



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



**THE NATIONAL CAPACITY SELF ASSESSMENT PROJECT-FIJI**

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**FINAL REPORT**

# **The National Strategy and Action Plan**

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## PART A: LIST OF ACRONYMS

ALTA – Agricultural Landlords and Tenants Act  
AO - Agriculture Officer  
BPoA- Barbados Plan of Action  
CC – Climate change  
CDM – Clean Development Mechanism  
CHARM – Comprehensive Hazard and Risk Management  
CITES – Convention on International Trade in Endangered Species  
COP - Conference of the Parties  
CTU - Carbon Trading Unit  
DISMAC – Disaster Management Committee  
DNA PIN – Designated National Authority Project Identification Number  
DOE – Department of Environment  
EIA – Environmental Impact Assessment  
EMA – Environment Management Act 2005  
EO - Environment Officer  
FAB – Fijian Affairs Board  
FEA – Fiji Electricity Authority  
FFI – Fiji Forest Industry  
FIRCA – Fiji Islands Revenue and Customs Authority  
FIT – Fiji Institute of Technology  
FLMMA – Fiji Locally Managed Marine Areas (network)  
FMS – Fiji Meteorological Service  
FNRC – Fiji National Research Council  
GEF - Global Environment Facility  
GHG - Greenhouse Gas  
GTZ – German Technical Organisation  
IAS - Institute of Applied Sciences  
ICZM - integrated coastal zone management  
ILO - International Labour Organisation  
INGO – International Non-Government Organisation  
IRMP - Integrated Resource Management Plan  
IT – Information Technology  
IUCN- International Union for the Conservation of Nature  
LO - Legal Officer  
LUS - Land Use Section of the Department of Agriculture  
MASLR– Department of Land Resources Planning and Development  
MDG - Millennium Development Goals  
MFF - Forestry Department of Ministry of Fisheries and Forests  
MOU - Memorandum of Understanding  
MPAs- Marine Protected Areas  
NBSAP – National Biodiversity Strategy and Action Plan  
NCSA – National Capacity Self Assessment  
NDMO – National Disaster Management Office  
NEC- National Environment Council  
NES – National Environment Strategy  
NGO – Non-Government Organisation  
NLTB – Native Land Trust Board  
NSAP- National Strategy and Action Plan

OHS - Operational Health and Safety  
PACE - Pacific Centre for Sustainable Development  
PDD - Project Design Document  
PEO- Principal Environment Officer  
PES - Payment of Ecosystem Services  
PILN - Pacific Invasive Learning Network;  
PIN - Project Idea Notes  
PoWPA - Programme of Work on Protected Areas  
PSC - Public Service Commission  
PWD - Public Works Department  
RE - Renewable Energy  
REDD - Reduction of Emission in Deforestation and Degradation  
RMUs - Removable Units  
SC - Standing Committee  
SEO - Senior Environment Officer  
SFM - Sustainable Forestry Management  
SLM - Sustainable Land Management  
SOPAC - Pacific Applied Geoscience Organisation  
SPC - Secretariat of the Pacific Community  
SPREP - Pacific Regional Environment Programme  
STA - Senior Technical Assistant  
TOR - Terms of Reference  
TPAF— Training Productivity Authority of Fiji  
UN - United Nations  
UNCBD - Convention on Biological Diversity  
UNCCD - Convention on Combating Desertification  
UNDP - United Nations Development Programme  
UNFCCC - Framework Convention on Climate Change  
USP - The University of the South Pacific  
VA - Vulnerability and Adaptation  
VERs - Verified Emission Reduction Units

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## 1.0 EXECUTIVE SUMMARY

### 1.1 The National Strategy and Action Plan (NSAP)

The National Capacity Self Assessment (NCSA) is aimed at determining national capacity requirements and defining national capacity needs and priorities under the United Nations Convention for Biological Diversity (UNCBD), the United Nations Framework Convention on Climate Change (UNFCCC), and the United Nations Convention to Combat Desertification (UNCCD). The main output of the NCSA is the National Strategy and Action Plan (NSAP) to meet prioritized needs and a mechanism for monitoring and evaluating progress made in meeting those needs.

The NSAP provides a set of recommended strategies and programmes for capacity development in which support and assistance of both the Fiji Government and Donor Agencies is required for capacity development to better address the three thematic areas of the Rio Conventions. The NSAP provides a list of 6 programmes in which a total of 30 projects under these 6 programmes are recommended. The projects, timeframe and estimated budget are as listed:

#### *Programme 1: Initiating Key Enabling Activities (Short and Medium Term)*

| Project Number | Project Title  | Estimated Budget (FJD\$) |
|----------------|--|--------------------------|
| 1              | Securing Fiji Government's commitment for the NSAP     | 2,000                    |
| 2              | Securing enabling financing for NSAP in the short term | 12,000                   |
| 3              | Institutional strengthening of the Focal Points        | 11.5million              |
| 4              | Development of Communication strategy                  | 10,000                   |

#### *Programme 2: Projects Addressing Cross- cutting Issues (Short to Medium Term)*

| Project Number | Project Title   | Estimated Budget (FJD\$) |
|----------------|---|--------------------------|
| 1              | Review and formulate relevant legislations and policies | 330,000                  |
| 2              | Promote and establish cross-sector cooperation          | 20,000                   |
| 3              | Establish proper performance and reporting mechanisms   | 32,000                   |
| 4              | Establish sustainable financing mechanisms              | 50,000                   |
| 5              | Establish a systematic research and monitoring system   | 155,000                  |
| 6              | Develop and support relevant training and education     | 99,000                   |
| 7              | Strengthen communication and awareness raising          | 20,000                   |

#### *Programme 3: Environmental and Sustainable Natural Resources Management Projects (Medium to Long Term / 2009 - 2010)*

| Project Number | Project Title   | Estimated Budget (FJD\$) |
|----------------|---|--------------------------|
| 1              | Promote and strengthen sustainable land management    | 6.5million               |
| 2              | Promote and establish integrated watershed management | 5.282million             |

|   |   |           |
|---|---|-----------|
| 3 | Promote and replicate sustainable management of water resources | 3,430,000 |
| 4 | Promote and replicate integrated coastal zone management        | 6,040,000 |
| 5 | Promote and strengthen sustainable forest management            | 260,000   |
| 6 | Establish additional protected areas and boundary reserves.     | 170,000   |
| 7 | Establish a National Drought Mitigation Plan                    | 136,000   |

*Programme 4: Specific Priority Desertification and Land Degradation Mitigation Projects*

| <b>Project Number</b> | <b>Project Title</b>  | <b>Timeframe</b>   | <b>Estimated Budget (FJD\$)</b> |
|-----------------------|---|--------------------|---------------------------------|
| 1                     | Development of appropriate irrigation systems and upgrading of existing systems within the Agriculture sector | Short term         | 10.6million                     |
| 2                     | Development of appropriate irrigation systems for sugarcane farming   | Short to long term | 7.1million                      |
| 3                     | Implement community-based drought and land degradation mitigation projects                                    | Short to long term | 550,000                         |

*Programme 5: Specific Priority Climate Change Projects*

| <b>Project Number</b> | <b>Project Title</b>  | <b>Timeframe</b> | <b>Estimated Budget (FJD\$)</b> |
|-----------------------|---|------------------|---------------------------------|
| 1                     | Fiji's Greenhouse Gas Inventory   | 2009 - 2010      | 143,000                         |
| 2                     | Establish a Carbon Trading Administration Unit  | 2009 - 2010      | 50,000                          |
| 3                     | Identify and Implement Renewable Energy Projects under Fiji's CDM Project                   | 2009 - 2010      | 80,000                          |
| 4                     | Replicate Best Practice Community Based Adaptation Project                                  | 2009 - 2010      | 100,000                         |
| 5                     | Strengthening of the Capacity for Data Storage and Network for Fiji Meteorological Services | 2009 - 2010      | 230,000                         |

*Programme 6: Specific Priority Biodiversity Projects*

| <b>Project Number</b> | <b>Project Title</b>  | <b>Timeframe</b> | <b>Estimated Budget (FJD\$)</b> |
|-----------------------|---|------------------|---------------------------------|
| 1                     | National inventory of invasive species  | 2009 - 2010      | 115,000                         |
| 2                     | Development of a Fiji Invasive Species Management Strategy for planned and present alien invasive species | 2009 - 2010      | 758,000                         |
| 3                     | Register of traditional knowledge on biodiversity   | 2009 - 2010      | 207,000                         |



|   |  |             |         |
|---|--|-------------|---------|
|   | conservation and sustainable use                         |             |         |
| 4 | Enhanced propagation and production of Yasi (sandalwood) | 2009 - 2010 | 425,000 |

## 2.0 Summary of Cross-cutting Issues and Capacity Constraints

The seven common issues that cut across the three conventions are listed below. They are:

- Ineffective or non-application of relevant policies and legislation
- Poor institutional networking and collaboration
- Limited systematic research and monitoring
- Lack of and/or limited relevant training and education programmes
- Relatively low awareness and understanding of conventions at all levels
- Relatively weak institutional capacity and infrastructure of key stakeholders
- Lack of adequate funding for environmental and sustainable natural resources management projects.

(1) The main issues about 'Policy and Legislation' are overlapping and inappropriate legislation and policies, legislation developed in a non-participatory manner, inadequate awareness-raising on relevant legislation, and ineffective implementation. Government also tends to respond reactively rather than proactively to policy development. Unclear mandates between Government ministries and statutory bodies, and contradiction in portfolios, are also a problem. The amendment of at least 13 pieces of legislation would greatly help objectives in all three conventions to be met.

(2) Institutional linkages are poorly defined and often overlapping. Many problems are caused by lack of communication (or networking) and/or occasional non-communication between government and non-government stakeholders. Ownership and lack of information sharing also lead to competition, inefficiencies in resource use, and overall lack of awareness. The need for a centralised information system is clear.

(3) In Fiji, integrated research and monitoring is limited. A policy for data acquisition and national ownership should be developed and, again, make use of a central information management system. A central body should be established to coordinate all convention-related activities (perhaps the existing National Environment Council, NEC) and implementing a natural resource inventory should be done as a matter of priority. A Climate Change institution should be established.

(4) More technically skilled Fijians should be available to steer national convention-related activities, but this aim is hampered by the lack of access to professional training in Fiji. School curricula need 'environmental' updating also. Better project management and reporting skills are required for staff in Government also.

(5) Lack of awareness of the importance of the environment pervades all levels of Government and the public in Fiji: this lack of awareness has had an effect on Fiji's current environment and Government programmes and resource allocation. A public environmental awareness strategy is needed as a matter of urgency, in conjunction with a big increase in environment awareness programmes.

Government, NGOs and all stakeholders should be more familiar with the three Rio Conventions and appreciate the roles the conventions should play in policy formulation.

The Department of Environment should be overhauled and decentralized, and Environment Units established in Government, statutory and large commercial organisations. Efficiency and effectiveness need to be enhanced in the Department: presently it is attempting to do too much with too little.

(6) Weak institutional capacity and infrastructure is a severe constraint in key (mainly Government) stakeholders in implementation of all three conventions: Department of Environment, Disaster Management Office, Fiji Meteorological Service, Landuse Section of the Department of Agriculture, Forestry Department, and Fisheries Department. A common thread is the inability of stakeholders to perform their functions effectively – because of poor organization, reporting, strategies, insufficient staff, irrelevant skills, and the expectation that they can provide answers “out of straw” (i.e. lack of resources).

Failure to report to the Conference of the Parties of each convention, or submission of weak reports, are accredited to lack of experienced staff, and failure to recognize that activity as a task when determining staff and budgetary allocations. Again, the need for a central information system that can be accessed by all relevant ministries and stakeholders is a priority. More effective monitoring of programmes – particularly those being performed by non-government organisations – would bring cohesion, assist in information transfer, and raise awareness.

(7) The lack of funding is a perennial problem for stakeholders. Often it obliges Government stakeholders to abrogate their roles in favour of NGOs, or cut down service delivery. It explains the partial failure by convention focal points and ministries to relay the importance of the conventions, include their obligations in their corporate plans and mission statements, and clearly demonstrate to national planners the link between environmental health, social welfare and sustainable development.

Incapacity to source donor funding is another constraint. Policies that generate income (e.g. ‘user-pays’) and the establishment of an Environmental Trust Fund would alleviate the usual funding shortfalls.

