, most of whom have studies Geography students under Professor Randy Thaman, USP. The society performs at functions – mainly in singing; they may also perform short dramas. There is no identified product (except their songs that they compose to suit each occasion at which they perform). Funding is usually in kind. The Econesian Society is part of the Pacific Youth Environment Network.

Fiji Locally Managed Marine Areas Network (FLMMA)

The Locally Managed Marine Area (LMMA) network’s website is a portal for information on community-based marine conservation and its practitioners. The Locally Managed Marine Area (LMMA) Network is a group of projects and practitioners who have joined together to increase the success of their marine conservation efforts. The Network uses a shared framework for learning and communications that transcends geographic, linguistic, and cultural barriers. It allows members to measure and improve the success of their marine conservation efforts.

FLMMA received the prestigious Equator Initiative Award from the United Nations Development Programme, out of more than 420 total nominations and 27 finalists, 2002

The FLMMA approach has been formally adopted by the Fiji Government, 2006

FLMMA received the prestigious Whitley People and Environment Award, 2004

Activities:

Marine protected areas (MPAs), 2000 onwards; community awareness raising through its ongoing Community Information, Communication and Education Campaign.

There are 213 sites (representing a much larger number of communities) in Fiji, 2008

FLMMA is trialing catch recording in about 30 sites around Fiji, gathering subsistence, artisanal and catch-per-unit-effort data, 2008

Fiji Marine Aquarium Council (FMAC)

This global organization is under restructure after being previously active in Fiji. Its primary mission is establishment of quality assurance in the aquarium fish industry, and several Fiji companies that export marine aquarium fishes and corals are 'MAC-accredited'. The head office is in Hawaii.

Frontier Fiji and Society for Environmental Exploration

The Society for Environmental Exploration is based in the United Kingdom and was established in 1989 as a non-profit conservation NGO dedicated to safeguarding biodiversity and ecosystem integrity. Since its inception, it has hosted many global conservation projects under the banner name of 'Frontier'. Frontier projects advance field research and implement projects that will help conserve biodiversity and help develop sustainable livelihoods. In Fiji, the society is known as 'Frontier-Fiji', and it has an MOU with the USP to conduct scientific research in Fiji. Frontier volunteers come throughout the year to assist in basic biodiversity studies on Gau Island.

Frontier-Fiji is collaboration between the Society for Environmental Exploration and the International Ocean Institute - Pacific Islands. Frontier-Fiji focuses on the coastal and marine environments of Gau Island in the Lomaiviti island group, on which the local communities are heavily dependent and are overexploited. As part of Frontier Fiji conducts a biodiversity assessment of marine protected areas (MPAs) on Gau with the objective of recording marine resource use and conservation evaluation. Scientific baseline data surveys of reef areas, mapping the coral reef, sea grass beds and mangrove fringes of the region are conducted. A Marine Research Methodology Training Manual has been created and the island's conservation and biodiversity needs are being identified. Furthermore, islanders are trained in making informed decisions regarding ecosystem management by building awareness in schools and communities through environmental education and training.

Greenforce

Or the 'Green Expedition Company'. This organization is based in the United Kingdom and the U.S.A. It specializes in marine and terrestrial scientific conservation expeditions for gap year students, university students and those wanting to undertake conservation activities world-wide.

Greenforce members have worked in Fiji with other stakeholders, including the National Trust and the Wildlife Conservation Society (WCS).

GTZ/SPC Forestry Program in the South Pacific

Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH [German Agency for Technical Cooperation] and the Secretariat of the Pacific Community.

The GTZ is an international cooperation enterprise for sustainable development with worldwide operations that conducts a regional forestry project with the Secretariat of the Pacific Community. Forestry resources play an important economic role in Fiji and other Pacific island States. Due to increasing demographic pressure and the promotion of the modern sector, more and more areas of forestland have been cleared for permanent and shifting cultivation, for industrial development and

infrastructure as well as for timber exports to the industrialized countries in the region. The GTZ/SPC forestry program concentrates on environmental policy and the conservation and sustainable use of natural resources.

Activities:

Report on regional awareness raising tour of local and global importance on investing in forests and trees for a secure future for our people, 2005; Assessment of the economic value, hydrology & soil resource of the Nakavu Forest, 1999-2000; Sustainable forest management and economic appraisal of Drawa Block Project, 2003; Forest Policy Statement, 2006; Profile of the Drawa Model Area (appraisal for a community managed forest area in Fiji), 2005; Financing instruments & financing strategies for Sustainable Forest Management in Fiji, 2006; Brochure, 'Sustainable Forest Management', 2000;

Brochure, 'Sustainable forest management: the way beyond the year 2000, 2000; Posters: Finding the right way - developing community-based small-scale forestry enterprises with Melanesian customary landowners; and Our Forests - Our Future, 2006; Workshop reports: regional workshops on training of trainers in forest certification & mandate, procedures, tasks & duties of national working groups on forest certification; Sustainable forest management & timber certification workshop; Regional workshop on capacity building strategies in forest certification in the Pacific, 1999-2000; Report on regional awareness raising tour of local and global importance on investing in forests and trees for a secure future for our people, 2005; Volume increment in managed Fijian rainforests. A comparison of differently treated compartments of the natural forest management pilot project area in Nakavu, 2001; Report on the results of the Second tree selection in seven compartments in natural forest management pilot project, 2003; Assessment of the economic value, hydrology & soil resource of the Nakavu Forest, 2000; Report on regional training course on forest inventory & data analysis: experimental design & applied statistical analysis in forestry - a training course for non-statisticians, 2003

Brochure: Sustaining forest resources in the Pacific, 1998; Book/brochure: Setting up a tree nursery - a guide for extension workers & communities, 1998; Book/brochure: Fijian communities plant trees, 1998; Brochure: Agroforestry, the way ahead to the year 2000; and Recommended tree species on agroforestry, 1999; Agroforestry 1 & 2:

A way to better farming - a manual for trainers, teachers & extension workers, 1999; Reports on the botanical and ethnobotanical studies. Drawa Block, Vanua Levu, 2000; Inventory of timber species (Nakavu/Namosi & Drawa Block, Cakaudrove), 2005; Forest cover analysis in Fiji using LandSat TM data, 2006; Report on analysis of increment conditions of Fiji's natural forests, 2005; Forestry facts & figures Fiji, 1999; Report on regional training course on forest inventory & data analysis, 2003; Report on raising forest industry's awareness of forest certification in the South Pacific, 2001; Report on development of capacity building strategies in forest certification in the Pacific region, 2002; Report on floristic survey of the native forest catchments in Cakaudrove Province, Viti Levu, 1999; Reports on training, preliminary evaluation, evaluation and pre-harvest inventory and management of Drawa Block, Vanua Levu, 2001; Report on a course on identification of indigenous tree species, 1999.

More recently: Sustainable land management, medium sized project, 2008; Capacity building and mainstream sustainable land management project, 2008; Burning timber as fuel energy project, 2007.

International Union for the Conservation of Nature

The IUCN is the world's oldest and largest global environment network. Although IUCN has been active in the Pacific region for many years through its volunteers, only in the last 18 months did it establish an office in Suva. IUCN also chaperones the Red List of endangered species, which is developed by the various Species Specialist Groups and Invasive Species Specialist Groups. Much of its work revolves around liaison – between other non-government groups, government, and any relevant stakeholders.

Recent activities:

Hosted 'Roundtable Conservation' meeting in Suva, 2008; Listing of the Fiji Ground Frog, *Platymantis vitiana*, as Endangered on the IUCN Red List, 2008; Invasive species specialist group (ISSG) host, 2000-ongoing. IUCN also proposes to enhance the quality of Pacific information in the Red List through training and liaison and, with other non-government organisations, is raising awareness of the needs for and actions on national protected areas in Fiji.

Live and Learn Environment Education Inc.

Live & Learn specializes in community participatory education to promote sustainable livelihood development and conservation of environmental resources in some of the most vulnerable communities and biologically diverse regions in Asia and the South Pacific. Its office in Fiji was opened in 1998.

Activities:

HOPE (Helping Our Planet Earth) toolkit and program for primary schools, 2008; HOPE for Peace teacher training, 2006-07; River Care Program for secondary schools (Vodafone Fiji Foundation), 2008; Project WET Fiji (Water Education for Teachers), training workshops in environmental education topics, 2007-08; Projects in support of Arbor Day and Environment week (with Dept of Education), 2007-08; 'World Water Day' programme, 2007-08; Non-formal education on environment, water quality and waste management (with FAB), 2007-08; 'Governing water' program, 2005-07; 'Developing Sustainable Communities' program (with SPC, Dept Agric & National Centre for Small Micro-Enterprise Development), 2007; Advancing Water Governance, 2007; Community Education Toolkits, 2007; 'Keeping your drinking water safe: a community toolkit' (with SOPAC, WHO, IAS-USP), 2007; 'Healthy water hopscotch' game, 2006; Report: 'Building a sustainable future. A rapid assessment of perceptions towards environment and sustainability issues in rural Melanesian communities', 2007

Mamanuca Environment Society (MES)

This NGO was formed in 2002 by the Mamanuca Fiji Islands Hotel and Tourism Association members, following a recommendation from the Coral Cay Conservation group. The main objective of the MES is to 'promote environmental awareness and protection that supports sustainable tourism and community livelihood in the Mamanuca group'.

The main activities in which the MES is involved are environmental capacity awareness for resource developers, resource managers, schools and communities, management of (small) oil spills, water quality analysis projects, turtle conservation (it received a UNDP-GEF grant for awareness raising and surveys), waste management awareness raising (e.g. on problems caused by dumping of waste from the Nadi area on Viti Levu), and coral reef protection and restoration.

Nature Fiji/ Mereqeti Viti

Established in 2007, NFMV is Fiji's first local non-government organization. Its mission is to enhance biodiversity and habitat conservation, endangered species protection and sustainable use of natural resources of the Fiji Islands through the promotion of collaborative conservation action, awareness raising, education, research and biodiversity information exchange.

Activities:

A Fern tree, *Drautabua (Acmopyle sahniana)* survey, 2008; Supporting the breeding of the Collared Lory at the Kula EcoPark at Korotogo, 2008; Surveying for the Critically Endangered Red-throated Lorikeet, 2007-08; Conservation of Fiji's sago palm project, 2008 (with DoE and NTF); Endangered species compendium project, 2008; Conservation Values study of Mago Island, 2007.

NatureFiji/MareqetiViti has recently become a member of the Forest Stewardship Council. The FSC forest management standards are the most respected in the world and wood with their trademark is the best known brand representing wood coming from a responsibly managed source. There are no forests in Fiji that are certified to FSC or other standards, but it remains a priority policy for the Forestry Department. Over the past 13 years, over 90 million hectares in more than 70 countries have been certified according to FSC standards while several thousand products are produced using FSC -certified wood and carrying the FSC trademark.

OISCA Fiji

OISCA's mission is to 'contribute to humanity's environmentally sustainable development through a holistic approach emphasizing the interconnectedness of agriculture, ecological integrity, and the human spirit'. To accomplish this, OISCA implements and advocates hands-on skill and knowledge programs, and 'cultivating such spiritual qualities as dedication, self-reliance, and universal brother-sisterhood'. In Fiji, OISCA works mainly with communities and youth; its headquarters are in Sigatoka.

Activities:

Children's Forest Program, 1992-ongoing; Mangrove planting/reforestation in seven sites in Viti Levu, 1994-1999; Coral restoration project in 28 sites in Viti Levu and Vanua Levu, 2001-ongoing; Planting of native fruit trees adjacent to communities, Sigatoka area, 1998-ongoing; Community mangrove rehabilitation programme, Sigatoka, 2006-07.

Partners in Community Development, Fiji (PCDF)

This organisation is the 'local' component of FSPI (below).

Activities:

Coral gardens project, Coral Coast, Viti Levu, 2005-ongoing; Ecotourism development, 2007-ongoing; Restoration of degraded coral reefs, Coral Coast, Viti Levu, 2006-ongoing; Marine Protected Areas establishment, Viti Levu, 2007-ongoing; Monitoring of reef rehabilitation pilot site at Motoriki Island, Viti Levu (with CRISP), 2008; and training of Fijian resource persons in coral transplanting techniques and site monitoring techniques (with CRISP), 2008

Seacology

Seacology is a non-profit environmental organisation that 'aims to preserve the highly endangered biodiversity of islands throughout the world'. Seacology attempts to 'link local environment protection with benefits for islanders'. It is a U.S.A. organisation and it operates by 'trading' – i.e. exchanging one benefit a community wishes for with the promise of that community to protect or conserve a habitat or organism.

In Fiji, Seacology has carried out several 'exchanges': on Matuku Island (built a community centre in exchange for establishment of a no-take marine reserve), Kadavu (built flush toilets in exchange for a marine protected area), Ketei village, Savusavu (built a community centre in exchange for creation of a forest reserve); Naviti Island (construction of a chiefly house in exchange for creation of a marine reserve), and similar such exchanges for 20 other communities in Fiji, from Ono Island to the Yasawas.

SeaWeb

SeaWeb is a communications-based nonprofit organization that uses social marketing techniques to advance ocean conservation in the Western Pacific. It raises public awareness, advances science-based solutions and mobilizes decision-makers around ocean conservation. In Fiji it generally is engaged in promoting community awareness of marine conservation, working with the FLMMA and the Society for Conservation of Reef Fish Aggregations. SeaWeb's main office is in the U.S.A. but it has other international offices including Papua New Guinea. There is an office in Suva.

SeaWeb started working in Fiji in 2005. Seaweb helps the media promote a healthy ocean, trains communities in media liaison, submits environment awareness articles to local newspapers for publication, helps reporters media write related stories, and puts media in contact with experts.

Wetlands International — Oceania

Wetlands International is a global NGO that works to achieve the conservation and wise use of wetlands, to benefit biodiversity and human well-being. Its mission is 'to sustain and restore wetlands, their resources and biodiversity for future through research, information exchange and conservation activities, worldwide'. The Oceania office is one of 16 Wetlands International offices around the world and operates in the Oceania region.

It has four staff working from offices in Australia and Fiji.

Activities:

The status of mangroves: global, Asia-Pacific & the Pacific Islands region. Proceedings of the Pacific Regional Workshop on mangrove wetlands protection & sustainable use, 2003; *Schismatogobius vitiensis*, a new freshwater goby from the Fiji Islands, 2005; Freshwater fishes from Fiji of the subfamily Sicydiinae, with descriptions of three new species (Teleostei: Gobioidae) and notes on their ecology, 2007; Redescription of *Yirrkala gjellerupi* (Weber & de Beaufort, 1916), a poorly known freshwater Indo-Pacific snake eel (Anguilliformes; Ophichthidae), 2007; Anemonefishes, 2005; Aquatic fauna & water quality of five river catchments in Macuata Province, 2006; A checklist of freshwater & brackish water fishes of the Fiji Islands, 2006-08; Report to the WWF on a review of seven freshwater ecoregions in Oceania based on diversity of freshwater ichthyofauna: Fiji, Solomon Islands, New Caledonia, Vanuatu-Santa Cruz, Lord Howe Island, Norfolk Island, & the Hawaiian Islands, 2006; A preliminary study of freshwater fauna & water quality of Kubuna River & tributaries with recommendations for conservation action, 2005; Freshwater fishes of Waisai Creek & allied hot springs systems, 2004; Report to WCS on a preliminary investigation of priority ichthyofauna & watershed ecosystem services for assessing representation in Fiji's forest reserves, 2003;

Asia Pacific Wetlands Managers' training program: training course 'Freshwater fishes of Fiji: an advanced taxonomy, identification & applications for wetland management', 2001; Asia Pacific wetlands managers' training program: training course 'Standard coral reef monitoring techniques for managers & communities', 2002.

More recently:

Report to WWF: Fiji's Great Sea Reef. The first marine biodiversity survey of Cakaulevu and associated coastal habitats, Jenkins, Lovell, Sykes, Skelton, 2005; Freshwater fish survey of Kubuna River, 2007; Freshwater fish surveys in Bua, Macuata, Nadroga, Taveuni, Rakiraki and Yagara, 2006-08; and Development of 'Upper Navua Conservation Area' as a RAMSAR site (with BI and WWF SPP), 2006. Site includes Fiji sago (*Metroxylon*), two species of endemic gobies and 17 species of endemic birds.

Wildlife Conservation Society (WCS)

The WCS is based in the U.S.A. and ‘saves wildlife and wild lands through careful science, international conservation, education, and the management of the world’s largest system of urban wildlife parks’.

Activities:

Waimanu Landowners Conservation Project, 2005-06; An ecosystem-based approach for managing tropical coastal marine ecosystems, 2005-06; Kubulau qoliqoli marine reserve network, 2006 ; Fiji watersheds at risk, 2004-06; Heritage trees of Fiji, 2003; Coral bleaching refugia, 2004-06; Dry forest vegetation survey for Yaduataba, 2002; Fiji's Vatu-i-ra world heritage seascape: an ecosystem-based approach for mapping tropical coastal marine ecosystems, 2004; Fiji invertebrate survey project, 2004; Long-horn beetle, 2002-03; Interesting flies from Malaise Traps in Fiji, 2003; Fiji Islands terrestrial arthropod study, 2003; Invasive fire ant awareness for Customs & Quarantine personnel of Pacific Island nations - training and capacity building program, Fiji, 2006-07.

More recently:

WCS is involved in several smaller (e.g. awareness raising on harmful exotic insects, such as fire ants) and two larger projects. Of the latter, WCS (with WWF, WI-O, and the Department of Forests) is engaged in ecobased management in the Kubulau area, Bua, Vanua Levu. In this project all ecosystems and their interconnectivity are studied, the objective being the development of a “functional conservation strategy”. The other major project is taxonomic, recording the diversity of terrestrial invertebrates, a project performed over several years with the support of the Bernice P Bishop Museum in Hawaii.

World Wide Fund for Nature (WWF South Pacific and Fiji Country Programme)

WWF is a global organisation whose mission is to promote living in harmony with nature by conserving the world's biodiversity, ensuring that the use of natural resources is sustainable, and promoting reduction of pollution and wasteful consumption. The Pacific programme aims ‘to support Pacific Island people in conserving and sustainably managing our natural inheritance for present and future generations.’

Activities:

Wetland ecosystems in Fiji: uses and distribution, 2000; Restoring sustainable livelihoods on Kabara Island, 2006-08; Self Help Tool Kit for the marine protected areas for coastal communities of Fiji to encourage sustainable livelihoods, 2005-07; Conservation & sustainable use of the globally outstanding biodiversity in marine environments of Fiji, 2005-07; The South Pacific Marine Program - Fiji activities, 2004-07; Fiji's Vatu-i-Ra heritage seascape ecosystem-based approach, 2004-06; South Pacific whale sanctuary, 2005-07; South Pacific marine turtles programme of work, 2005-07; Report of the mangrove flora & fauna surveys conducted within Lomawai Reserve, Bole Reserve & Lotonaluya Reserve, Tikina Wai, Nadroga, 2003; Inventory of wetlands - Kuta growing areas. Part 1: location maps, site maps, description and status of area, 1999.

More recently:

Gau Island and Macuata Province protected areas project, 2007-08; Project to secure representative network of MPAs in ecologically and biologically important sites, 2008-ongoing; Inventory and sustainable use of species policy, 2008-ongoing (with Australian Biological Survey); Thirty percent of Fiji’s waters as a marine part by 2020, 2006; Fiji Islands Marine Ecoregion project, 2004-5; Community natural resource management and enhancement in Ono-i-Lau for biodiversity conservation and sustainable livelihoods, 2006-07.

3.3.3 ACADEMIC

The University of the South Pacific

Geography Department

Activities:

Vegetation and vascular plants of the proposed Upper Navua Conservation Area (UNCA), south-western Viti Levu, Fiji Islands, 2005-06; Traditional ethno-biological knowledge, resource use & community-based biodiversity conservation in Fiji, 1998; Fiji National Biodiversity Strategy and Action Plan, report of working group 4. 1998.

More recently:

MSc project (Takeda), flora of Sigatoka Sand Dunes and the impact of invasive species (with support from National Trust), 2008; MSc project (Kuruyawa), women in fisheries on Beqa, 2008; MSc project (Fong), ecology and cultural information on parrotfishes, 2008; MSc project (Mere), fruit bats, 2008; 'Urban and homegarden agroforestry in the Pacific Islands: current status and future prospects', 2006, Thaman, Elegiac and Kennedy; 'Nasoata Mangrove Island, the PABITRA coastal study site for Viti Levu, Fiji Islands', 2005, Thaman et al.; Finfishes of Vanua Navakavu, Viti Levu, Fiji Islands, SPRH Biodiversity and Ethnobiobiodiversity report no. 4, 2008, Thaman, Fong, Balawa.