## 2.1 Summary of the Thematic Assessment Findings

### 2.1.1 United Nation Convention on Biological Diversity (UNCBD)

| Capacity Needs  | Analysis   | Recommendations   |
|-----------------|--|---|
| <b>Systemic</b> | Legislations and policies  | Be reviewed and updated as a matter of urgency to ensure harmonisation  |
|                 | Dissemination of information at national level not efficient                 | Needs to be brought out in all possible forums including TV and media   |
|                 | Realisation of the UNCBD objectives  | Requires the development of an enabling environment and widespread recognition of the economic value of biodiversity protection.  |
|                 | Awareness program  | Recognition of biodiversity as a key component of the tourism industry in Fiji contributes to greater awareness. Industries and personnel working in the tourism industry be targeted on awareness programs on biological diversity and conservation. |
|                 | Implementation and sustainability of conservation programs at national level | Greater political commitment required   |

|                       |  |   |
|-----------------------|--|---|
|                       | Fiji's environment conventions and Fiji's obligations to these conventions | Status review be carried out as high priority   |
|                       | Implementation of conservation measures and alternative technologies       | Tax incentives for the private sectors  |
|                       | National Strategy and Action Plan  | To focus on capacity building that identifies projects, overall goals, specific objectives to be achieved                               |
|                       | Public Education   | Special emphasis to be placed on the judiciary, police, local government organisations and communities in protected areas               |
|                       | Harmonisation of overlapping activities among the three Rio Conventions    | Steps need to be initiated to ensure effective national measures to protect the environment   |
|                       | Career paths and salaries  | Government to initiate appropriate training activities and put in place additional incentives to retain experienced staff               |
| <b>Organisational</b> | Overlapping / conflicting mandates   | Improve on institutional frameworks, linkages, and communication among all stakeholders (Government and NGOs)                           |
|                       | Understanding the objectives and benefits of UNCBD                         | Clearly defined mandates and organisational independence  |
|                       |  | Facilitate harmony and stability within institutions and amongst stakeholders   |
|                       | Department of Environment  | Integration and interaction with other department and ministries to be strengthened   |
|                       |  | Be given the resources and mandate to coordinate the NSAP in relevant sectors   |
|                       |  | Re-establish priorities and communication within the Department to improve  |
|                       |  | An appropriate information management system would assist in integrating the efforts of different stakeholders                          |
|                       |  | Decentralise office in key relevant statutory bodies and local, provincial and district councils  |
| <b>Organisational</b> | Department of Environment  | Liaise actively with NGOs; MOUs reviewed and monitored  |
|                       |  | Recruitment of skilled staff  |
|                       | Government organisations under-staffed                                     | Appropriate staffs to be recruited  |
|                       | Financial resources  | Need to identify sources of (non-Government) funding and sustain them   |
|                       | Difficulties in policy implementation                                      | Sufficient information on Fiji's flora and fauna needed to be provided and updated with more coordination amongst relevant stakeholders |
|                       | Staff retention  | Introduce financial incentives  |
|                       | Awareness program  | Communication of policies and policy instrument be disseminated to regional and local levels  |
|                       |  | Establish a standardised reporting procedure  |
|                       | Commitment to obligations  | Effective implementation of policies and policy instruments   |
|                       | NGOs   | Should be required to work in Fiji under a National Environment Strategy  |
| <b>Individual</b>     | Success of national initiatives  | Individual capacity be strengthened for Fiji  |

|  |   |  |
|--|---|--|
|  | National Strategy   | Needed for coordination and to facilitate the development of capacity appropriate for national needs |
|  | Achieving convention objectives                             | Skills development and other forms of training ongoing   |
|  | Forestry staffs   | Wildlife management training should be a requirement   |
|  | Skilled personnel and low staff / skills turnover           | Investments needed to be made in skills development urgently   |
|  | Capacity relating to international treaties and conventions | Greater investment needed  |
|  | Meeting reporting requirements                              | Individual capacity (quantity and quality) be increased  |

### 2.1.2 United Nations Framework Convention on Climate Change (UNFCCC)

| Capacity Needs        | Analysis                                     | Recommendations   |
|-----------------------|--|---|
| <b>Systemic</b>       | Budget constraints                           | A funding specialist be engaged to focus towards identifying potential donors, writing proposals and pursue funds earmarked for climate change programmes   |
|                       | Existing policies for cross-cutting issues   | To be reviewed and fully utilised with intra-organisational cohesion and stakeholders' participation.   |
|                       | Climate Change studies                       | To be included in the education curricular at primary and secondary school level apart from tertiary.   |
|                       | Adaptation and Mitigation measures           | Private sectors, NGOs, and community-based organisations be brought onto the process and given meaningful roles to play<br>Develop national action plan for these measures  |
|                       | Global recognition and funding opportunities | Integrate climate change consideration in national development policy of the Government.  |
| <b>Organisational</b> | Climate Change Unit                          | Be fully established within the Department of Environment to strengthen focal point institution   |
| Capacity Needs        | Analysis                                     | Recommendations   |
| <b>Organisational</b> | Public awareness                             | Design and implement a public awareness program targeting audiences at several levels of society  |
|                       | Database                                     | Formal collection and archiving of baseline data information<br>Establishment of GHG database should be encouraged and strengthened   |
|                       | Understanding climate change processes       | Fully utilise the services of major regional academic and crop agencies especially those that have developed regional climate models for small island countries<br>Specific study research on the areas of climate change |
|                       | Vulnerability assessment                     | Adequate funding required; strengthening of formal climate change research program for institutions in Fiji and abroad  |
|                       |  |   |
| <b>Individual</b>     | Staffing level of DOE                        | Need to be expanded to effectively address issues   |
|                       | Work demand experience,                      | UNFCCC secretariat to advice on specific training   |

|  |  |  |
|--|--|--|
|  | visionary leadership and analytical skills | courses available globally   |
|  | Training on all areas of climate change    | Fellowship programme offered by UNFCCC would be an ideal training opportunity  |
|  |  | Scientific training in technical institutions offering courses on climate change   |
|  |  | Need to utilise existing institutions that are familiar with the thematic issues of the convention   |
|  | Training Institutions                      | Will require additional equipment including high-speed computers so initial needs assessment required  |
|  | CDM and Carbon Trading                     | Develop technical skills; Carbon Trade Unit be set up  |
|  | Technical capacity                         | Concentrate on the post Kyoto commitments; specialist environmental economist to be selected and moulded to actively participate in very important COP meetings. |

### 2.1.3 United Nations Convention to Combat Desertification (UNCCD)

| Capacity Needs        | Analysis   | Recommendations  |
|-----------------------|--|--|
| <b>Systemic</b>       | UNCCD obligations and participation  | Develop an appropriate system of accountability for the focal point                                      |
|                       | Dissemination of relevant information  | Needs addressing through various policies and reporting programmes                                       |
|                       | Creating an enabling environment   | Political understanding and commitment to the principles of the UNCCD                                    |
|                       | Effective monitoring programmes  | Comprehensive assessment of the factors that causes drought and the mapping of drought areas             |
|                       | National policy, legal and regulatory framework  | Need for synchronisation   |
|                       | Water resources and adequate financing   | Acquisition of proper technology   |
|                       | Public education programme   | Develop an effective and comprehensive one that is informative of the country's obligations in the UNCCD |
| <b>Systemic</b>       | Legislative and regulatory framework   | Need for enforcement of existing laws and stricter penalties   |
|                       | Prevention of the increasing conversion of agricultural lands to residential and other commercial purposes | Land Conservation and Improvement Act be endorsed  |
|                       | School curricular  | Strengthened for environmental protection and land management planning                                   |
|                       | Development of sustainable rural projects  | Financial incentives needed  |
| <b>Organisational</b> | Additional activities for UNCCD  | To be accounted for in the existing organisational framework under the Land Use Section                  |
|                       | Focal point responsibility   | Integration of specific reference into the job descriptions  |
|                       | Awareness and COP reporting  | Focal point to prepare and distribute detailed quarterly reports as well as newsletters                  |
|                       |  | Use of radio, television and other media   |
|                       |  | More communication amongst all relevant stakeholders   |

|                   |   |  |
|-------------------|---|--|
|                   | Project progress, stakeholder activities, policy measures etc.                  | Develop and appropriate information management system for tracking purposes  |
|                   | Institutional memory  | Responsibilities be vested equally   |
|                   | Coordination, cooperation, integration and partnership between all stakeholders | Have a clearly defined organisational mandate  |
|                   | Capacity building   | Through technical workshops and practical training   |
|                   | Community planning and decision making  | Promote and empower community action groups  |
|                   |   | Promote the interaction and coordination between all stakeholders particularly at community levels   |
|                   |   | Identify key land users and ensure their involvement in all areas of land management   |
|                   | Convention implementation   | Need good administrators who can work with Government to source funds from within the government machinery   |
|                   | Sustainable land management and natural disaster risk management                | Relevant human resource development plans needed   |
| <b>Individual</b> | Capacity needs  | Institutional strengthening of the Land Use Section to a Department level  |
|                   | Achieving maximum impacts   | Secure relevant numbers of medium to large size projects   |
|                   | Keeping up with latest development  | Continued skills development   |
|                   | Training needs  | Link with the national workforce planning unit through PSC   |
|                   |   | Staff development through sponsoring of tertiary education with study leave  |
|                   |   | General soil management  |
|                   |   | Environment- friendly road construction techniques   |
|                   |   | Environment management of mining operations  |
|                   |   | Urban landscape planning and management  |
| <b>Individual</b> | Specialists needed  | Includes soil chemists, soil scientists, agronomists, geomorphologists, environmental planners, community development specialists, remote sensing and computer programmers, scientists and practitioners |
|                   | Community participation in project implementation                               | More awareness to be done  |
|                   |   | Community representatives to be targeted in awareness campaigns  |

### 3.0 CAPACITY DEVELOPMENT FRAMEWORK

#### 3.1 Vision

Improving the management of Fiji's environment and natural resources through strengthened capacities.

#### 3.2 Mission

To develop and implement sustainable capacity development actions in order to manage and care for Fiji's environment and to contribute to global environment agenda.

### **3.3 Objectives**

- (i) To identify capacity development strategies and action programmes that will lead to an improvement in Fiji's management of global and national environmental issues.
- (ii) To specify implementation frameworks including monitoring indicators and evaluation plans to ensure follow-up to the National Capacity Self Assessment (NCSA).
- (iii) To mobilize support for environmental capacity development from local and international sources including financial assistance and non-financial support such as sponsorship, equipment, infrastructures, technical assistance and training.
- (iv) Promote stakeholder participation and coordination /collaboration in environmental management.

### **3.4 Principles for Capacity Development**

The National Strategy and Action Plan (NSAP) is built on the following principles:

- (i) Ensuring national ownership and high-level political commitment to the Strategy;
- (ii) Using existing coordinating structures and mechanisms;
- (iii) Building on past capacity development efforts to avoid duplication of efforts and 'reinventing of the wheel';
- (iv) Paying due allocation to the obligations and requirements of the three Conventions, particularly those related to capacity development;
- (v) Focusing on issues that are cross-cutting for the three Rio-Conventions with the aim of strengthening synergies in implementing these Conventions;
- (vi) Adopting a holistic approach to capacity development that addresses capacity needs at the systemic, institutional and individual levels within the context of sustainable development;
- (vii) Paying particular attention to capacity needs at the systemic level, since they are often neglected by initiatives that focus on individual and institutional capacity;
- (viii) Adopting a long-term approach to capacity development as part of national, regional and international sustainable development initiatives; and
- (ix) Linking to other on-going initiatives and on-going programmes as a sub-component for capacity development/project profiles will address capacity gaps and needs not covered by other initiatives and programmes.

## **4.0 CAPACITY DEVELOPMENT STRATEGY**

### **4.1 Implementation Strategy**

The NSAP will be implemented in six different programmes. These are:

- i. Programme 1- key enabling activities,



- ii. Programme 2 - projects addressing cross-cutting issues,
- iii. Programme 3 - cross-cutting environmental and sustainable natural resources management projects,
- iv. Programme 4 - specific priority desertification and land degradation mitigation projects,
- v. Programme 5 - specific priority climate change projects and
- vi. Programme 6 - specific priority biodiversity projects

In terms of the time frame, Programme 1 is short term (1 – 3 years), Programme 2 is short to medium term projects (1 – 7 years), while Programme 3 are projects that span medium to long term time frames (4 – 12 years).

The programmes are such that the short term and medium term programmes are keys to the successful implementation of the NSAP. Therefore the funding of these programmes is vital to achieving the overall objectives of the Fiji NCSA programme as well as providing tangible impacts to Fiji's sustainable natural resources and environmental management programmes and initiatives.

#### **4.2 Coordinating Agency**

It is proposed that the NEC endorse a national steering committee be formed under the Department of Environment with close coordination with the Department of National Planning to guide and coordinate the activities of NAP. The monitoring of the relevant activities will be carried out by the NEC (with matters regarding UNFCCC and CBD) and LCB (with matters regarding UNCCD) respectively.

In terms of formulating proposals, accessing funds, and coordinating reporting under the international obligations, this would become the responsibility of the proposed MEA International Treaties Unit of the Department of Environment. While awaiting establishment of MEA Unit within the timeframe of medium term, the NCSA Project Unit can resume the role of formulation of proposal and accessing of funds for NSAP, obtaining endorsement for NSAP and assist focal point with strengthening coordination and networking for the NSAP implementation within a short term timeframe.

In terms of the Ministry to coordinate the NSAP there are two options recommended. The first option is to remain with the existing government structure (Department of Environment within the Ministry of Local Government, Urban Development, Housing and Environment); the other is to create a completely new ministry designed to accommodate all relevant components of environment, heritage and culture in Fiji.

The first option (the status quo) is already familiar and is not repeated here (see 5.3.1, below). The second option (that of a new ministry) and its supporting rationale, are described below under the Institutional Strengthening of the Department of Environment as Phase 4.

##### **4.2.1 The National Environment Council**

Watling and Chape (1993) recommended that a National Environment Council be set up to 'advise the Minister ... on the views of the public, private sector interests, NGOs, local authorities, etc.' (p 34). The Council's composition should reflect all of those groups affected by environmental management measures and well as those with environmental or conservation interests (p 37). Such a council ultimately was established under the EMA. As outlined in EMA (§8) [Box 1], the functions of the Council are:

### Box 1

1. (a) to approve the National State of the Environment Report;  
(b) to approve the National Environment Strategy;  
(c) to monitor and oversee the implementation of the National Environment Strategy;  
(d) to facilitate a forum for discussion of environmental issues;  
(e) to make resolutions on public and private sector efforts on environmental issues;  
(f) to ensure that commitments made at regional and international forums on environment and development are implemented;  
(g) to advise the Government on international and regional treaties, conventions and agreements relating to the environment; and  
(h) to perform any other functions conferred under this Act or any other written law.
2. The National Environment Council may appoint any technical committee necessary to advise it on matters affecting environmental protection and resource management.
3. The Council may appoint a committee for coastal zone management to prepare a coastal zone management plan.
4. The Council shall establish a Resource Owners Committee to advise the Council on any environment matter affecting their resources.

Meanwhile, the powers of the NEC [Box 2] in relation to the functioning of the Department of Environment are considerable. In light of the CBD thematic assessment<sup>1</sup> and the NCSA cross-cutting report, the provision identified in part (2) (Box 1), is a key provision, as are the functions and powers of the NEC (Box 2). This is because throughout the NCSA assessment of how Fiji is meeting its obligations towards the CBD and UNFCCC, the Department of Environment was shown to be lacking capacity at many levels. The EMA 2005 gives the NEC the power to improve the performance of the Department in the national interest.

### Box 2 – powers of the NEC (EMA, §11)

- 11.-(1) In carrying out its functions, the Council may require the Department to carry out the following-
- (a) to coordinate the formulation and review of National State of the Environment Report;
  - (b) to coordinate the formulation, review and implementation of the National Environment Strategy (including national environmental and resource management policies);
  - (c) to implement and carry out the EIA process;
  - (d) to design and implement policies and programmes on pollution and waste management, abatement and reduction;
  - (e) to formulate, monitor and enforce environmental standards;
  - (f) to co-ordinate conservation and management of natural resources;
  - (g) to facilitate the establishment of environmental units in Ministries, departments, statutory authorities, local authorities or facilities;
  - (h) to establish and maintain a register of accredited persons;
  - (i) to provide technical advice on pollution control and abatement methods;
  - (j) to implement treaties and conventions on environmental and resource management to which Fiji is a party;
  - (k) to formulate and review a National Resource Management Plan and the Natural Resources Inventory.
- (2) For the purposes of subsection (1), the Council may further require the Department to carry out the following duties-
- (a) to evaluate environmental and resource management implications of major economic and sectoral policies; and
  - (b) to review environmental and resource data and environmental audit reports.

<sup>1</sup> Kailola, P.J. 2008. *Thematic Assessment report for the Convention on Biological Diversity and the Cartagena Protocol on Biosafety, Fiji Islands*. Report prepared for the Department of Environment, Suva, Fiji, and UNDP-GEF.

Sadly, the slow (yet careful) responses of the NEC may also lie in the circular nature of the 'system' considering that:

- (a) Each member of the NEC has other duties, and the majority of the members are at very senior level (Director, or Permanent Secretary). They have a large workload and – as identified in the NCSA Cross-cutting report (for convention reporting) – attendance at and following up on positions taken by the NEC may not be addressed in their engagement contracts; hence attention to NEC matters may only come about at or just prior to the next NEC meeting;
- (b) The lack of resources of the Department of Environment: if the Department does not perform the task required of it by the NEC, there is no penalty;
- (c) since the EMA was enacted, the NEC has met fewer than five times (in nearly four years) even though the EMA instructs that it should meet four times each year. Faces change and time passes – all adding up to the difficulty of following up on instructions, and receiving feedback;
- (d) Perhaps at the 'top of the tree' lies the incomplete appreciation of the importance of the environment at senior levels of Government, and with that incomplete appreciation a non-realisation of the link between environment, poverty and sustainable development.

Implementation of the NSAP relies heavily on:

- the willingness of the NEC to carry out the functions for which it is legislated,
- the capacity of the DOE to perform them, and
- the appreciation by Government of the link between environment, poverty and sustainable development.

#### **4.3 Project Implementation Agencies**

While the merits of creating a new ministry are being considered, it is recommended that the Department of Environment under the direction of the NEC forms a national coordinating committee to guide and coordinate the activities of NSAP, and that monitoring of relevant activities should be carried out by the NEC and LCB through the Department of Environment and Landuse Section of Ministry of Agriculture.

For greater accountability and for ease of monitoring the progress of programmes and projects, the NSAP identifies three levels related to institutional arrangements. The three levels are (i) executing agency, (ii) implementing agency, (iii) supporting agencies.

Within the NSAP great importance is taken in identifying the lead implementation agency or agencies for each of the projects. The identification of leads agencies is also included at the activity level to ensure accountability.

#### **4.4 Identified Programmes and Projects**

##### **Programme 1: Key Enabling Activities**

*Timeframe: Short and Medium Term*

- Project 1: Securing Fiji Government's commitment for NSAP
- Project 2: Securing enabling finance for the NSAP in the short term
- Project 3: Institutional strengthening of the Focal Points
- Project 4: Development of Communication Strategy

##### **Programme 2: Projects Addressing Cross-cutting Issues**

*Timeframe: Short to Medium Term*

- Project 1: Review and formulate relevant legislations and policies
- Project 2: Promote and establish cross-sector cooperation
- Project 3: Establish proper performance and reporting mechanisms

- Project 4: Establish sustainable financing mechanisms
- Project 5: Establish a systematic research and monitoring system
- Project 6: Develop and support relevant training and education
- Project 7: Strengthen communication and awareness raising

### **Programme 3: Cross-cutting Environmental and Sustainable Natural Resources Management Projects**

*Timeframe: Medium to Long Term*

- Project 1: Promote and strengthen sustainable land management
- Project 2: Promote and establish integrated watershed management
- Project 3: Promote and replicate sustainable management of water resources
- Project 4: Promote and replicate integrated coastal zone management
- Project 5: Promote and strengthen sustainable forest management
- Project 6: Establish additional protected areas and boundary reserves.
- Project 7: Establish a National Drought Mitigation Plan

### **Programme 4: Specific Priority Desertification and Land Degradation Mitigation Projects**

*Timeframe: as indicated for each project*

- Project 1: Development of appropriate irrigation systems and upgrading of existing systems within the Agriculture sector- [Short Term]
- Project 2: Development of appropriate irrigation systems for sugarcane farming - [Short to Long Term]
- Project 3: Implement community-based drought and land degradation mitigation projects - [Short to Long Term]

### **Programme 5: Specific Priority Climate Change Projects**

*Timeframe: as indicated for each project*

- Project 1: Fiji's Greenhouse Gas Inventory - [Short to Long Term]
- Project 2: Establish a Carbon Trading Administration Unit [Short Term]
- Project 3: Identify and Implement Renewable Energy Projects under Fiji's Clean Development Mechanism
- Project 4: Replicate Best Practice Community Based Adaptation Project
- Project 5: Strengthening of the Capacity for Data Storage and Network for Fiji Meteorological Services

### **Programme 6: Specific Priority Biodiversity Projects**

*Timeframe: as indicated for each project*

- Project 1: National inventory of invasive species -[Short to Medium Term]
- Project 2: Development of a Fiji Invasive Species Management Strategy for planned and present alien invasive species - [Medium to Long Term]
- Project 3: Register of traditional knowledge on biodiversity conservation and sustainable use – [Medium to Long Term]
- Project 4: Enhanced propagation and production of Yasi (sandalwood) – [Medium to Long Term]

## **4.5 Evaluation and Monitoring**

Monitoring and evaluating the implementation of the National Strategy and Action Plan is an important part of the NCSA process. It will involve the continuous review of progress against projected schedules. The NCSA Crosscutting Report identified several initiatives that require monitoring and some of them are already addressed by the EMA. They include monitoring and

overseeing the implementation of the National Environment Strategy (to be prepared by the Department of Environment) and overseeing research and monitoring.

Already legislated (even by policy) to monitor environmental activities are both the NCSD and the NEC, and the NEC has the option to establish committees. It is not in the interest of the nation that a third monitoring committee be established to oversee the National Strategy and Action Plan (NSAP). We recommend therefore, that the NEC either directly monitor the NSAP, or establish a sub-committee to do so<sup>2</sup>. At the same time, the NEC may also perform, through one of its sub-committees, the remaining NBSAP tasks of project management: 'when', 'how' and 'who'. A third option is for the DOE, acting on instruction from the NEC, to 'contract' a third party to monitor the implementation of the NSAP: such a third party may be a local or regional NGO.

The monitoring and implementation committee (in whatever form) should prepare an action plan for the first 12 months, and provide a status report on NSAP implementation after 12 months of implementation.

## **PROGRAMMES AND PROJECT PROFILES**

### **5.0 Programme 1 – Initiating Key Enabling Activities [Short Term]**

#### **5.1 Project 1: Securing Fiji Government's commitment for NSAP**

Addressing political will and obtaining the support of key decision makers to the NSAP and its recommendations are vital for the successful implementation of NSAP and its recommended strategies. The NSAP aims develop Fiji's capacity to be able to better address the three Rio convention obligations that specifically look at Climate Change, Conservation and Biodiversity, Land Degradation and Desertification.

Securing high level support can be facilitated through the preparation of a cabinet paper for NSAP and the securing of support and participation of relevant stakeholders identified as implementers of recommendations in the NSAP. Preparation of a cabinet paper for NSAP implementation to follow proper protocol through the following:

1. A presentation of the NSAP to the national key decision makers that includes the National Environment Council (NEC), the Land Conservation Board (LCB) and Development Service Committee (DSC) to obtain endorsement.
2. Upon endorsement and recommendation of the NEC, LCB and DSC a cabinet paper be developed by DOE to be submitted to cabinet for endorsement.

#### **Institutional Arrangement**

Executing Agency: DOE

Implementing Agency: DOE & Land-Use Ministry of Agriculture

Supporting Agency: National Planning, PSC

#### **Financial Resources**

Resource Mobilization: Government of Fiji & External Donors

Indicative Budget: \$2000.00

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<sup>2</sup> The sub-committee could include representatives of the national focal points for each convention

## **5.2 Project 2: Securing enabling finance for the NSAP in the short term**

Securing of funds is a very important component ensuring successful implementation of the NSAP. The support of both Government and Donor Community is a necessity. The task of securing an enabling financial arrangement for the NSAP is to be coordinated by the DOE.