Institute of Marine Resources

Activities:

Turtle tagging project (with WWF), 2007- ongoing

Shark finning project (proposal), 2008

CRISP and GCRMN activities (see below)

Institute of Applied Sciences

Activities:

Community based closed areas in Fiji: a case study in the fishery effects of marine reserves and fishery closures, 2002; Marine protected areas (MPAs), 2004-ongoing

Biodiversity survey for Waisali Forest Reserve, 2004; Strengthening a network system of coastal management in Fiji: progress & lessons learned towards integrated coastal management on the Coral Coast & implications for national policy. Joint project between Government, IAS & CRC (University of Rhode Island, U.S.A.); Integrated coastal management (ICM); Coral Coast, 2002-ongoing; Survey of the current status of the proposed mangrove sanctuaries for three villages in Tikina Wai, Nadroga Province, 2002; Report of the preliminary JICA/MRD baseline survey of the flora & fauna & vegetation of Waivaka South Province, Fiji, 2003; Report of the preliminary baseline survey of the terrestrial vertebrate fauna of the Waivaka catchments, Naomia, Viti Levu, 2003; Baseline flora and fauna survey of the Sovi Basin, Naitasiri, 2003; Report of the mangrove flora & fauna surveys conducted within Lomawai Reserve, Bole Reserve & Lotonaluya Reserve, Tikina Wai, Nadroga, 2003; Vegetation status assessment of Laucala Island, Cakaudrove Province, Fiji, 2006; Vegetation ecology survey: vegetation mapping & prioritisation of the Fiji petrel (*Pterodroma macgillivray*) habitat on Gau Island, Fiji, 2006; Vascular plants & vegetation of Makuluva Reef Islet, Rewa Province, 2004; Botanical study on the proposed Caudua Point resort & residential sub-division project, Nabukavesi, Namosi, 2006; Baseline biological survey report of the Vatu-i-lailai marine protected area, Tikina Korolevu-i-wai, Nadroga, 2006; Fisheries resource assessment report for the Koroi Wai qoliqoli, Viti Levu, 2003; Coral diversity, Mamanuca Islands & Coral

Coast, Fiji, 2005; Marine baseline survey of Champagne Beach, Yasawa Island; Biodiversity survey for Waisali Forest Reserve, 2004; Biodiversity survey, Gau Highlands, 2005; Sovi biodiversity survey, 2005, Coastal water quality & ecological studies of proposed site for Bua Bay port development, Wairiki, Bua, 2004-05; Coastal water quality & marine baseline studies of the proposed site for FPCL (Fiji Ports Corporation Limited) Rokobili Port Development, Suva & assessment of potential impacts, 2005; Marine baseline survey & coastal water quality study of Anchorage Beach Resource, Vuda Point; A revision of the genus *Septaria* Ferrusac, 1803 (Gastropoda; Neritimorpha), 2001; Report on the cooperative mineral exploration environmental baseline study in the Viti Levu South area, the Republic of the Fiji Islands, 2004; Survey for the presence of Fiji's crested iguana (*Brachylopus fasciatus*) on Macuata Island, Vunitogoloa, Ra Province, 2004; Empowering local communities: case study of Votua, Ba, Fiji, 2003; The role of locally managed marine areas (LMMAs) in the development of eco-tourism in Fiji, 2005; Effects of collection on ornamental reef fish populations in Fiji. [A pilot study of fish population in collection and non-collection areas], 2002; Report of the Tikina Vanuaso Community Marine Resource Biological Monitoring Training Workshop, 2002

More recently:

Maintenance of an aquaculture farm at USP for raising reef fish post-larvae, accompanied by the training of three Fijian fishermen and a technician (with CRISP, 2008);

Village site identified for a technology transfer operation in order to test the post-larvae viability in Muaivoso (with CRISP, 2008); Preliminary study on how to improve the legal framework of Fiji to conduct the capture of post-larvae (with CRISP, 2007-08); Support the project of Coral reef Conservation of Rotuma (with CRISP, 2008); Workshop on reef fish management indicators and coral eco-system monitoring (with CRISP, 2008); Research on the health state of coral reefs within seven countries of the Western Pacific (with CRISP, 2008); Didactic movie to reiterate the capacity of local communities to monitor MPAs from LMMA network (with CRISP, 2008). Also additional Integrated Coastal Management activities, such as clean water initiatives on the Coral Coast.

Biology, Chemistry, Mathematics, Physics

Activities:

Insect inventories with Dept of Forests; Viwa Island rat, cat, dog, cane toad eradication

Molecular phylogenetics of plants; PACINET (Pacific Taxonomy network); Pacific Asia Biodiversity Transect (PABITRA) – monitoring of Sovi Basin (with SBWG); Sovi Basin conservation initiative (with CI and NTF).

More recently:

Studies have included water quality of the Sigatoka River catchment, sediment circulation and metal loading in the Rewa River estuary, biology of the Fiji Ground Frog, study of local populations of an invasive ant species, studies on biology and ecology of beetles, butterflies, honey-eater birds, comparison of bird populations in degraded and pristine forest areas, study of persistent organic pollutants in freshwater and inshore marine edible molluscs, contamination levels in market fish and shellfish, an economic appraisal of Marine Protected Areas and vegetative propagation of sandalwood (*Santalum* species) and determination of *Santalum* hybrids.

3.3.4 STATUTORY BODY

National Trust of Fiji

Activities:

Biodiversity survey for Waisali Forest Reserve, 2004; PLA community resource management plan, Waisali village, 2005 ; Dry forest vegetation survey for Yaduataba, 2002; Population survey of crested iguanas on Taduataba, 2003; Crested iguana surveys of Monu & Monuriki, 2003; Crested iguana distribution survey for Yasawas & Mamanuca islands, 1999-2000; Biodiversity survey, Gau Highlands, 2005; Survey of the red-throated lorikeet, Viti Levu, 2002; Bird survey, Solodamu, Kadavu, 2003; Coral reef surveys, Yadua and Yaduataba, 1998-2004 (with Greenforce); Survey for the presence of Fiji's crested iguana (*Brachylopus fasciatus*) on Macuata Island, Vunitogoloa, Ra Province, 2005; Community training on identification, catch and release for petrels, 2005

Community training. Predator identification and protection of petrel burrows, Gau Island, 2005; Community awareness program for the endangered Fiji Petrel, Gau Island, 2003-04; Specialist training for community representatives on petrel identification and conservation, 2004; Community-based weed eradication program, Yaduataba, 2004-06

More recently:

The National Trust maintains its care of the Sigatoka Sand Dune National Park and the Waisali Rainforest Reserve in Cakaudrove. It also has a Kadavu bird awareness project, the Kacau ni Gau awareness project and the Global Mangrove Information System (GLOMIS) project (which is funded by the International Tropical Timber Organisation).

3.3.5 COMMUNITY BASED ORGANISATIONS

Biasevu Tourism Committee

Community biodiversity conservation and ecotourism support project – forest ecosystems, Korolevu, 2006-07. Funded by UNDP-GEF

Cakaudrove Provincial Office

Integrated community coastal resource management project, 2006-07. Funded by UNDP-GEF

Driti Village Development Committee

Sustainable mangrove fisheries initiative as a component of coastal, marine and freshwater ecosystems, 2006-07. Funded by UNDP-GEF.

LajeRotuma Initiative

LajeRotuma is 'an initiative of Rotuman youth who desire to protect and conserve their island environment'. Endorsed by the Rotuma Island Council, the group has received funds to support coastal clean-ups and poster education programs in the schools have been granted by the International Ocean Institute-Pacific and the World Wide Fund for Nature. LajeRotuma has also been funded to carry out training workshops to support sustainable resource use by the Rotuman community. The UNDP-GEF provided funding in 2006-07 to LajeRotuma for integrated community fisheries management, building community resilience to the adverse impacts of climate change, and a coastal rehabilitation program.

Naisaumua Mataqali Heads

Community Integrated Resource Management-Naisaumua Mataqali Heads, Naitasiri, 2006-07. Funded by UNDP-GEF

Natewa Yaubula Committee

Community Forests Conservation Programme - Natewa District, 2006-07. Funded by UNDP-GEF

Sovi Basin Working Group

This is a loose association of non-government organisations and government departments; mainly coordinated by the South Pacific Regional Herbarium at the USP.

Activities include:

Pacific-Asia Biodiversity Transect network (PABITRA) survey; Sovi Workshop - a direction forward, 2005 (with NTF, CI); Sovi boundary survey and plan, 2006; Vascular Plants and vegetation of Makaluva Reef Islet, Rewa Province, 2005 (part of PABITRA work) and undertaking follow-up PABITRA surveys; general biodiversity baseline data.

Tagituba Initiative – Community Biodiversity Conservation Initiative

Cakaudrove Province, Vanua Levu

Activities:

Coastal, marine and freshwater ecosystems and forest ecosystems.

In 2006-07 and 2007-08, the Tagituba Initiative was funded by the UNDP-GEF to carry out two projects: (1) establishment and implementation of Forest, Land and Marine Conservation Management Plans for the Dogotuki Community, coupled with the initiation of small community alternative livelihood activities for the communities of the Dogotuki Communities; and (2) Integrated coastal management. Extension and consolidation of Marine Resources management – North-eastern Macuata Province (Northern Udu Peninsula region).

The Initiative has also collaborated with the Society for the Conservation of Reef Fish Aggregations in conducting surveys and awareness raising.

Tikina Wai Environment Committee

Nahue-Community Conservation Programme, Nadroga, 2007-08. Funded by UNDP-GEF.

Vitokoni Ni Vuci Committee

Revitalization of traditional Vuci ponds, Tailevu, 2006-07. Funded by UNDP-GEF.

Vusu Environment Committee

Komave compost toilets, Nadroga, 2005-06. Funded by UNDP-GEF

Wainimate

This is the Women's Association for Natural Medicinal Therapy. It is a women's non-governmental organisation registered as a Charitable Trust in Fiji, and its mission is to ensure the promotion, conservation and protection of safe and effective traditional knowledge and medicinal plant resources for women and their families, through training, awareness, demonstrations, consultations, networking and research. Wainimate was formed in 1992.

The group subsequently disbanded. It produced some publications on herbal remedies and medicinal plants.

Additional community-based organisations – mainly founded through being associated with the Fiji Locally Managed Marines Areas network – are:

Namuka/Dogotuki Yaubula Management Support Team

Votua (Ba) Qoliqoli Committee

Tikina Tavua Qoliqoli Committee

Korolevuiwai Environment Committee

Kadavu Yaubula Management Support team.

Nakorotubu Qoliqoli Cokovata Committee

Lomani Gau (Gau Island)

Vueti Navakavu Qoliqoli Committee

Tabanivonolevu Qoliqoli Committee (Kadavu)

Verata- Qoliqoli Committee

3.3.6 BUSINESS/PRIVATE ORGANISATIONS

Clean Up Fiji

This is an informal organisation run by the Tebbutt Research Pty Ltd. Its main activity in Fiji is an annual 'Clean-up Day', conducted in about September each year. Funds for the clean-up are secured through sale of T-shirts and sponsorship by Tebbutt Research and other local business houses.

The *Fiji Times* newspaper (News Limited)

In June 2007 the *Fiji Times* launched its 'One Degree' climate change initiative nation-wide. 'One Degree' was launched as a nation-wide campaign to spread knowledge about how Fiji residents can live more efficiently (saving money in the process) and more environmentally-friendly (saving the planet along the way). The campaign has been well-received by private companies and the public, its main public feature being a 'Cool Change' page in its daily newspaper which provides information on climate change and environment initiatives around the country.

Fiji Water Foundation

'FIJI Water' is the product and company name for a natural artesian water bottled at the source in Viti Levu; it is the second largest imported bottled water brand in the U.S.A. In January 2008 it announced a Sustainable Growth Initiative that is intended to make its products carbon negative. Conservation International (CI) (see above) has partnered with FIJI Water to counsel them on their sustainability initiative and to develop an ambitious multi-benefit carbon offset plan that, in addition to reducing CO₂ in the atmosphere, will also benefit Fiji's local communities and its biodiversity – the protection and permanent preservation of the largest remaining area of pristine rainforest in Fiji, the Sovi Basin, so that it will not be logged.