1. Upon endorsement of the NSAP with its Resource Mobilization Strategy, the DOE is to coordinate recruitment of a consultant on a short-term basis to prepare a funding proposal for each of the three thematic areas of the conventions within the requirement and funding cycle of Donors and Government.

2. After preparing a funding proposal, the DOE is to conduct a Resource Mobilization Strategy Roundtable Discussion with donors and Government to solicit funds and support for the NSAP. One of the government avenues would be through the Ministry of National Planning's Millennium Development Goals strategy: the Ministry has specific discretion to prioritize specific thematic areas of the conventions that could translate into foreign income-generating projects for the Government of the day.

3. Once funds and support are secured, the DOE through the NEC Subcommittee will coordinate and monitor the use of funds to address capacity needs and gaps as recommended in the NSAP with the following arrangement recommended above under 4.3: Project Implementation Agency

### **Institutional Arrangement**

Executing Agency: DOE

Implementing Agency: DOE & Donor Agencies

Supporting Agency: Ministry of Finance & PSC

### **Financial Resources**

Resource Mobilization: Government of Fiji & External Donors

Indicative Budget: \$12,000.00

## **5.3 Project 3: Institutional strengthening of the Focal Points**

Recommendations written below are summarized and supported in Table 5.3, presented at the end of this section

The in-depth assessments identified the existence of an overall lack of capacity at the focal points for the three Rio conventions (the Department of Environment as focal point for CBD and UNFCCC, and the Landuse Division as focal point for UNCCD). The recommended institutional structure in this chapter focuses on building capacity to better implement the three Rio Conventions and may not be entirely reflective of the department capacity needs for institutional strengthening. For example the Waste and EIA Unit of Department of Environment may submit a separate proposal for institutional strengthening of its unit.

Institutional strengthening of the focal points centers on the four main areas as listed below:

- Human resources
- Institutional structure and management
- Financial resources (to be secured)
- Infrastructure resources to be allocated appropriately and managed effectively.

### 5.3.1 INSTITUTIONAL STRENGTHENING OF THE DEPARTMENT OF ENVIRONMENT

#### Background

Presently the DOE, the focal point for the UN CBD and UN FCCC, is a department within the Ministry of Local Government, Urban Development, Housing and Environment.

The history of the DOE (or Environment Unit) reflects the indecision of successive Fiji Governments on the important role of the environment in sustainable development. For all this years since its establishment in 1992, it has been shifted five times around various ministries and during that time it had only once been upgraded to a Ministry level. In 2009, it is with the Ministry of Local Government, Urban Development, Housing and Environment.

The Department is critically understaffed and to get by with its mandated programmes it requires the assistance of volunteers, which makes up approximately 34% of its workforce.

The Institutional Strengthening structure of DOE as reflected in the NSAP only focus on capacity developments with regards to better addressing the three thematic areas of the convention that includes Climate Change, Conservation and Biodiversity and Land Degradation and Desertification however is not inclusive of the Waste Units proposed structure to be submitted separately from this.

#### Objective:

- To strengthen institutional structure for DOE so to build its capacity in addressing capacity gaps and constraints as identified in earlier NCSA In-Depth Thematic Assessment and Crosscutting Report and ensuring successful implementation of its multilateral environment agreement in a holistic and integrated fashion. This will be achieved through the implementation of the 4 Phases of Institutional Strengthening of DOE.
- To facilitate sustainable development by effectively managing Fiji's environment, provide comprehensive heritage protection, and involve Fiji's private and public sectors in sustainable environment management and heritage protection.
- Recommend preferred institutional model for facilitating effective environmental planning and management,
- Define job descriptions, roles and responsibilities based on a needs assessment and required training programme,

Recommend human, financial and other resources required to support a strengthened Department of Environment and ultimately a Ministry of Environment

#### How it addresses Capacity

Capacity building and development of DOE at all three level of capacity through Institutional Strengthening.

#### Institutional Arrangement

|                     |   |   |
|---------------------|---|---|
| Executing agency    | - | Ministry of Local Government, Urban Development, Housing and Environment. |
| Implementing agency | - | Department of Environment   |
| Supporting agencies | - | Public Service Commission, Ministry of Finance                            |

#### Financial Resources

|                       |   |  |
|-----------------------|---|--|
| Resource mobilization | - | Government of Fiji and external donors |
|-----------------------|---|--|



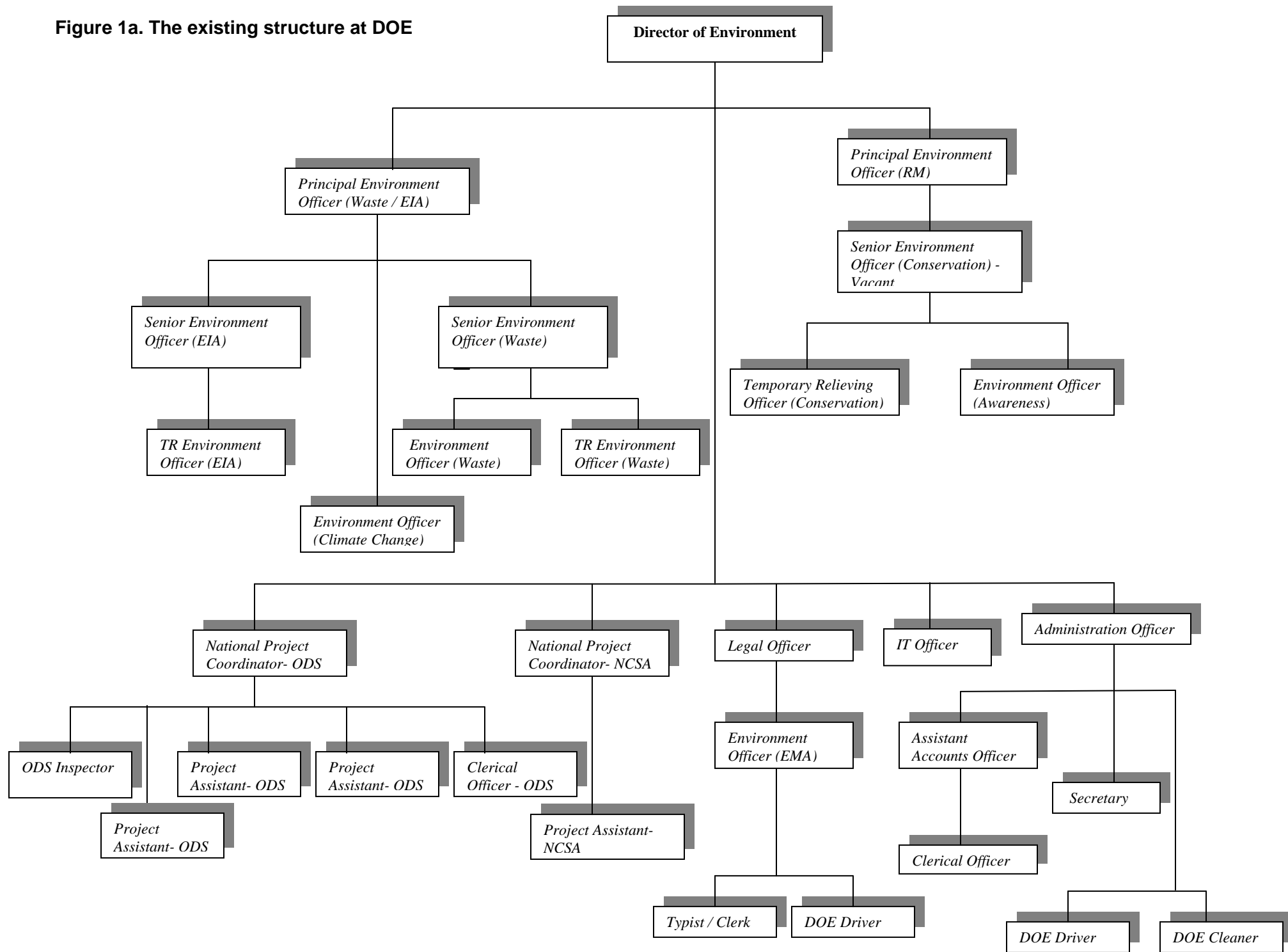
Indicative budget - \$1.5 million (FD)

**Indicative Budget** – (The detail usage of the indicative budget is elaborated further under 5.3.1f)

| Activity                              | Cost (FD)    |
|---------------------------------------|--------------|
| Phase 1: Institutional Strengthening  | \$156,845.00 |
| Phase 1: Operating Budget             | \$60,000.00  |
| Phase 2 : Institutional Strengthening | \$257,378.00 |
| Phase 2 : Operating Budget            | \$120,000.00 |
| Phase 3 : Institutional Strengthening | \$175,208.00 |
| Phase 3 : Operating Budget            | \$240,000.00 |

5.3.1a In previous NCSA Thematic Assessment and Crosscutting Report for Fiji, a number of capacity constraints was highlighted that indicates or confirms the lack of capacity in terms of staffs and resources at DOE. One such capacity gap highlighted for instance is the lack of proper coordination and monitoring from DOE with other relevant key stakeholders or implementers of Climate Change and Conservation of Biodiversity. This is simply because of lack of staff and there is no dedicated or appointed Liaison Officer to coordinate, network and specifically to monitor agreement under MOU and follow-up on reporting requirement. Understanding this capacity gap and need, the NSAP recommends a recruitment of an Environment Officer Liaison to undertake the above task and strengthen coordination and network between DOE and key stakeholders however work in close coordination with relevant Units concerned at DOE such as Climate Change, Resource Management, Education and Awareness Unit etc. Thus the 4 Phases of Institutional Strengthening that is recommended in this NSAP is an attempt to address the capacity gap and needs of DOE that would provide DOE the opportunity to operate holistically with proper resources at hand to better implement and fulfil its obligation. Figure 1a displays the existing structure of DOE. The Institutional Strengthening of DOE to be undertaken in four phases includes being upgraded into a Ministry on its own in the third phase and in the fourth phase is proposed that it becomes the Ministry of Environment and Climate Change, Culture and Heritage

**Figure 1a. The existing structure at DOE**



**Strengthening the DOE by modifying its existing structure to be undertaken in three phases, as identified below:**

**5.3.1b Phase 1: Strengthening the current DOE structure.** This would include filling in currently vacant positions, creating new positions and establishing technical un-established staff currently holding the positions temporarily. This is to be undertaken within a short – medium term timeframe.

- i. Strengthening the department's coordination role by recruiting a Liaison Officer at Environment Officer (EO) level; the officer's role would be to network with stakeholders who are implementers of the Rio conventions. This recruitment will address the capacity gap that was identified in the thematic assessment reports on the lack of coordination and networking from the focal point (the DOE) to relevant stakeholders. The EO (Liaison) is to coordinate and network with stakeholders, build up public relations (PR), and monitor requirements under memorandum of understanding (MOUs) and their reporting. The EO (Liaison) could also coordinate the implementation of NCSA and NSAP in close liaison with the EO (Conservation) and EO (Climate Change) on completion of the NCSA Project and while awaiting establishment of Multilateral Environment Agreement Unit during Phase 2. The EO Liaison is also to coordinate and network within the department to harmonize activities.
- ii. Currently a Principal Environment Officer (PEO) who is assisted by a Temporary Environment Officer (Conservation) and one voluntary attaché manage the Resource Management (RM) Unit. It is recommended in the NSAP that the RM Unit needs be strengthened by proper recruitment of a Senior Environment Officer for (Conservation and Biodiversity) (SEO (CBD)) to work under the supervision of the PEO (RM). The SEO (CBD)'s task would be to coordinate the overall conservation and biodiversity programme in Fiji and report to the PEO (RM) as well as coordinate and supervise the work of the EO (Conservation). One other position to be newly created under the RM Unit and come under the supervision of SEO-CBD includes the Environment Officer (CITES): The EO (CITES) would be responsible for the licensing and permit system of controlled species under the CITES Act, registration of industries, and inventory of all Fiji flora and fauna and invasive species and also look into RAMSAR and Wetlands.
- iii. The Environment Impact Assessment (EIA) Unit at DOE monitors developments as required under the Environment Management Act and EIA Regulations. The EIA Unit currently has a Senior Environment Officer (EIA) who reports to the PEO (Waste and EIA). The SEO (EIA) coordinates and supervises the work of one EO (EIA) Inspector; however there is a capacity need for a recruitment of a second EO (EIA) Administration to meet the demand of work. The EO (EIA) inspector would partake in the duties of enforcement and monitoring as are required under the EIA Regulations, while the newly recruited EO (EIA) Administration to focus on administrative matters and reporting however when required to due to demand the EO (EIA) Administration to assist also in Inspection.
- iv. The Fiji Cabinet's endorsement of the Clean Development Mechanism (CDM) in 2008 calls for the establishment of a CDM Unit at the DOE. The NSAP proposes two options of which DOE is to consult with CDM Technical Team on.
  1. It is recommended that the CDM Administration Unit be incorporated into the existing structure under the following arrangement:  
A Senior Environment Officer (Climate Change - CC) position to be created that reports to the PEO (RM). The SEO (CC) would coordinate and supervise the two position; the existing EO (Climate Change) and a newly created EO (CDM). The recruited staff appointed to the position of EO-CDM is to facilitate and administer the CDM Unit on a short term basis while awaiting the CDM Administration Unit's strengthening in Phase 2 (medium to long term basis).