The Sovi Basin covers over 50,000 acres of land and is the largest remaining lowland rainforest in Fiji. The FIJI Water Foundation will provide funding to endow a Sovi Basin trust fund. As part of this conservation effort, CI's Global Conservation Fund will also donate funding toward the trust fund. Revenues from the fund will support the annual management costs of Sovi Basin, compensate communities for revenue that could have been generated from logging, and cover the annual lease payments to the Sovi Basin landowners. The revenues will also fund a small grants facility that will support community development activities. The National Trust of Fiji is responsible for management of the Sovi Basin, and will receive and administer revenues from the fund. This ambitious effort to preserve the Fijian rainforest will ensure that about ten million tons of CO₂ stored in the forest will remain out of the atmosphere in perpetuity.

In addition, the FIJI Water Foundation is funding the study and protection of the Yaqara Valley watershed, home to FIJI Water source.

Green Steps

The main activity of this informal organisation is its clean-up campaign ('COFFEE – the Cleaning Of Fiji For Everyone's Enjoyment'). Green Steps commenced January 2008 and its activities are supported mainly by businesses in the Suva area, the region in which it currently operates.

Pacific Green Industries (Fiji) Limited

This company is based near Sigatoka. Its specialty is manufacture of furniture from old coconut palms. The palms are secured from all around Fiji and dried in kilns at the premises. Wood waste from processing is used as fuel for the kilns; the leather finishes to the furniture are made in China. Pacific Green is 'committed to promoting Palmwood as an ecologically sound substitute for Fiji's endangered hardwood'.

Rivers Fiji

This company has been operating from Pacific Harbor on Viti Levu since about 1998. Its mission is to 'enhance visitors and indigenous peoples' awareness of, and appreciation for the culture and environment by providing activities that promote conservation and preservation through socially responsible and environmentally sensitive interaction with the people, landscape and ecosystems which make the Fijian Highlands so distinct and unique. By paying user fees to native land owners also, the company encourages support for sustainable tourism products by protecting pristine landscapes and waterways.

VODAFONE ATH Fiji Foundation

The Vodafone ATH Fiji Foundation was established in March 2004 as a charitable trust to enable our businesses and our people to invest some of our profits and Passion for the World Around Us back into the communities and the environment in which we live and work. It is funded by annual donations from Amalgamated Telecom Holdings Limited (ATH), Vodafone Fiji Limited and the Vodafone Group Foundation of the United Kingdom. Vodafone partners with credible not-for-profits and NGOs, funding projects that will benefit and enable the people and communities of Fiji to have fuller lives. Some of these partnerships have been directed at environment awareness-raising.

3.4 KEY LEGISLATION and SUPPORT

There are more than 70 laws of Fiji relating to the environment. They range over many things, including ALTA, drainage, explosives and factories, petroleum exploration, archaeology, public safety, water supply and roads, and from as long ago as 1879 (the 'Preservation of Bêche-de-Mer Ordinance') to 2007 (the 'Environment Management Act regulations') with four more bills in draft status.

Key among them are the:

- Environment Management Act (2005) and Environment Management (Waste disposal and recycling) regulations (2007)
- Bird and Game Protection Act (1985)
- Endangered and Protected Species Act (2002) and Regulations (2003)
- Fisheries Act (1942)
- Forestry Act (1953)
- Land Conservation and Improvement Act (1953)
- National Trust for Fiji Act (1970)
- Town Planning Act (1999)
- Quarantine Act
- Rivers and Streams Act (1985)
- Sustainable Development Bill (1999)

The **Fiji Biodiversity Strategy and Action Plan** (2003) (NBSAP) is the basis of the work being performed now.

The NBSAP defines the term 'biodiversity' as 'The variety of life forms, the different plants, animals and micro-organisms, the genes they contain, and the ecosystems they form. It is usually considered at three levels of diversity: genetic, species and ecosystem.'

3.5 REGIONAL ACTIVITIES UNDER THE UN CBD

Coral Reef Initiatives for the Pacific (CRISP)

CRISP aims at the effective protection and management of coral reefs in the Pacific. It is championed by France and open to contributions from all quarters. It aims to develop a vision for the future for these unique ecosystems and the peoples who depend on them for their livelihood by putting in place strategies and projects to preserve the biodiversity of the reefs and for the future development of the economic and environmental services that they offer both locally and globally. CRISP also intends to serve as a vector for regional integration between the developed and the developing countries of the Pacific.

This program is based at The University of the South Pacific. ReefBase Pacific (below) is a component of CRISP.

Locally Managed Marine Areas

Other countries in the region (additional to Fiji) that follow the bottom-up approach of marine conservation and management practiced by FLMMA are Papua New Guinea, Solomon Islands, Palau and Pohnpei.

The South Pacific Regional Forest Genetic Resources Group (SPRIG)

The first phase of SPRIG was a three-year AusAID-funded project (1996-2000) that focused on the conservation, enhancement and wise use of priority forest and tree genetic resources in the South Pacific. Project countries included Fiji, Samoa, Solomon Islands, Tonga and Vanuatu. SPRIG Phase 2 commenced in 2001. The five components of SPRIG Phase 2 are:

- institutional strengthening and regional networking,
- conservation and sustainable management of priority species,
- tree improvement,
- demonstrating linkages between conservation, tree improvement and enhanced rural incomes, and
- project management

Important development elements of SPRIG Phase 2 include:

- development of local germplasm sources (seedling seed orchards and clone bank) and ex situ gene conservation stands,
- development and demonstration of model plantings of the region's priority tree species, including sandalwood (village level plantings in Vanuatu and Tonga), mahogany (*Swietenia macrophylla*) and *Terminalia richii* (semi-operational clonal plantings in Samoa),
- enhanced Government extension nurseries, including development of

vegetative propagation facilities in Samoa,

- promotion of small demonstration outgrower schemes; whereby a few selected lead farmers are encouraged to plant clones of genetically superior tree material, and
- development of income-generating forest genetic resource activities in support of community-based conservation initiatives in Tonga (Ha'apai group).

The **United Nations Division for Sustainable Development – Partnerships** developed the Pacific Islands 2003-2007 Action Strategy for Nature Conservation. This action plan is specifically designed to promote and facilitate the mainstreaming of nature conservation, and provides an over-arching regional framework that has the cooperation of all Pacific Islands Countries, SPREP, donors and regional non-government organisations. [This program is under SPREP's umbrella.]

Greenpeace

Greenpeace is an independent global campaigning organisation that acts to change attitudes and behavior, to protect and conserve the environment and to promote peace by 'catalyzing an energy revolution', 'defending our oceans', 'protecting the world's ancient forests', 'working for disarmament and peace', 'creating a toxic free future' and 'campaigning for sustainable agriculture'.

Greenpeace's regional office is located in Fiji. Activities conducted from Fiji include initiatives on climate change, whaling, overfishing, and forestry.

Pacific Conference of Churches

PCOC could be a conduit for conservation (in the Pacific). It spans the Pacific; has 26 churches throughout the region, and through the conference of churches it can reach other churches. The history of the PCOC started in 1961, therefore it is the oldest regional organisation in the Pacific. Its first initiatives were moves against nuclear testing (against the French Government in Tahiti).

It has a responsibility to look at the environmental ethics of governments (with the churches). The PCOC's focus is on climate change (re-settlement of people because climate change will affect them). For the next five years, PCOC's focus is on renewable energy, waste management, governance, human rights (and many other things). [Contact is Fei Tevi]

Pacific Centre for Environment and Sustainable Development (PACE-SD)

The mission of PACE is to work with all other relevant sections of the USP, regional and international organisations, regional governments and NGOs to promote environmentally sustainable development

Foundation of the Peoples of the South Pacific International (FSPI)

FSPI manages and coordinates five regional programmes – Governance, Health, Coastal resource management, Disaster risk reduction, and Sustainable Livelihoods; also the Communities and Coasts programme. It collaborates with regional and international agencies on issues such as institutional strengthening of civil society, engagement with the Pacific Plan, and annual Forum Leaders' Summit.

Pacific Regional Environment Programme (SPREP)

SPREP's mandate is to promote cooperation in the Pacific islands region and to provide assistance in order to protect and improve the environment and to ensure sustainable development for present and future generations. SPREP's vision is that people of the Pacific islands are better able to plan, protect, manage and use their environment for sustainable development. SPREP operates two programs, 'Island ecosystems' and 'Pacific futures' and each has projects running within them.

Pacific Invasive Initiative (PII)

The goal of the PII is to conserve island biodiversity and enhance the sustainability of the livelihoods of men, women and youth in the Pacific region. This goal is being achieved by reducing the negative impacts of invasive species, primarily by managing them at selected Demonstration Projects in PICs. The fundamental role of the Demonstration Projects is to raise awareness of the negative effects of invasive species on biodiversity and people's livelihoods, generate support for their management and improve the capacity of communities to manage invasive problems.

Pacific Invasives Learning Network (PILN, a SPREP initiative)

PILN's mission is to empower effective invasive species management through a participant-driven network that meets priority needs, rapidly shares skills and resources, provides links to technical expertise, increases information exchange, and accelerates on-the-ground action. PILN is already working with different groups in Fiji.

South Pacific Commission (SPC)

SPC is an international organisation that provides technical assistance, policy advice, training and research services to 22 Pacific Island countries and territories in areas such as health, human development, agriculture, forestry and fisheries. It works in most areas of environment in the Pacific, including biosecurity, forestry and fisheries, land resources, crop production, agriculture,

animal health and production, genetic resources and plant health. One of its areas of concentration in Fiji is on invasive plant species.

South Pacific Regional Herbarium (SPRH)

SPRH was established in 1993 by the Fiji Department of Agriculture. The USP (IAS) assumed responsibility for the maintenance and administration of the facility in 1982. SPRH currently houses more than 50,000 vascular plant specimens in the main collection plus a wet collection of plant parts, bryophytes and algae from the Pacific region. The SPRH is a very important resource in matters pertaining to the taxonomy, conservation and ecology of plants, forestry, land use planning, economic plants and weed problems in the region. As a member of an international network of herbaria, the SPRH participates in programs with other international herbaria to maintain collections of botanical plants specimens for study by both local and international botanists and scientists working in associated fields.

Activities:

Reports on the botanical and ethnobotanical studies. Drawa Block, Vanua Levu, 2000

Dry forest vegetation survey for Yaduataba, 2002; Crested iguana distribution survey for Yasawas & Mamanuca islands, 1999-2000; Sovi biodiversity survey, 2005; weed (invasive species) surveys in Warea and other areas of Fiji; undertaking environmental impact assessments.

Pacific Islands Applied Geosciences Commission (SOPAC)

SOPAC is an inter-governmental, regional organisation dedicated to providing services to promote sustainable development in the countries it serves. It has three program areas: 'Ocean and Islands' (focusing on research, development and management of non-living resources in ocean and island systems, addressing matters relating to seabed resources, energy, maritime boundaries and monitoring of ocean processes), 'Community Lifelines' (strengthening local capacities in energy, water and sanitation, and communication technologies) and 'Community Risk' (aiming at reducing community vulnerability through improved hazard assessment and risk management).

UN Environment Program through its implementing agency, the United Nations Development Programme and UNEP's funding facility, the Global Environment Fund.

The UNDP-GEF Small Grants Programme ('Community Action – Global Impact') has funded a variety of conservation-biodiversity projects in Fiji, many of them carried out by community-based organisations (see above).

World Fish Center's Reefbase Pacific project

This project aims at strengthening information access and dissemination in support of effective coral reef conservation and management. It mobilizes information to support informed research and management of coral reef

resources in the Pacific. Much of its mission is carried out by collating coral reef information on a user-friendly database.

Global Coral Reef Monitoring Network (GCRMN)

GCRMN was established in 1995 by the International Coral Reef Initiative. The GCRMN works hard to improve management and conservation of coral reefs by providing manuals, equipment, databases, training, problem solving, and helps with finding funds for reef monitoring - all coordinated in a global network. The GCRMN aims to improve management and sustainable conservation of coral reefs for people by assessing the status and trends in the reefs and how people use and value the resources.

International Ocean Institute – Pacific Islands

IOI - Pacific Islands is based at the School of Marine Studies, USP. It is part of the global International Ocean Institute that was founded in 1972 as a knowledge-based non-governmental, non-profit international organization devoted to the sustainable development of the oceans. As a non-governmental body with consultative status at the United Nations, the International Ocean Institute works to uphold and expand the principles enshrined in the United Nations Convention of the Law of the Sea – namely that the seabed and the oceans are the common heritage of humankind, for the benefit of humankind as a whole, with particular consideration of the poor. IOI - Pacific Islands carries out workshops on responsible fisheries, trains community fishers in resource management and sustainable livelihoods. It also runs training programs on regional ocean governance and other activities under the Institute's mandate of training and education, capacity building, ocean governance and public awareness.

Pacific Islands Marine Resources Information System (PIMRIS)

PIMRIS is a formal cooperative network of libraries and information centres within regional organisations and government agencies concerned with the development of fisheries and marine resources in the Pacific. Its aim is to improve access to information on marine resources in the region.

3.6 THE CARTAGENA PROTOCOL ON BIOSAFETY

The Cartagena Protocol on Biosafety was adopted as a supplementary agreement by the Conference of the Parties to the CBD on 29 January 2000.

The Protocol seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology by establishing an advance informed agreement (AIA) procedure for ensuring that countries are provided with the information necessary to make informed decisions before agreeing to the import of such organisms into their territory. The Protocol contains reference to a precautionary approach and also establishes a Biosafety Clearing-House to facilitate the exchange of information on living modified organisms and to assist countries in the implementation of the Protocol.

Country activities and progress. Fiji signed the Cartagena Protocol on 5 May 2001 and ratified it on 5 June 2001. The Department of Environment is the focal point.

The first national Biosafety Clearing House (BCH) taskforce workshop was conducted in May 2008, hosted by the UNEP-GEF Biosafety Committee. The objective of the workshop was the setting up of Fiji's BCH system and management, an overview of the BCH project and identifying the needs of the BCH project in 2008.

A MOU was finalized with UNEP (United Nations Environment Programme) in February 2008.

National Biosafety Sub-Committee

The key institutions in Fiji are the Ministries of Justice, Agriculture (Quarantine only), Health, the Customs Authority and the Consumer Council of Fiji.

3.7 CONCLUDING REMARKS

Fiji attempts to meet its obligations under the CBD through several government departments – such as Environment, Fisheries and Forestry – , statutory bodies such as the National Trust, and miscellaneous other stakeholders. In addressing its CBD obligations, Fiji also is fortunate that The University of the South Pacific with its expertise, is located in this country.

There are many non-government organisations (NGOs) in Fiji, ranging from big international ‘BINGO’s to small local ones (e.g. Nature Fiji/Mareqeti Viti). In addition, on the small scale, there is a variety of community-based organisations, often funded by some international donors, such as the UNDP’s Global Environment Fund small grant’s scheme and New Zealand Aid. On the large scale are the several regional conservation organisations such as the Pacific Regional Environment Program (SPREP) and its derivatives, the Pacific Invasives Initiative and the Pacific Invasives Learning Network.

One could imagine therefore that Fiji’s conservation-of-biodiversity concerns are well contained and that public awareness of and participation in conservation are high. Those ideals are very distant to reality however. As The Austral Foundation discovered (2007, ‘Review and Analysis of Fiji’s Conservation Sector’) there is a **biodiversity crisis in Fiji**. ‘The most critical issue facing terrestrial biodiversity conservation is forest degradation through agricultural clearance, plantation establishment, and destructive and unsustainable logging that is continuing through large areas of the remaining tropical rainforests of Fiji. ... Degradation of forest habitat results in a situation today where 11 endemic bird species of Fiji are threatened with extinction and a further six are Near Threatened. Three of the six native bats are officially categorized as threatened, both endemic frogs, a third of the reptiles and half the palms. In the marine ecosystems, the situation is no better. Over-harvesting combined with pollution, soil erosion, and land run-off has led to a crisis in Fijian fisheries.’ (p 3)

Although The Austral Foundation revealed that ‘The biodiversity crisis in Fiji has arisen despite the presence of four government agencies with an interest in conservation, 23 non-government agencies and at least a half-dozen community-based groups working on conservation outcomes, 148 individuals employed full time on the issues, the oversight of several Pacific regional secretariats, the contracting of numerous experts, the writing of uncounted reports, the modeling of numerous trials, over F\$13 million spent on the crisis annually, a population that depends for its livelihood and economic development on biodiversity conservation, and a history of conservation effort that goes back to 1880.’ (p 4) the Foundation concluded that much greater progress can be made in Fiji if some fundamental changes are made in the way the sector is approached.

Determining and putting in place the most appropriate changes is one of the prime objectives of this National Capacity Self Assessment project. Another is developing a strategy to conserve Fiji’s biodiversity - a strategy that is agreed upon by all interested parties, which can be managed by the Fiji Government, and which will be embraced by the Fiji community.

PART E: REFERENCES

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NCSA
Consultant Strategic Planning
Phase 1: Stocktaking and Inventory Data Compilation
June 3rd – 30th , 2008

1.1 Introduction:

The NCSA Consultant Strategic Plan is an account of the planned activities and logistics in the first phase of the NCSA Process to be undertaken for a period of 4 weeks that is Stocktaking and Inventory Data compilation. The Strategic Plan is one of the expected target output from the Consultancy Service to be provided by the three local consultant recruited under the NCSA Project specifically tasked to assess Fiji's capacity to implement obligations under three Rio Convention as follows:

1. Leone Limalevu: UNCCD
2. Dr. Paulo Vanualailai: UNFCCC
3. Dr Patricia Kailola: CBD

1.2 Consultant Strategic Plan

The Consultant Strategic Plan is prepared through collective contribution of the three consultants in identifying key resource area for information and specification of the types of information needed with logistics of obtaining it. An Xcel data entry is a vital component of the stocktake process to be updated regularly during the stocktake process and is an expected output target as per TOR. The consultant in its attempt to compile the Strategic Plan has made a preliminary listing of some of the following to be used as bases for stocktake process:

- ❖ Key Stakeholders implementing work addressing each of the three Rio Convention. In each an account of Mission Statement and Achievement, Human Resource and Institutional Structure (staffing), Budget and Funding.
- ❖ Projects, Initiatives or programmes addressing each of the three Rio Convention, its project status in brief and funding agency with implementing agency.
- ❖ Legislation addressing Convention.
- ❖ Key Documents, Reports and Strategic Plan.

The table 1 below outlines the Strategic Plan of carrying out the Stocktake and Inventory data compilation process with inclusion of the tools to use and associated process with timeframe as follows:

Table 1: Consultant Strategic Plan

Tools	Process	Timeframe			
		Wk 1	Wk 2	Wk 3	Wk 4
Desk Research	<p>Obtaining and consideration of the following documents through formal request to key stakeholders such as:</p> <ol style="list-style-type: none"> 1. Development Strategic Plan / Cooperate Plan defining Millennium Goal and Mission Statement. 2. Act, Regulation, Bills and Policy 3. Relevant COP papers. 4. Convention related documents. 5. List of initiatives and projects addressing Rio Convention. 6. National Reports ect. 				
Telecommunication Research	<p>Due to the limited timeframe for Stocktaking, some 2nd priority stakeholders listed Y as in table 3 & Annex 2 is to be contacted via the use of internet, phone and fax to obtain information.</p>				
Consultative Meeting.	<p>To be conducted with management of selected priority key stakeholders detailed in Annex 2 and summarized in table 3. A formal request from the Department of Environment to be sent out on this regard. The aim is to obtain and verify information's on Rio Convention implementation by priotised key stakeholders</p>				

	as in table 4.0 specifically Key Stakeholders marked X in Annex 2.				
Tools	Process	Timeframe			
		Wk 1	Wk 2	Wk 3	Wk 4
Stocktake Report Compilation	Draft Stocktake report is to be compiled in the 4 th week of Phase 1.				

2.1 Below is a preliminary listing of different categories of stakeholders in Fiji implementing work addressing each of the three Rio Convention UNFCCC, UNCCD, CBD collectively compiled by the consultant as outlined in table 2 and further listed in Annex 2.

Table 2: Total numbers in each category of stakeholders

Stakeholders Category	Numbers
Government Ministries	16
Department	60
NGOs/ Organisation	25
Academic Institutions	4
Statutory Bodies	5
Media	6
Regional / International Organisation	7
Private Sector	3
Embassy and Consulates	8
Community Based Organisation	2
Corporate Bodies	6
Civil Organisation	4
Total of Key Stakeholders:	146

2.2 Prioritised Key Stakeholders

Due to the large numbers of the key stakeholders of a total of 146 and the many competing interest of priorities within a limited timeframe of 4 weeks, each of the consultant has identified prioritised key stakeholders marked X in Annex 2 to focus on. The first round of consultative meeting is scheduled around key stakeholders X. Key Stakeholders Y as in Annex 2 are second in priority to be attended while in the route to X.

Table 3: Total of Prioritised key stakeholders in each Rio Convention.

Rio Convention	Priority Key Stakeholders X	Second Priority Stakeholders Y
UNCCD	24	106
UNFCCC	36	94
CBD	38	98

9 Common Key Stakeholders to UNCCD, CBD, UNFCCC to be attended by the three consultant at the same time.

3.1 Traveling Logistics:

The traveling logistics for the consultation meeting and workshop for priority key stakeholders is to be scheduled at the same time for areas within the same locality. However it is subject to the the prior availability of organizational information such as (corporate plan, strategic plan, mission statement ect) before the consultation and the availability of resource people to meet with.