2. The second option that is highlighted in this NSAP is a structure proposed by the SPC-GTZ and comes in light after considering the limited timeframe that is there to fast-track the establishment of a CDM and REDD initiative operation in Fiji. In this CDM Administration structure it is proposed that the CDM Administration Unit be established operating independently from DOE however all reporting to the Designated National Authority of DOE and work under the supervision and coordination of the CDM Technical Team.
3. The NSAP further proposes option 3 (as shown in diagram 2) which is an integration of both proposed structures in phase two of institutional strengthening of DOE as well as the proposed structure by SPC-GTZ reflected in Diagram 1.
- v. The DOE has a few vacant positions filled temporarily and contracts are renewed every 3 months. It is the DOE's responsibility to see that these positions are properly advertised and filled in due time through proper recruitment process. These positions include EO (Waste), EO (EIA) Inspector and IT Officer and EO (Conservation).
- vi. The NSAP also recommends the establishment of a Biosafety Environment Officer at DOE to work under the supervision of PEO (RM) with the following justification. The Biosafety EO is to implement the National Biosafety Framework and the Biosafety Clearing House Project. If government funds may not be forthcoming to accommodate this position, donor funding is to be sought to support considering the following below.

Fiji became a party to the Cartagena protocol in May 2001. The objective of the protocol was for Fiji to ensure adequate level of protection in the field of the safe transfer, handling of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on trans-boundary movements.

Under Article 2 on General Provisions of the Protocol, Fiji as a Party is required to take necessary appropriate legal, administrative and other measures to implement each obligation under the Protocol. From 2003 to 2008, the Department of Environment hired the service of Consultant John Wilson through Eco Consultants Limited, to draft the Biosafety Bill. The 2<sup>nd</sup> draft of the Biosafety Bill was completed in 2008. One of the main parts of the Draft Biosafety Bill is the setup of a Biosafety Division within the Department of Environment to facilitate requirements of the Cartagena Protocol which Fiji became a Party in 2001.

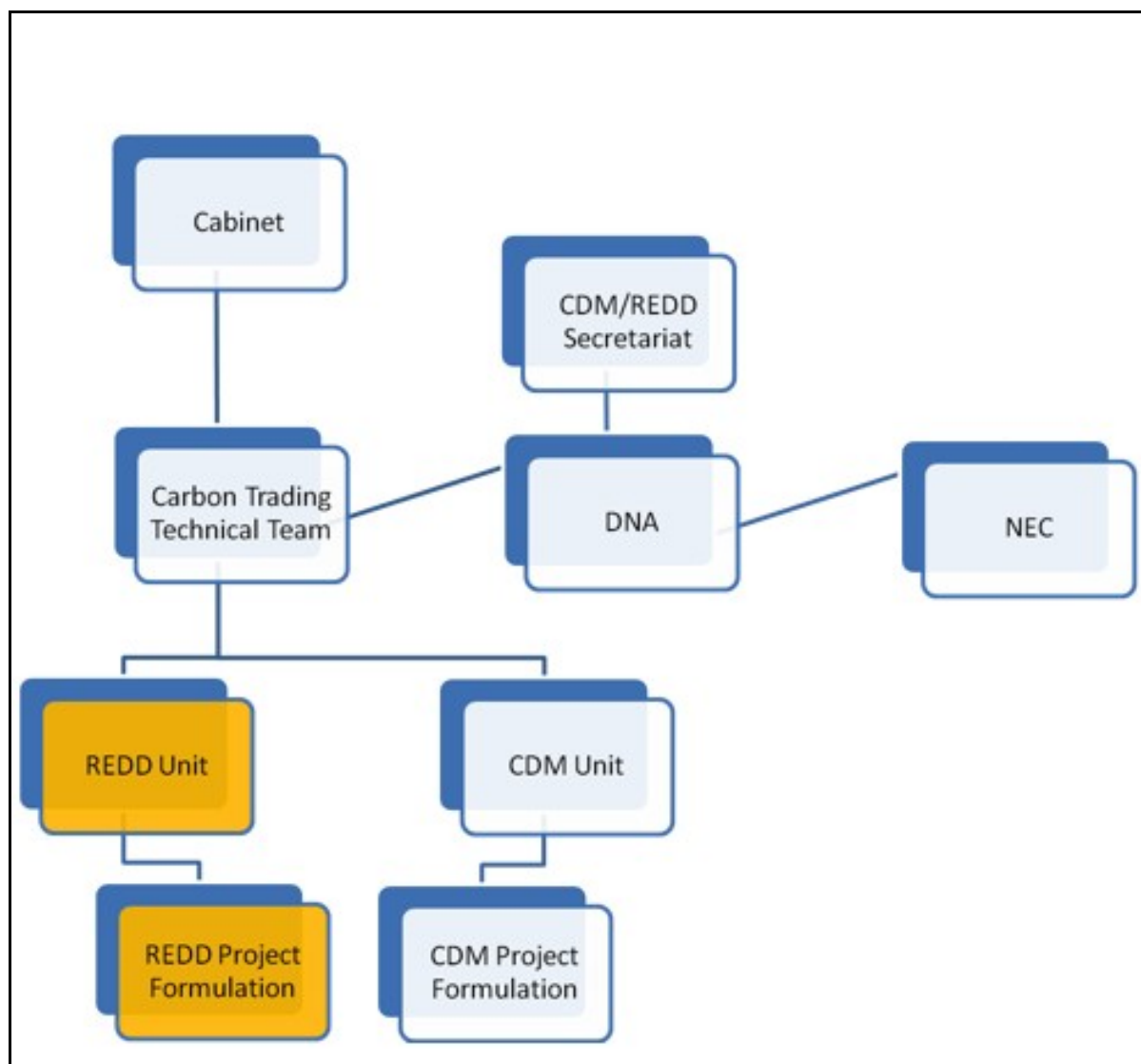
The proposed position of an EO-Biosafety will also be tasked to implement Article 20 of the Cartagena Protocol which states that Fiji as party to the protocol must provide some information through the establishment of a Biosafety Clearing House (BCH). The EO Biosafety is to ensure that the types of information that should be made available to the BCH are the BCH National Focal Point, Competent National Authority, existing laws, regulations, bilateral, regional or multilateral agreement and other information that relates to Biosafety.

*Table 1: Proposed Position/ Grade/ Salary of DOE Phase 1 Structure*

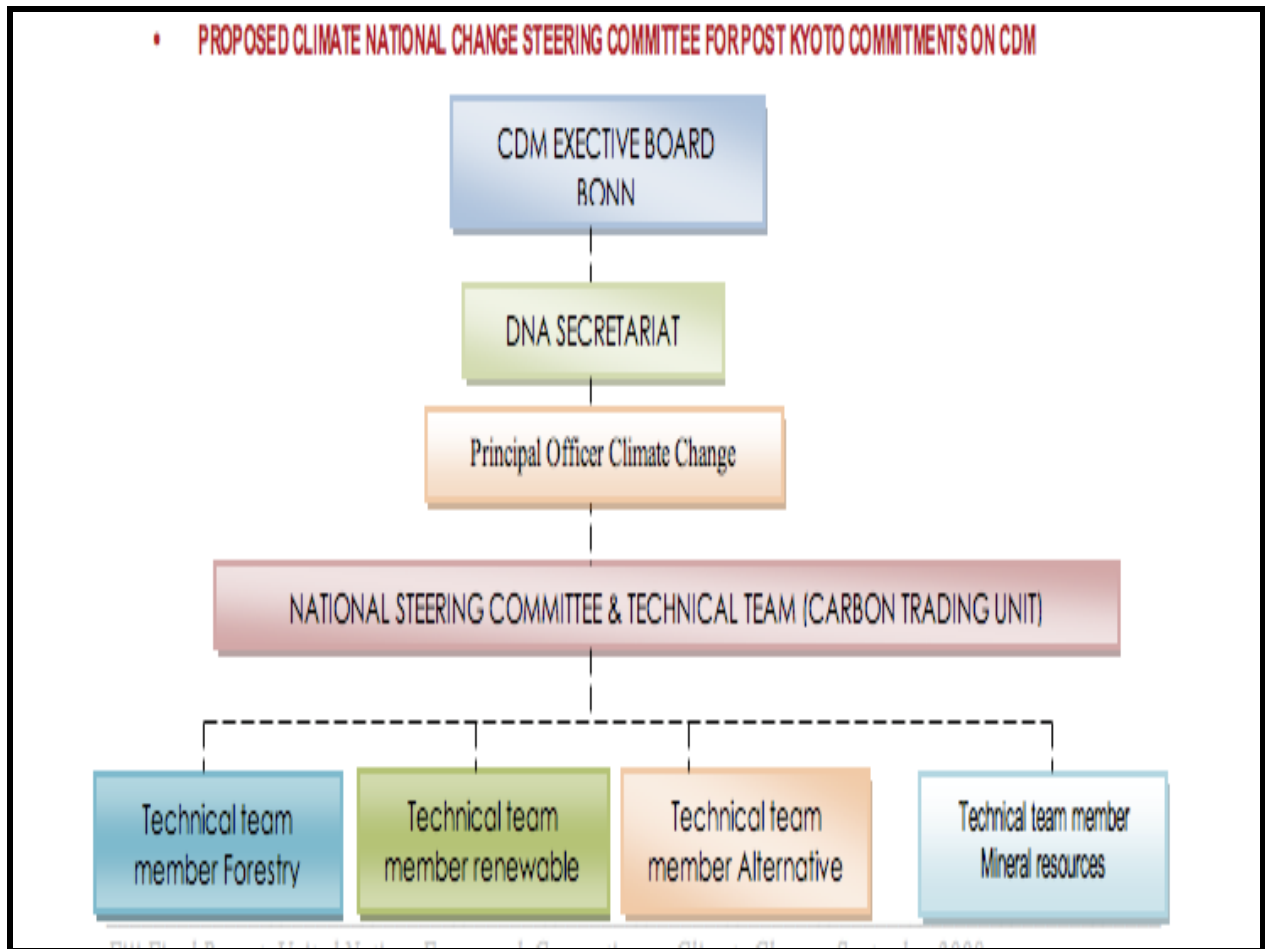
| <b>Position</b>     | <b>Grade</b> | <b>Salary</b> |
|---------------------|--------------|---------------|
| SEO (CC)            | LB02 (09)    | 27,585        |
| EO (CITES & Ramsar) | LB03 (10)    | 20,335        |
| EO (Biosafety)      | LB03 (10)    | 20,335        |
| Liaison Officer     | LB03 (10)    | 20,335        |

|                         |           |           |
|-------------------------|-----------|-----------|
| EO (CDM)                | LB03 (10) | 20,335    |
| EO (EIA Administration) | LB03 (10) | 20,335    |
| SEO (Conservation)      | LB02 (09) | 27,585    |
|                         | TOTAL     | \$156,845 |

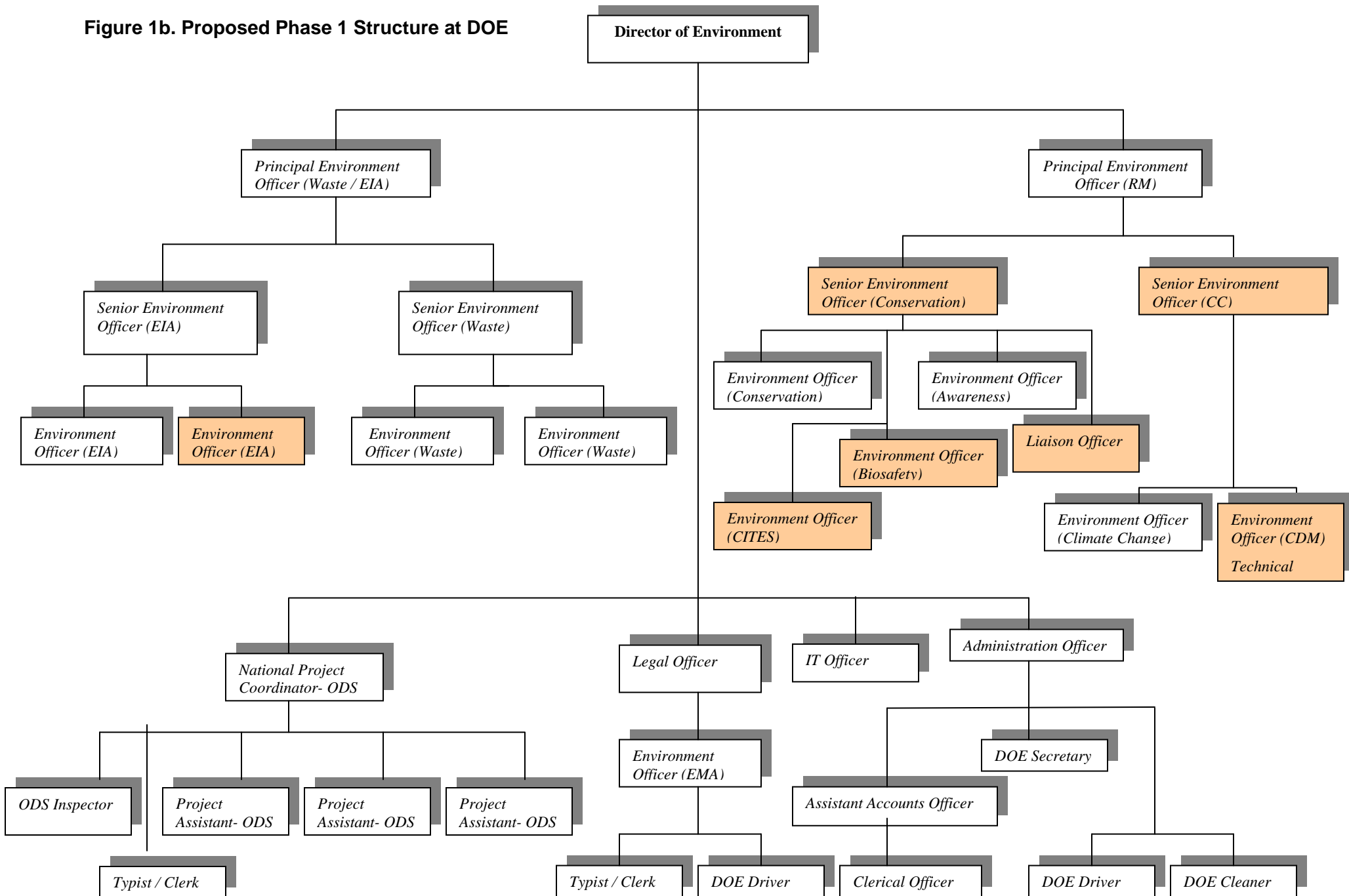
**Diagram 1: Proposed Structure for a REDD institutional framework**



**Diagram 2: Proposed Institutional Restructure for CDM Administration Unit**



**Figure 1b. Proposed Phase 1 Structure at DOE**





**5.3.1c Phase 2 proposes the further strengthening of Phase 1 structure through the establishment and strengthening of management positions, as listed:**

- a. Phase 2 proposes further strengthening of Climate Change Unit with a recruitment of one Principal Environment Officer (Climate Change) to be responsible for the overall management and supervision of the Climate Change Unit and Climate Change Staff however reports to the Director of Environment (DoE). The SEO (CC) comes under the supervision of PEO (CC) and is responsible for coordinating and supervising the work of EO (Climate Change) and EO (CDM Administration). Other newly recruited position in phase 2 under the Climate Change Unit is the Environment Officer CDM (Technical) to take charge of the technical aspects of CDM.
- b. A newly created position of Senior Environment Officer-Multilateral Environment Agreements and Reporting. The SEO-MEA would report to the PEO (RM) and is to coordinate and supervise the work of the EO (Liaison). The SEO (MEA) position is to be dedicated to administering the global environmental commitments to which the DOE is a focal point; also to liaise with section heads of core units at DOE to ensure proper implementation of convention and treaty obligations, and monitor reporting requirements. The SEO (MEA), in close liaison with the IT Unit, would coordinate a central database (or Clearing House Mechanism) that networks with relevant stakeholders who implement environment convention commitments. This central database would allow for uploading relevant reports and updates on convention implementation. It is proposed that the above position be co-funded by both government and convention secretariat to the CBD and UNFCCC.
- c. The need to strengthen capacity at DOE for Education and Awareness has also been highlighted in previous NCSA assessment report. Currently there is only one officer at Environment Officer Level and comes under the umbrella of the RM Unit. It is recommended that in the long term the Unit be strengthened with staff at Senior Environment Officer Level. It is also recommended that they operate independently from other Units of the department and with strengthened decision making and coordinating role reporting directly to the Director of Environment.
- d. The Legal Unit of DOE has been an unestablished project position for the past three years. It administers the Environment Management Act. The unestablished project position of LO is funded by Government and it would end if and when Government discontinued funding it. We recommend that this unestablished project position be absorbed into the government system and be made as an established position however strengthened to a Senior Legal Position reporting directly to the Director of Environment.
- e. One of the capacity gap identified in earlier NCSA Thematic Assessment and Crosscutting Report is the lack of a proper personnel to prepare project or funding proposal and this is also required of one who is aware of donor funding cycle and its requirement and is explorative of the various funding opportunity that can be tapped. The NSAP recommends the strengthening of the Accounts Unit with the recruitment of a Senior Accounts Officer who will also be tasked to help DOE in preparation of funding proposal and securing of funds.
- f. The ODS Project un-established position to be made permanent and absorbed into the government system as an established position (see ODS Act). It is proposed that the ODS Unit is to come under the supervision of PEO (Climate Change).

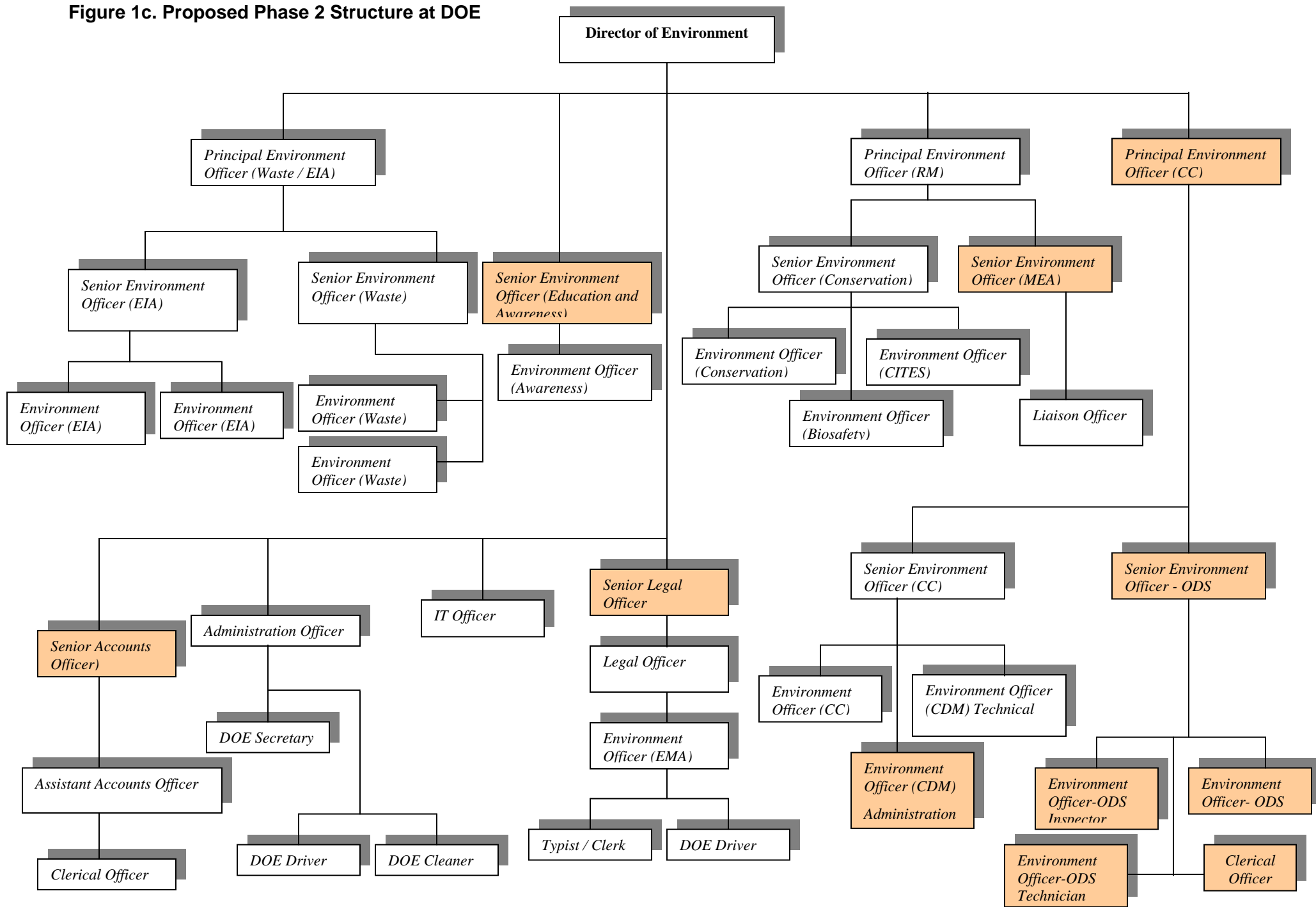
The following are the recommended changes in designation for the Ozone Unit staff: ODS Project Coordinator to be re-designated as the SEO (ODS) and to coordinate and do overall supervision of the Ozone Depleting Substance Unit. The ODS Project Assistant to be called the EO (ODS), the two ODS Technical Officer be called EO (ODS Inspector) and EO (ODS Technician). The ODS Accounts Clerk to be established as DOE Accounts Clerk but dedicated to managing ODS-related Transactions and Environment Trust Fund as well as assisting DOE's accounting functions.

The ODS Unit through its existing ODS Trust and Institutional Strengthening Fund and with government contribution can ensure the establishment of the above ODS position.

**Table 2: Proposed Position/ Grade/ Salary of DOE Phase 2 Structure**

| <b>Position</b>             | <b>Grade</b> | <b>Salary</b>    |
|-----------------------------|--------------|------------------|
| PEO (CC)                    | LB01 (08)    | 36,237           |
| SEO (MEA)                   | LB02 (09)    | 27,585           |
| SEO Education and Awareness | LB02 (09)    | 27,585           |
| SEO (ODS)                   | LB02 (09)    | 27,585           |
| EO (ODS-Inspector)          | LB03 (10)    | 20,335           |
| EO (ODS)                    | LB03 (10)    | 20,335           |
| EO (ODS-Technical)          | LB03 (10)    | 20,335           |
| Clerical Officer (ODS)      | SS05 (17)    | 8,092            |
| EO (CDM Technical)          | LB03 (10)    | 20,335           |
| Senior Legal Officer        | LG04 (09)    | 31,267           |
| Senior Accounts Officer     | AC04 (08)    | 17,687           |
|                             | <b>TOTAL</b> | <b>\$257,378</b> |

**Figure 1c. Proposed Phase 2 Structure at DOE**



### 5.3.1d Phase 3: Ministry of Environment

The history of the DOE (or Environment Unit) reflects the indecision and ignorance of successive Fiji Governments on the role of the environment in sustainable development:

- originally (1992) it was placed in the Ministry of Housing and Urban Development;
- then (1996) in the Ministry of Housing, Local Government and Environment;
- by 2002 in the Ministry of Local Government, Housing, Squatter Settlement and Environment;
- late 2006 as a Ministry of Environment for a few months only;
- then (2007) in the Ministry of Labour, Industrial Relations, Tourism and Environment;
- then (2008) in the Ministry of Lands, Mineral Resources and Environment; and
- ultimately (2009) Ministry of Local Government, Urban Development, Housing and Environment.