Table 4: List of Prioritised Key Stakeholders and Travel Logistics

Timeframe	Consultation type	Organisation	Location	Travel Arrangement	
				Transport	Accommodation
Wk 2 Wed	Consultation meeting	DOE SPREP Ministry of Women, Social Welfare & Housing (LL)	Central Suva Area (A)	No	No

Wk 2 Thursday	Consultation meeting	<p>Ministry of Fijian Affairs, Heritage, Provincial Development and Multi - Ethnic Affairs.</p> <p>Native Lands Trust Board</p> <p>Ministry of Local Government, Public Utilities Housing and Environment (PV). Department of Lands (LM)</p> <p>Ministry of Tourism & Commerce (PV)</p> <p>Ministry of Finance, National Planning & Sugar Industry (PV & LL) Greenpeace PK</p> <p>Foundation of the South Pacific International (FSPI) (PK & LL)</p> <p>FDB (PV) FTIB (PV) JICA (PV) FEA (PV)</p>	Central Suva Area (B)	Yes	No
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Timeframe	Consultation type	Organisation	Location	Travel Arrangement	
				Transport	Accommodation
Wk 2 Friday	Consultation meeting	<p>Ministry of Fisheries and Forestry</p> <p>Ministry of Health (PV)</p> <p>Food & Nutrition Committee (PK)</p> <p>SPRIG (PK & PV)</p> <p>French Embassy (PV)</p> <p>Conservation International</p> <p>IUCN</p> <p>World Wildlife Fund Fiji</p> <p>National Trust (PK)</p> <p>ECREA (PV)</p> <p>GTZ</p> <p>Sovi Basin</p>	Greater Suva Area (A)	Yes	No
Wk 3 Monday	Consultation meeting	<p>Working Group (SBWG) (PK & PV)</p> <p>University of the South Pacific (USP)</p> <p>Fiji Locally Managed Marine Areas network – USP (PV & PK)</p> <p>Birdlife International (PK)</p> <p>Coral Cay Conservation</p>	Greater Suva Area (B)	Yes	No

Timeframe	Consultation type	Organisation	Location	Travel Arrangement	
				Transport	Accommodation
Wk 3 Monday	Consultation meeting	Wildlife Conservation Society(WCS) (PK) Fiji Council of Social Services (PK and LL)	Greater Suva Area (B)	Yes	No
Wk 3 Tuesday	Consultation meeting	Ministry of Agriculture (LL & PV) Secretariat of the Pacific Community (SPC). Department of Mineral Resources (LL) Ministry of Transport, Works and Energy (LL & PV) Ministry of Prime Ministers Office & Home Affairs (PV).	Suva – Nausori Corridor.	Yes	No
Wk 3 Wednesday	½ day Consultation workshop	NCSA-TWG	DOE	No	No
Wk 3 Thursday	Consultation meeting	Fiji Pine/Tropik Wood (PV) OISCA (PK & LL) Pacific Green (LL) Mamanuca Environment Society (PV & PK) FSC (PV and	West	Yes	Yes

		LL) Other relevant Stakeholders West.			
Timeframe	Consultation type	Organisation	Location	Travel Arrangement	
				Transport	Accommodation
Wk 3 Friday	½ day Consultation Workshop.	Key Stakeholders West.	Lautoka	Yes	Yes
Wk 4 (to be confirmed)	Consultation meeting	Fiji Copra Board (PV) Fiji Forest Industry (PV & LL)	North	Yes	Yes

4.1 Conclusion:

It is noted that in the Strategic Plan, there is a wide range of key stakeholders in Fiji implementing work addressing each of the Rio Convention. Categorizing and prioritising the key stakeholder is an attempt to streamline and focus resources and time on major key stakeholders implementing convention obligation requirement.

The strategic plan concludes with a listing of prioritised key stakeholders for the first round of consultation. It is also an attempt to place the prioritised stakeholders with the same area of locality together while arranging consultation. This aims to ease the problem for transportation arrangement.

Due to the availability of key information mostly in the Central division, most part of the stocktake process will be based in the Central. The consultant have agreed to a 2 days visit to the key stakeholders in the West for complete compilation of stocktake data.

ANNEX 1-1 Legislations and Acts

UNFCCC	UNCCD	CBD
Fiji Tourism Development Act	Land Conservation & Improvement Act 1953	Fiji Biodiversity Strategy Action Plan (BSAP) 2003
Sustainability bill	Forestry Act 1953	Birds and Game Protection Act 1985
Ozone Depleting Substances Act 1998	Agricultural Landlord & Tenant Act (ALTA) 1967	Endangered and Protected Species Act 2002
Natural Disaster Management Act 1998	Environment Management Act 2005	Environment Management Act 2005
Fiji's Rural Electrification Policy 1993	Drainage Act 1961	Fisheries Act 1941
	Fiji Tourism Development Act	Forestry Act 1953
	Amendment of Land Conservation & Improvement Act	Forest Decree 1991
	Rural Land Use Policy for Fiji 2002	Forest Policy 1950
	Review of Rural Land Use Policy in Fiji 2002	Land Conservation and Improvement Act 1953
	Review of Forestry Policy	Marine Spaces Act 1978
	Water Policy	National Trust for Fiji Act 1970
	Rivers And Streams Act	National Trust for Fiji Ordinance 1970
	Quarry Act	Town Planning Act 1999
	Town Planning Act	Fisheries Management Bill
	Lands Act	Quarantine
	Rural Land Use Policy	Customs
	State Lands Act	
	Irrigation Act	
	The Subdivision of Lands - Residential and Industrial Act	
	Forest Decree	
	Mining Act	
	Land Development Act	
	National Trust for Fiji Act	
	National Code of Logging Practice	
	Mineral (Exploration and Exploitation) Bill 2006	
	Petroleum Act	

ANNEX 1-2 Inventory of Existing Stakeholders

STAKEHOLDERS	DEPARTMENT
GOVERNMENT	
Ministry of Agriculture	Landuse Resource Planning, Landwater Resource Management, Quarantine, Animal Health and Production, Extension, Research.
Ministry of Lands & Mineral Resources	Lands, Mineral Resources
Ministry of Local Government, Public Utilities Housing and Environment	Local Government, Town and Country Planning, Housing, Public Utilities, Environment
Ministry of Fisheries and Forestry	Fisheries, Forestry
Ministry of Transport, Works and Energy	Civil Aviation, Energy, Transport, Divisional Engineers, Maritime Safety, Shipping, Meteorology, Public Works (Water Supply & Sewage).
Ministry of Education	Curriculum Development Unit
Ministry of Youth, Sports, Employment Opportunities and Productivity.	Youth and Sports, Employment Opportunities and Productivity.
Ministry of Fijian Affairs, Heritage, Provincial Development and Multi - Ethnic Affairs.	Fijian Affairs Culture and Heritage, Arts Council, Fiji Museum, Fijian Affairs Board, Fiji Development Fund Board, GCC, National Trust, Native Fisheries Commission, Native Lands Appeal Tribunal, Native Land Commission, Department of Provincial Development, Multi-Ethnic Affairs, Natural Disaster Management Office.
Ministry of Women, Social Welfare & Housing	Social Welfare, Women, Poverty Eradication Unit
Ministry of Health	Divisional Hospitals, FSN, Government Pharmacy, health Centres & Nursing Stations, National Centres for Communicable Disease Control, National Centres for Health Promotion, National Referral Hospitals, Sub Divisional Hospitals
Ministry of Attorney- General, Minister for Justice, Electoral Reform & Anti-Corruption	Office of the Solicitor General, Copyright Tribunal, Fiji Law Reform Commission, Office of the Administrator- General, Office of the Commissioner of Stamp Duties, Office of the Registrar of Titles, Office of the Registrar-General, Constituency Boundaries Commission.
Ministry of Tourism & Commerce	Labour & Industrial Relations, Labour Advisory Board, OHS, Registrar of Trade Union & Labour Relation, Permanent Arbitrator, Tourism, Commerce, Small Business Advisory Unit, National Microfinance Unit, Fair Trading & Consumer Affairs, Government Handicraft Centre, Cooperatives and Communication.
Ministry of Finance, National Planning & Sugar Industry	Budget Division, Financial Asset Management Division, Internal Audit Division, Treasury, Information Technology & Computing Services, Office of the Auditor General, Public Trustee

	Office, National Planning Office, Bureau of Statistics
PSC	
Ministry of Prime Ministers Office & Home Affairs	Department of Immigration & Police(PK), Republic of Fiji Military Forces, Department of Information and National Archives
Ministry of Foreign Affairs	Foreign Affairs & External Trade
NGOs/ Organisation	
Birdlife International	
Conservation International	
Coral Cay Conservation	
Econesian Society	
Fiji Locally Managed Marine Areas network	
Foundation of the South Pacific International (FSPI)	
Frontier Fiji and Society for Environmental Exploration	
Green Force	
Greenpeace	
IUCN	
Live and Learn Environment Education	
Nature Fiji/ Mereqeti Viti	
OISCA Fiji	
Pacific Invasive Initiative	
Pacific Invasive Learning Network?	
Partners in Community Development, Fiji (PCDF)	
Seacology	
Sea Web	
Wetlands International - Oceania	
Wildlife Conservation Society(WCS)	
World Fish Centre	
World Parrot	
World Wildlife Fund Fiji	
Fiji Council of Social Services	
Pacific Development Institute	
Wainimate	
Food & Nutrition Committee	
ACADEMIC INSTITUTION	
University of the South Pacific (USP)	PACE, IAS, Biology, Chemistry, FST, FIO,IMR, Geography.
Fiji Institute of Technology (FIT)	Environmental Science
University of Fiji	Center for Environment & Sustainable Development
TPAF	Environmental Standards
FSM	OHS, Environmental Health

STATUTORY BODY	
Native Lands Trust Board	
National Trust	
Fiji Pine/ Tropik Wood	
Fiji Development Bank	
FTIB	
FVB	
MEDIA	
Fiji times	
Post Fiji	
Fiji Sun	
Fiji One	
Magazines	
Vodafone	
Radio Station	
REGIONAL / INTERNATIONAL ORGANISATION	
Oceania Customs Organization	
SPREP	
SPRIG	
SP Reginal herbarium	
Secretariat of the Pacific Community (SPC)	
Secretariat for the Pacific Islands Applied Geoscience Commission (SOPAC)	
UNDP	
Forum Secretariat	
PRIVATE SECTOR	
Environment Consultants Fiji (ECF)	
Rivers Fiji	
Fiji Water	
Pacific Green	
EMBASSY & CONSULATES	
Korean Agency?	
GTZ	
Japan International Cooperation Agency (JICA)	
Taiwan Technical Mission	
US Embassy	
Australia	
French	
New Zealand	
China	

CBO	
Maruia Society	
Sovi Basin Working Group (SBWG)	
Tagituba Initiative	
CORPORATE BODY	
Fiji Islands Revenue & Custom Authority	
Fiji Electricity Authority (FEA)	
LTA	
Fiji Ports Corporation	
Fiji Copra Board	
Fiji Sugar Corporation	
Fiji Forest Industry	
CIVIL ORGANIZATION	
ECREA	
Fiji Council of Churches	
Citizens Constituency Forum	
Womens Right	

ANNEX 1-3 Listing of Projects Implemented Under the 3 Rio Conventions

FIJI PROJECTS INITIATED UNDER IMPLEMENTATION OF UNFCCC

Project Title	Donor Agencies	Implemented by	Year of Implementation
The South Pacific Sea Level and Climate Monitoring Project (SPSLCMP)	AusAID	SOPAC/Geoscience Aus.,NTC,MC	2006-2010(4th phase)
The South Pacific Sea Level and Climate Monitoring Project (SPSLCMP)	AusAID		2001-2005(3rd phase)
South Pacific Sea Level & Climate Monitoring Project (SEAFRAME)	AusAID	SOPAC	ongoing from 1992
Kabara Climate Witness Project	WWF US/WWF Indonesia	WWF	ongoing
Reducing Community Risk against Climate Change Disasters in the Pacific		WWF	2007-2008
Pacific Island Climate Update (ICU) Bulletin		SOPAC	ongoing
Pacific Island Climate Data Rescue (PI CDR) Project		SOPAC	
Pacific Hydrological Cycle Observing System Project (Pacific HYCOS)		SOPAC	
Rainwater Harvesting Pilot Project		SOPAC	
Fiji's Seasonal Rainfall Prediction Model	AusAID	FMS	ongoing
Sustainable Growth Initiative: Fiji Water Project		Fiji Water	Jan-08
Adaptation to Climate Change in the Tourism sector in Fiji Islands	GEF/SCCF	UNEP	2007
Piloting Climate Change Adaptation to Protect Human Health (PCCAPHH)	GEF/SCCF	UNDP / FSM	2007
Climate Change Adaptation in Rural Communities of Fiji	AusAID	IAS/PACE-SD, USP	2006
Water Shortages in Bavu, Western Viti Levu	AusAID	IAS/PACE-SD, USP	2006-2009
Coastal Erosion and Water Problems in Votua, South West Viti Levu	AusAID	IAS/PACE-SD, USP	2006-2009
River Bank Erosion and Inundation in Buretu, Southeastern Viti Levu	AusAID	IAS/PACE-SD, USP	2006-2009
Coastal Erosion & Inundation in Navukailagi, Lomaiviti	AusAID	IAS/PACE-SD, USP	2006-2009

River Bank Erosion & Flooding in Korotasere, Vanua Levu	AusAID	IAS/PACE-SD, USP	2006-2009
Water Problems in Druadrua Island, Vanua Levu	AusAID	IAS/PACE-SD, USP	2006-2009
Integrated Methods and Models for Assessing Coastal Vulnerability and Adaptation to Climate Change in the Pacific Countries (AIACC) -Navua town&Natadola area	START	PACE-SD(USP), IGCI(UoW),USP Geography Department	2004
Climate Change Variability - Community Relocation Project	APN	IAS/PACE-SD(USP),(UoW)	2005
Investigating rates of floodplain sediment accretion in tropical Pacific island river basins	USP, University of Guelph	USP Geography Department, in collaboration with USP Physics Department, University of Guelph in Canada and Fiji's PWD	ongoing from 2002
The impact of tropical cyclones on river flows, morphology and sedimentation in Fiji	USP,University of Guelph	USP Geography Department, in collaboration with University of Guelph in Canada and Fiji's PWD	ongoing
Water quality assessments Water Wastage Study	JICA	IAS,USP	ongoing
USP -NASA/NOAA Ozone Project	USP/NASA/NOAA	PACE-SD, and USP's Chemistry Department	ongoing from1997
USP-NIWA NZ Greenhouse Gas project	USP,NIWA	PACE-SD, and USP's Chemistry Department	ongoing from 1994
Ozone and Methane Project	NASA	Professor Koshy Kanayathu,PACE-SD and USP Chemistry Department	ongoing
El Nino and Sugar Project	START/NOAA	Professor Koshy Kanayathu,PACE-SD and USP	2001-2002
ODS-Ozone Depleting Substance	MLFS via UNEP	DOE	ongoing
Butoni Windmill Farm (Sigatoka)	CDM	FEA	
Wailoa Basin Hydropower		FEA	
Nadarivatu Renewable Energy EPC Project	IRBD and EIB	FEA	
Rural Electrification Scheme	Fiji Gov/FEA	FEA/Dept of Energy	
ADB/CIDA Climate Change Adaptation in the Pacific (CLIMAP) Program	Canadian Cooperation Fund for Climate Change	Asian Development Bank, Pacific Department	2002-2004

CIDA Capacity Building for the Development of Adaptation Measures in Pacific Island Countries (CBDAMPIC) project	CIDA	SPREP, National Gov.	Jan 02-Mar 05
Biofuel Projects in Taveuni and Vanua Balavu, Fiji	SPC(Rural Energy Development Programme), Fiji Government through DOE & French Embassy	SOPAC	2000 & 2001
Establishment of a Climate Change Unit within the Department of Environment			proposed project
Promotion of Renewable Energy			proposed project
National vulnerability and adaptation assessment study – Phase II			proposed project
Watershed management project for the sugarcane drought-prone areas			proposed project
Integrated Coastal Zone Management Programme for Fiji			proposed project
Vaturu (Nadi) Hydro Project	CDM	SEL	Jun-04
Wainikasou (Wainimala-Naitasiri) Hydro Projects	CDM	SEL	May-04
PACCLIM	IGCI/SPREP		Jun-05
FIJICLIM	IGCI/SPREP/World Bank		
Renewable Energy Hybrid Power Systems, Nabouwalu, Bua	GEF/UNDP	Fiji Gov & Japan Gov	1998
Pacific Islands Greenhouse Gas Abatement through Renewable Energy Project (PIGGAREP)	GEF/UNDP	UNDP/SPREP	Jul-07
Pacific Islands Climate Change Assistance Project (PICCAP): Climate Change Enabling Activity, Fiji	GEF/UNDP	SPREP, USP, Ibaraki Uni, SOPAC	1997
Pacific Islands Renewable Energy Programme (PIREP)	GEF/UNDP	SPREP, Fiji Gov, Pacific Island Forum Secretariat, SOPAC, SPC, USP	May 03-Dec 05 (extended to Aug 06)
Community climate change and energy reduction program, Fiji	GEF	Soqosoqo ni Marama, Macuata	2007

FIJI PROJECTS INITIATED UNDER IMPLEMENTATION OF UNCCD

Project Title	Implemented by	Donor	Year of Implementation
Sustainable Land Management (SLM)	Fiji Government		ongoing
Development of Sustainable Agriculture in the Pacific (DSAP)	SPC / Fiji Government	EU	2004 - 2007
Development of Integrated Farming Approaches (CROPPRO) Project	EU / Fiji Gov		2002 - 2007
Integrated Coastal Management (ICM)	USP/Fiji Gov		ongoing
Watershed Management	Fiji Government		ongoing
Watershed Management Master Plan: Flood and Drought Control Project in the Nadi Watershed	Land & Water Resources Dept.	Fiji Gov	2004
Climate Change and Vulnerability Adaptation Program	SPREP / Fiji Gov		2003 - 2009
Slopland Farming Program			ongoing
Tikina Based Profile	Fiji Government		ongoing
Alternative Livelihood Program	ADB /Fiji Government		2006 - 2011
Farming Assistance Scheme	Fiji Government		ongoing
Sustainable Forest Management	SPC / Fiji Government/GTZ		1994 - 2007
Policy options for improving the value of land use in smallholder Fijian agriculture	Deakin University(Aus), MASLR,SPC		01/07/05-30/06/08
Biological control of "mile-a-minute" (Mikania micrantha) in Fiji	QDPIF(Aus),SPC,MA SLR		01/01/06-30/06/09
Establishing forest pest detection systems in South Pacific Countries(Fiji&Vanuatu)	QDPIF(Aus),SPC,MA SLR,Min.of Fisheries and Forests		01/01/06-31/12/08
Improved farming systems for managing soil-borne pathogens of ginger in Fiji	QDPIF(Aus),SPC,MA SLR		01/01/06-31/12/09
Postgraduate Scholarship Scheme for USP, Fiji	USP		25/02/08-30/06/2011
Trade liberalisation,agriculture and land degradation in Fiji: implications for sustainable development policies	University of Queensland(Aus),USP, Min. of Finance,National Planning,ABARE(Aus)		01/10/06-31/12/07
Development of forest health surveillance systems for South Pacific countries (Fiji,Samoa,Tonga, Vanuatu)	QDPIF(Aus),SPC,MA SLR,Fiji Pine Ltd		01/07/02-31/12/04
Land Use Planning Project in Bemana, Nadroga	Dept. of Land Resources & Development		
Integrated Agriculture Program	MAFFA		

Pacific Network Soil Research Program	Dept. of Land Resources Planning & Development/MAFFA Extension & Research Division		
Agro Forestry Program	Min. of Agriculture, Extension Division and Land Use Section		
Native Forest Management Pilot Project in Nakavu, Namosi			
Reafforestation program	Forestry Dept./ FHCL		
Establishment of pilot and demonstration farms		VenezuelaGrant	2007-2009
Establishment and maintenance of rural community managed nurseries		VenezuelaGrant	2007-2009
Establishment of woodlots for rural communities		VenezuelaGrant	2007-2009
Onsite training of farmers on SLM technology & Nursery Management		VenezuelaGrant	2007-2009
Revitalisation of traditional Vuci ponds, Fiji	Vuci committee	GEF	2007-2009
Community mangrove rehabilitation programme, Fiji	Oisca-Fiji ex Trainees Association	GEF	2007-2009
Development of an Institutional Capability for Integrated Landuse Planning			
National Landuse Planning			
National Land Zoning			
National Contemporary Landuse Mapping			
Integrated Rural Resource Database Development and Application			
Adaptive Research and Extension in Land Husbandry Technologies			
National Sustainable Land Management, Education and Awareness Programme			
Improve the capacity and quality for human resources within the government for land management and landuse planning			
National Soil Resources and Classification Project		NZ Government	1981
The study on Groundwater Development in North Viti Levu in the Republic of Fiji Islands	JICA, Nippon Koei Co.Ltd, Nikko Exploration & Development Co.Ltd		June 1993 - May 1995
The study of Watershed, Management and Flood Control for the four major Viti Levu Rivers in the Republic of the Fiji Islands	JICA, Yachiyo Engeering Co.Ltd		August 1996 - October 1998
The Cooperative Mineral Exploration in the Viti Levu Area, Republic of Fiji Islands	JICA, MMAJ		1990 - 1992
The Cooperative Mineral Exploration Environmental Baseline Study in the Viti Levu South Area, Republic of Fiji Islands	JICA, MMAJ		2003 - 2004