And although 'environment' was not given a cap in its first ministry, in all of its different ministries since the Environment Department always is listed last – as a sort of after-thought.

The thematic assessment reports of all three Rio conventions and the NCSA cross-cutting report identified that environmental accountability by the Fiji Government is under question and that until recent years, there has been overall a lack of political awareness of the importance of biodiversity conservation, climate change and other obligations that Fiji owes by having signed the three conventions.

In late 2006, the Department of Environment (then under Ministry of Local Government, Housing, Squatter Settlement and Environment) was promoted to being a Ministry on its own to be known as the Ministry of Environment. This was a milestone achieved by DOE; however this lasted for only a few months. Even with limited staff structure with only one Director, one Principal Environment Officer and with a few Senior Environment and Environment Officer level officers, the Department of Environment was still promoted to being a Ministry on its own with its own Permanent Secretary and a Minister for Environment.

Greater political commitment to environmental sustainability can best be demonstrated through elevating the Environment portfolio to that of a Ministry on its own at that time.

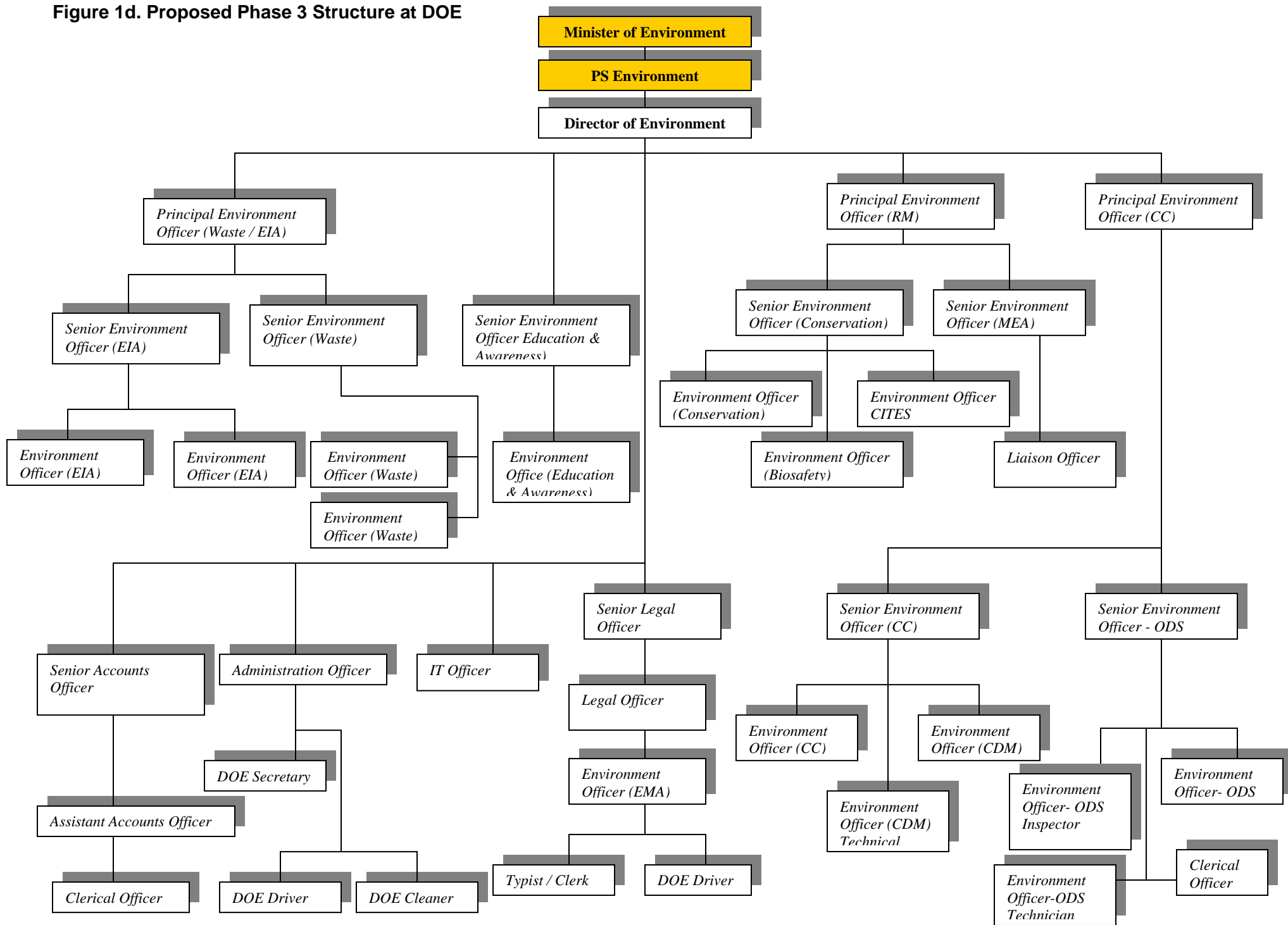
In this NSAP, it is recommended that after the establishment and achievement of Phase 1 and 2 with the Institutional Strengthening of the Department of Environment that DOE should sort political will and support of key decision makers to be promoted once again to a Ministry on its own designated as the Ministry of Environment with the following executive positions strengthened and added to its structure: 1. One Minister for Environment 2. One Permanent Secretary for Environment. Figure 1d shows the Institutional Structure for Phase 3.

To reach this stage would be a milestone achieved once again for the Environment Department and would confirm government's commitment to uphold and sustain a clean, healthy and resourceful environment and safeguard for the future. As a Ministry on its own with strengthened capacity, the Ministry of Environment would be in much better position to tackle ongoing challenges and changes posed to the environment through climate change, threat to conservation and biodiversity, manage waste and pollution concerns thoroughly and closely monitor developments through EIA.

**Table 3: Proposed Executive Position and Salary Grade for Phase 3 Structure**

| Position                | Grade     | Salary    |
|-------------------------|-----------|-----------|
| Minister of Environment | US01      | 101,568   |
| PS Environment          | US01 (07) | 73,640    |
|                         | TOTAL     | \$175,208 |

**Figure 1d. Proposed Phase 3 Structure at DOE**



### 5.3.1e Phase 4: The Ministry of Environment, Culture and Heritage

Presently the DOE, the focal point for the UN CBD and UN FCCC, is a department within the Ministry of Local Government, Urban Development, Housing and Environment. Meanwhile, the Ministry of Agriculture specifically the Landuse Section is the focal point for the UN CCD (Figure 4.2.1).

An enabling environment and a widespread recognition of the economic value of biodiversity protection in Fiji need to be developed. A primary recommendation is that greater political commitment is required to ensure implementation and sustainability of conservation programs at the national level. Political commitment needs to be translated into national interventions that address the overall economic, policy, legislative, political and national infrastructure to ensure sustainable development and sufficient protective measures.

Greater political commitment to environmental sustainability can best be demonstrated through elevating the Environment portfolio to that of a Ministry. And in keeping with the objectives of the CBD, Fijian culture and heritage should be included in that Ministry (CBD Articles 8(viii), 10, 18); see also Watling and Chape, 1993, pp 22-28; 30-33).

Statements made in the 'National Environment Strategy' (1993) are supported by the NCSA Steering Committee. Because almost all aspects of a nation's governmental endeavours affect the environment – and in turn are affected by it – environment is not a 'vertical' sector (like agriculture, transport or fisheries) but instead is 'horizontal', cutting across all sectors of Government. Hence, Government cannot 'deal' with environment in the same way in which it 'deals with' other aspects of government business. To achieve sustainable development, the Government of Fiji requires<sup>4</sup>:

- an effective environmental management capability;
- effective heritage protection; and
- effective public involvement.

To ensure effective environmental management and conservation, and because environmental management can only be achieved through a multi-sectoral approach, Government needs a policy of sole agency accountability. Importantly, 'environment' must be located in a Ministry that has no developmental responsibilities, otherwise conflicts of interest will arise and they will inevitably be to the detriment of its environmental responsibilities. As identified above, in almost all of its ministerial associations, 'environment' has been associated with 'development activity' (e.g. labour, housing, industrial relations, mineral resources, urban development). This view is independently supported by the NCSA's own cross-cutting analysis.<sup>5</sup>

Previously, the Fiji Government has attempted to ensure heritage and cultural protection by establishing a Department of Culture and Heritage. 'Heritage' however, comprises both natural and historic: presently, the 'natural' heritage is bundled into 'Environment' while the historic 'heritage' is placed (2009 Fiji telephone directory) in the Department of National Heritage, Culture and Arts (which itself is placed in the Ministry of Education, National Heritage, Culture and Arts, Youth and Sports<sup>6</sup>). In deciding on these ministries, the Government again has demonstrated its confusion on the independence of environment and heritage.

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<sup>3</sup> Watling, D. and Chape, S. 1993. *The National Environment Strategy Fiji*. Suva: Government of Fiji and IUCN – The World Conservation Union.

<sup>4</sup> Ibid, p.25

<sup>5</sup> *Crosscutting report. The National Capacity Self-Assessment Project - Fiji*. Department of Environment, Fiji. November 2008.

<sup>6</sup> Components of the Ministry (according to the 2009 Fiji telephone directory) are: Department of Education, Department of Department of National Heritage, Culture and Arts, Fiji Arts Council, Fiji Museum, National Trust of Fiji and Department of Youth and Sports.

This confusion is clearly demonstrated by the mandate of the National Trust for Fiji because the purpose of the National Trust (S3, Cap 265) is to 'promote the permanent preservation for the benefit of the nation of *lands (including reefs)*, buildings, furniture, pictures and chattels of every description having national, historic, architectural *or natural interest or beauty*; the *protection* and augmentation of the amenities of any such land or buildings and their surroundings and to *preserve their natural aspect and features*; to *protect animal and plant life*; and to provide for the access to and enjoyment by the public of such lands, buildings and chattels' (emphasis mine). In other words, care of the environment is already split between two ministries.

Watling and Chape<sup>7</sup> state that Fiji's cultural, historic and natural heritage 'is inadequately known and protection is poorly developed and lacking any significant management. The principle issues are:

- inadequate documentation of all facets of Fiji's heritage;
- the lack of a system of protected areas;
- inadequate preservation of cultural sites and historic buildings and their increasing loss through development activities;
- the inadequacy of wildlife protection, trade and exploitation laws.'

Therefore, it is reasonable to establish an institution within Government whose mission would be to promote heritage conservation and preservation. Watling and Chape (1993) suggest that this should be identified ultimately as a 'Department of Conservation' with management responsibility for advocacy, protected areas, historic and cultural sites, wildlife protection and animal import/export. The boundaries of this institution are not determined presently however – while Watling's and Chape's overall concept is supported there remains scope for discussion, 16 years after their advocacy.

The function of the Ministry of Environment and Culture & Heritage would be to effectively manage Fiji's environment, provide comprehensive heritage protection, and involve Fiji's private and public sectors in sustainable environment management and heritage protection.

The Ministry should be divided into two departments – Environment and Climate Change, and Culture and Heritage (or, Conservation). The Department of Environment should oversee:

- (a) Policy, planning and coordination,
- (b) Standards, monitoring and enforcement,
- (c) Awareness, public information and liaison,
- (d) Waste and environmental pollution issues,
- (e) Act as the secretariat for the NEC, and
- (f) Manage (with support from the Ministry of Finance) the Environment Trust Fund (see NBSAP; NCSA cross-cutting report) and any other monies accruing from environmental services.

The components of the Department of Culture and Heritage (Fiji Museum, Fiji Arts Council, Fiji National Trust, and the Department as it now stands) should continue with their current practices (that now include: legislative review and monitoring, stakeholder liaison, field surveys,

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<sup>7</sup> Watling, D. and Chape, S. 1993. *The National Environment Strategy Fiji*. Suva: Government of Fiji and IUCN – The World Conservation Union. P 22

recording and interviewing, seeking resource (funds), inventorying and preserving historical and archaeological structures, and awareness and advocacy), although a review and streamlining would be carried out at earliest opportunity. Meanwhile, the functions of Climate Change Unit should be as identified in the revised Department of Environment structure, as presented elsewhere in this report.