FIJI PROJECTS INITIATED UNDER IMPLEMENTATION OF CBD

Project Title	Year of Implementation	Stakeholder	Funding Agency
A Future for the Sovi Basin, (Waimanu) Integrating Conservation and Development	1995	NLTB, Maruia Society	
Management Plan Ravilevu Nature Reserve Taveuni Cakaudrove (Draft)	2006	DoF, BLI, ECF	
Management Plan Tomaivi Nature Reserve Ba (Draft)	2006	DoF, BLI, ECF	
Report on the Conservative mineral exploration Environmental Baseline Study in the Viti Levu South Area, The Republic of the Fiji Islands	2004	JICA, ECF, IAS	
Vegetation and Vascular Plants of the Proposed Upper Navua Conservation Area (UNCA), Southwestern, Viti Levu, Fiji Islands		G. Keppel, R.R. Thaman, I.A. Rounds	
Forest Policy Statement	2005 - 2006	DoF, SPC & GTZ	
Forestry Certification Programme	ongoing	DoF, National Committee	
Inventory of timber species (Nakavu/Namosi and Drawa, Cakaudrove)	2002- 2005	DoF, Committee Members, GTZ	
Conservation and Development Programme for Nasavu and Vunivia Catchment- Dogotuki, Vanua Levu	2005	Tagituba Initiative	
Interesting Files from Mailaise Traps in Fiji	2003	WCS	
Survey of the Presence of Fijis Crested Iguana (Brachylopus fasciatus) on Macuata Island, Vuitogoloa, Ra Province	2004	WCS, NTF, USP, IAS	
Fiji Islands Terrestrial Anthropolod Survey	2005	WCS	
Preliminary checklists of the Terrestrial Anthropolods of Fiji	2006		
The Xixuthrus species of Fiji (Coleopter: Cerambycidae: Prioninae)	2004		
Waimanu Landowners Conservation Project	2005-2006	WCS	
Fiji Invertebrate Survery Project	2002- 2007	WCS	
Fiji Watersheds at Risks	2004-2006	WCS	
Long-horn Beatle	2002-2003	WCS	
Bird Surveys at Eight Forested Sites in Vanua Levu	2003-2004	BLI	
Bird Surveys at Eight Forested Sites in Viti Levu	2003-2006	BLI	
Important Bird Areas in Fiji. A publication of the 14 IBAs in Fiji	2006	BLI	
The Survey of the current status of the Proposed Mangrove Sanctuaries for three Villages in Tikina Wai, Nadroga Province	2002	IAS-USP	
Report of the Preliminary (JICA/MRD) Baseline survey on the Flora and Fauna and Vegetation of Waivaka South Pacific, Fiji	2003	IAS-USP	
Report of the Preliminary Baseline survey of the Terrestrial Vertebrate Fauna of the Waivaka catchments, Namosi, Viti Levu	2003	ECF, BLI, IAS-USP	
Baseline Flora Fauna survey of the Sovi Basin, Naitasiri	2003	IAS-USP	

Report of the Mangrove Flora and Fauna surveys conducted with Lomawai Reserve, Bole Reserve and Lotonaluya Reserve Tikina Wai, Nadroga	2003	WWF & IAS	
Vegetation status Assessment of Laucala Island, Cakaudrove Province, Fiji		IAS	
Vegetation Ecology Survey: Vegetation Mapping and Prioritization of the Fiji Petrel (<i>Pterodroma macgillivrayi</i>) Habitat on Gau Island, Fiji		IAS	
Vascular Plants and vegetation of Makaluva Reef Islet, Rewa Province		IAS-USP	
Botanical study on the proposed Caudua point Resort and residential sub division project, Nabukavesi, Namosi	2006	IAS-USP	
Restoring sustainable livelihoods on Kabara Island	2005-07	WWF-FCP, MAFF, Lau Provincial Office, Kabara Communities	
Profile of the Drawa Model Area (Appraisal for a community managed forest area in Fiji)	May-05	SPC & GTZ	
Heritage Trees of Fiji	25/03/2003	WCS, FAB, DOE, MAFF	
Wetland Ecosystems in Fiji- Uses and Distribution	2000	WWF(SPP)	
Self Help Toolkit for the Marine Protected Areas for Coastal communities of Fiji to encourage sustainable livelihoods	22/02/07	WWF-FCP, Sawaieke & So mosomo	
An Integrated Resource Management Plan for Ovalau island	Jul-98	NLTB	
Conservation and sustainable use of the globally outstanding biodiversity in the marine environments of Fiji	2005-07	WWF - FCP & partners	
The South Pacific Marine Programme- Fiji activities	2004-07	WWF - FCP & partners	
Strengthened a network system of coastal management in Fiji: Progress and lessons learned towards integrated coastal		IAS - USP	
Management on the coral coast and implications for national policy. Joint project between government of Fiji, IAS (USP) and CRC			
Community based closed areas in Fiji. A case study in: The Fisheries effects of Marine reserves and fishery closures	2002	IAS - USP	
The role of locally managed marine areas (LMMAS) in the development of Eco-tourism in Fiji	2003	IAS - USP	
Effects of collection on ornamental reef fish populations in collection and Non collection areas	2002	IAS - USP	
Marine Protected Areas	2000 on going	LMMA, FD	
An Ecosystem Based Approach for Managing Tropical Coastal Marine Ecosystems	2005-2006	WCS	
Report of the Tikina Vanuaso Community Marine Resource Biological Monitoring Training Workshop	2002	IAS - USP	
Qoliqoli Survey Guideline and Methodology		MAFF	

Resource Assessment of Inshore Fisheries	1996	MAFF	
Kubulau Qoloqoli Marine Reserve Network	2006	WCS	
The Fiji Island Whale Sanctuary	2003		
Schismatogobius vittiensis, a new freshwater goby from the Fiji Islands	2005		
Deepwater Snapper Fisheries	ongoing	DF	
Seaweed Project	ongoing	DF	
Freshwater Aquaculture Project	ongoing	DF	
Aquarium Projects	ongoing	DF	
Inshore Culture Research Center (Makogai- Giant Clam)	ongoing	DF	
Pearl Farming Project- Savusavu		DF	
Sea Turtle Conservation and Management	2004-2008	DF	
Coral Bleaching Refugia	2004-2006	WCS	
Baseline Biological Survey Report of the Vatu-o-lailai Marine Protected Area, Tikina Korolevu-iwai, Nadroga	2003	IAS - USP	
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Integrated Coastal Management (ICM): coral Coast	2000 on going	Bill Aalbersberg & ICM Committee	
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		Dick Watling, ECF, SPR EP	
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Biodiversity survey for Waisali Forest Reserve	2004	IAS, NTF	
PLA Community Resource Management plan, Waisalai Village	2005	NTF	
Dry forest vegetation survey for Yaduataba	2002	WCS,NTF,SPRH	
Blood parasite study for Crested Iguanas on Yaduataba	2003	Taronga Zoo,NTF	
Population survey of Crested Iguanas on Taduataba	2003	Taronga Zoo,NTF	
Crested Iguana surveys of Monu and Monuriki	2003	Taronga Zoo,NTF	
Crested Iguana distribution survey for Yasawas and Mamanuca Island.	1999/2000	Taronga Zoo,NTF,SPRH	
Weed control report, Yaduataba	2003	Taronga Zoo	
Community-based weed eradication program, Yaduataba	2004-2006	NTF	
Biodiversity survey, Gau Highlands	2005	IAS, NTF	
Community training on identification, catch and release for petrels	2005	BLI, NTF, ECF	
Community training . Predator identification and protection of petrel burrows, Gau Island	2003/4	BLI, NTF, ECF	
Community awareness program for the endangered Fiji Petrel, Gau Island	2003/4	NTF,Gau Island Council,ECF	
Specialist training for community representatives on petrel identification and conservation	2004	BLI,Gau Comm. Rep,NTF,NSW-Parks & Wildlife	
Survey of the Red-Throated Lorikeet, Viti Levu	2002	World Parrot Trust,ECF,NTF	
Bird survey,Solodamu, Kadavu	2003	World Parrot Trust,ECF,NTF	
Coral reef surveys, Yadua and Yaduataba	1998-2004	Greenforce, NTF	
Sovi Biodiversity Survey	2005	USP,IAS,SPRH,Do F,WCS,BLL,NTF	
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Sovi Boundary Survey and Plan	2006	SBWG	
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Identifying invertebrate representation within Fiji's future network on Forest Reserves	2006	USP	
Training in turtle population assessment techniques	2006-07	MSP USP	
Development of a network of government, NGOs, resorts, and communities to assist in assessment and conservation of marine turtles	2006-07	MSP USP	

Mapping and assessing the turtle nesting beaches in Fiji including detailed surveys of nesting turtles on important nesting beaches in the Mamanuca and Yasawa's, Rotuma, Gau Island and Vanua Levu	2007	MSP USP	
Assess the current hunting pressure on marine turtles in Fiji	2006-07	MSP USP	
Support the development of the Fiji Turtle Conservation Strategy	2007	MSP USP	
Assist SPREP and the Fiji Department of Fisheries in implementation of the regional turtle database	2006-07 (ongoing)	MSP USP	
Coral Gardens Initiative: Poverty alleviation through capacity building in community based fisheries management and coral reef restoration	2002-2005	FSPI	EU
Blue Forests: Protecting Biodiversity through Sustainable Farming of Coral Reefs	2002-2005	FSPI	UK Darwin Initiative
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Setting up a Tree Nursery - A guide for extension workers and communities	1998	MAFF & SPC/GTZ	
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Forestry Facts & Figures Fiji	1999	MAFF & SPC/GTZ	
Posters: Finding the Right Way- Developing community-based small-scale forestry enterprises with Melanesian customary landowners and Our Forests-Our Future	2005/2006	SPC/GTZ	
Report on Regional Training Course on Forest Inventory and Data Analysis	2003	Vletter, J. SPC/GTZ	
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Workshop Reports: Regional Workshops on Training of Trainers in Forest Certification and Mandate, Procedures, Tasks & Duties of National Working Groups on Forest Certification; Sustainable Forest Management and Timber	1999/2002	Lenoa, L.; Pac. Germ an Regional Forestry Project; Ratu, T. et al	

Certification Workshop; Regional workshop on Capacity Building Strategies in Forest Certification in the Pacific		SPC/GTZ	
Brochure: Agroforestry: The way ahead to the year 2000 and Recommended Tree species in Agroforestry	1999	MAFF & SPC/GTZ	
Agroforestry 1 & 2: A Way to Better Farming - A Manual for Trainers, Teachers and Extension Workers	1999	Ratukalou, I. et al. MAFF & SPC/GTZ	
Report on regional awareness raising tour of local and global importance on Investing in Forests and Trees for a secure future for our people	2005	Fung, C. SPC/GTZ	
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Report on the Results of the 2nd Tree Selection in 7 compartments in Natural forest management Pilot Project	2003	Huttner, M. SPC/GTZ	
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Sustainable Forestry Management Economic Appraisal of Drawa Block Project	2003	Chand, U. SPC/GTZ	
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Community Forests Conservation Programme - Natewa District, FIJI	2007-2008	Natewa Yaubula Committee	GEF
			GEF
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		Tikina Wai Environment Committee	
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