However, contrary to some of its current practices, the Department should not attempt to implement all environmental management issues itself: instead, it should ‘contract them out’ – to other Government departments, to local and regional NGOs, to community-based organisations, to private businesses, to academic institutions. The ‘contracting’ would be part of MOU agreements and decisions on ‘contracting’ would be based on the National Environment Strategy. This suggestion is explored later in this document under ‘Phase 3, Financial Resources, part c).

It is interesting that three spatially and temporally separate environment overview projects (the National Environment Strategy of 1993, the Environment Management Act (EMA) of 2005, and the National Capacity Self-Assessment project of 2008) each have arrived at similar conclusions regarding the overall structure of environmental and heritage management in Fiji. The structure of the Ministry of Environment, Climate Change and Heritage is approximately<sup>8</sup> outlined below.

| <b>Portfolios within the Dept of Environment &amp; Climate Change</b> | <b>Portfolios within the Dept of Culture &amp; Heritage (including Arts Council, Fiji Museum, National Trust)</b> | <b>Advocated by</b>                                       |
|---|---|---|
| Standards, enforcement and monitoring                                 |   | Watling & Chape 1993; NCSA cross-cutting report 2008      |
| Legislation review and monitoring                                     | Legislation review and monitoring   | NCSA cross-cutting report 2008; Watling & Chape 1993      |
| International   |   | NCSA cross-cutting report 2008; Watling & Chape 1993      |
| Stakeholder liaison   | Stakeholder liaison   | NCSA cross-cutting report 2008; Watling & Chape 1993      |
| Funding   | Funding   | NCSA cross-cutting report 2008                            |
|   | Inventory and preservation of historical and archaeological structures  | NCSA cross-cutting report 2008                            |
| Waste management and pollution  |   | Watling & Chape 1993; EMA                                 |
| Awareness and advocacy <sup>9</sup>                                   | Awareness and advocacy  | Watling & Chape 1993; EMA; NCSA cross-cutting report 2008 |
| Environmental Impact Assessments                                      |   | EMA; Watling & Chape 1993                                 |
| Policy, planning and assessment <sup>10</sup>                         |   | Watling & Chape 1993                                      |
|   | Natural resource inventory; wildlife protection   | Watling & Chape 1993                                      |

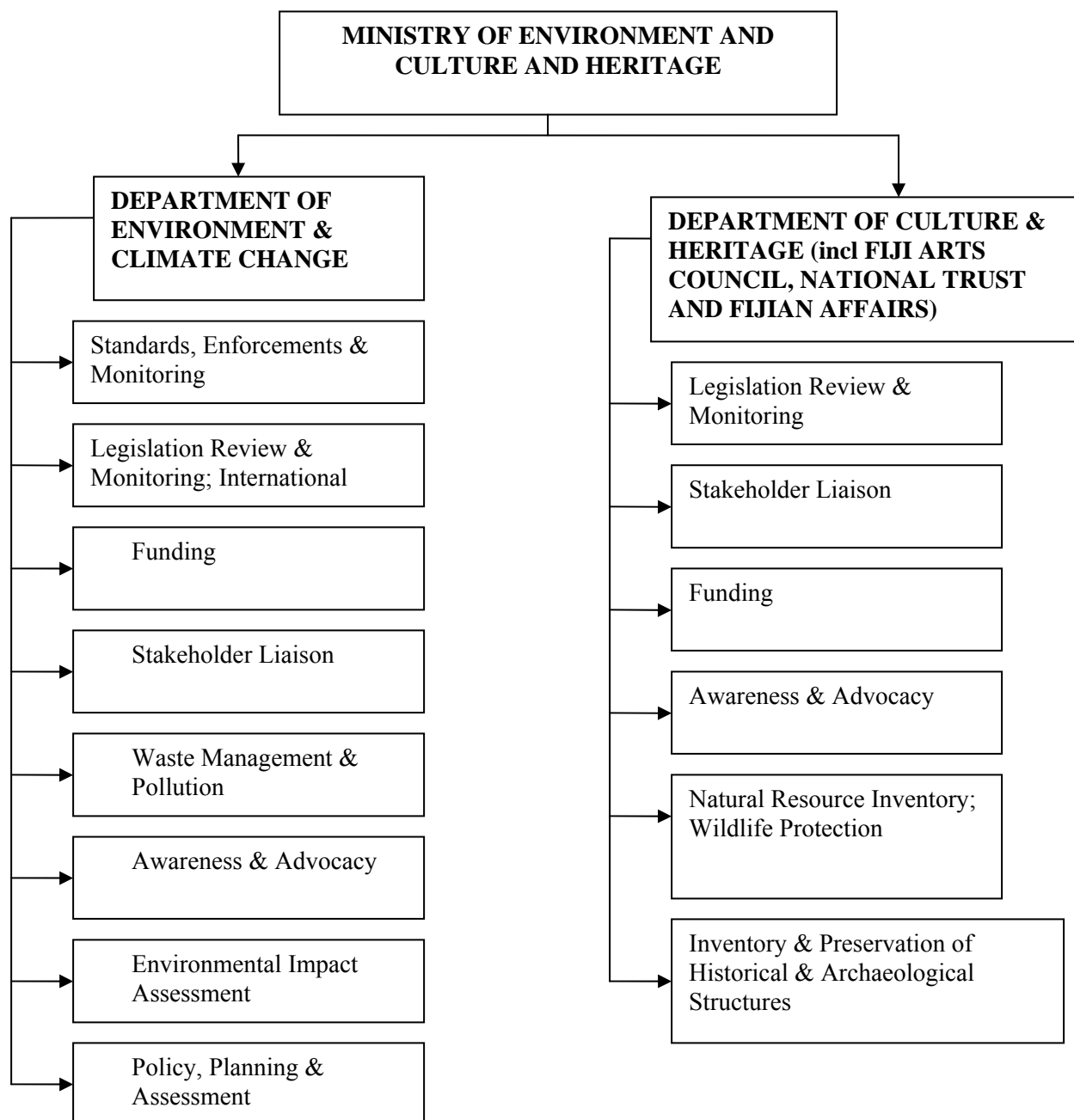
<sup>8</sup> ‘Approximately’ because it now is in draft form, and requires discussion with stakeholders.

<sup>9</sup> In EMA, the Resource Management unit has overlapping responsibilities with the Environmental Management unit.

<sup>10</sup> In Watling and Chape, this unit overlaps with the Environmental management unit.



Presently, the Department of Environment comprises Fiji Government-funded positions for a director, and eight sections or units to address government responsibilities under environmental impact assessments, waste management, conservation, environmental awareness, legal, and administration and accounts section (including information technology) (see also below). Other project-supported units are for Ozone Depletion Substances and the NCSA; and staff attached to other sections man the Biosafety Unit.



#### Phase 4: The Ministry of Lands, Mineral Resources and Environment (Option 2)

Previously from the end of 2007 to the mid of 2008 a portfolio (Lands, Mineral Resources and Environment) formed under the leadership of the then Minister (Mr. Netani Sukanaivalu) indicates that attempts were made for the formation of this Ministry.

The responsibility of the Ministry (Ministry of Lands, Mineral Resources and Environment) was to administrate and oversee all developments on State Lands under the State Lands Act, act as custodian of Fiji's Mineral wealth through exploration and development to benefit the country and its citizen, and effectively manage Fiji's environment through sustainable land, mineral and environment management.

Greater political commitment to the environment sustainably can best be demonstrated through merging of these three government departments. This would lead to a greater recognition of the obligations under the three conventions that Fiji is signatory to (CBD, UNCCD and UNFCCC).

After consultations with stakeholders on the options that could be taken if the Phase 4, Option 1 would not be possible. It was then brought up to re-instate this Ministry of Land, Mineral Resource and Environment. This was because the departments within this portfolio carry out duties that complement each other. This would also help in better addressing what is in their cooperative plans, crosscutting issues and filled capacity gaps which are common to the three departments (e.g. duplications of work and efficient networking in terms of data exchange).

The Ministry would still run separately into three departments namely, The Department of Lands and Surveys, Department of Mineral Resources and The Department of Environment. The core responsibilities of each division should be as follows:

Department of Lands, Survey and Mapping is responsible for the administration and the oversight of all development on State Land in Fiji under the State Lands Act (Cap. 32). As the principle survey authority in Fiji under the Surveyors Act (Cap 260), it is responsible for the regulation of all surveys undertaken in Fiji by registered surveyors. It also develops, provides and maintains the network of surveys nation wide. A major and growing role is that of information, and the Department produces and updates all national maps of Fiji. The valuation division of the Department undertake all negotiations from acquiring land from public purposes including assessment of rentals.

Mineral Resource Department is the custodian of Fiji's Mineral wealth under the Mining Act (Cap 146). It is responsible for its exploration and development in a manner that results in the greatest benefit to the country and its citizen. The department is also responsible for the development and assessment of Fiji's groundwater resource for use in water supply, agriculture (irrigation & water source) and commercially for bottled water industry. The department also provides advice on geological hazards such as earthquakes and tsunamis and geotechnical information for sustainable land development.

Department of Environment's key role is to formulate, coordinate and monitor the implementation of Fiji's national environment policies, programmes and legislations. These responsibilities are implemented by the Environment Management Act (2005), Endangered and Protected Species Act (2002), Ozone Substance Act (1998), Litter Act and the Litter Promulgation. Ultimately the work of the department contributed to the achievements of the national Government's strategic goal for environment, i.e. sustainable use for all natural resource.

| <b>Portfolios within the Mineral Resources Division</b>                           | <b>Portfolios within the Department of Lands</b>                      | <b>Portfolios within the Department of Environment</b> |
|---|---|--|
| Portfolio Leadership policy advice and secretariat support                        | Administration and oversight of all development on state land in Fiji | Standards, enforcement and monitoring                  |
| Promotion and development of exploration, mining, petroleum and quarrying         | Regulation of all land surveys  | Legislation review and monitoring                      |
| Groundwater advice and resource development                                       | Maintain network of survey control                                    | Stakeholder liaison                                    |
| Geological services and seismology  | Produce, update and disseminate land information                      | Funding  |
| Licensing, compliance and monitoring-explosives, mining and exploration tenements | Land valuation  | Waste management and pollution                         |
|   |   | Awareness and advocacy                                 |
|   |   | Environmental impact assessment                        |
|   |   | Policy, planning and assessment                        |

| <b>Key Responsibility</b>   | <b>Expected Result</b>   | <b>Department</b> |
|---|--|-------------------|
| <b>Provide geotechnical, geological and groundwater advice</b>                  | Provide baseline geological, seismological and water resources data for development planning | MRD               |
|   | Technical reports and development of groundwater resources in small islands                  | MRD               |
|   | Technical reports and development of groundwater sources in main islands                     | MRD               |
|   | Increased community awareness on geological hazards  | MRD               |
|   | Seismic network maintained for reliable information  | MRD               |
|   | Geo-technical Assessment reports for land and foreshore development                          | MRD               |
|   | Geo-technical analytical information and reports   | MRD               |
| <b>Promote and develop exploration, mining, petroleum and quarrying sectors</b> | Safe use of explosives   | MRD               |
|   | Reduced conflicts mining and exploration tenements   | MRD               |
|   | Increased promotions and investment potential  | MRD               |
| <b>Provide surveying and valuation services</b>                                 | Increased efficiency in survey plans checking and approval                                   | LANDS             |
|   | New geodetic stations established  | LANDS             |
|   | Additional NLC survey of Namosi  | LANDS             |
|   | Land acquired for public purposes  | LANDS             |
|   | Re-assessment for 2009 completed   | LANDS             |
| <b>Efficiently manage state land, state leases and land sales</b>               | Increased customer satisfaction  | LANDS             |
|   | Efficient processing of consents to dealings on state land                                   | LANDS             |
|   | State foreshore land and wet leases policy developed   | LANDS             |
|   | State land policies reviewed   | LANDS             |
|   | Collection of 100% crown land rents and arrears  | LANDS             |

|   |  |       |
|---|--|-------|
|   | All expired leases renewed   | LANDS |
|   | Vacant state land developed  | LANDS |
|   | Efficient processing of consents to dealings on state land                                     | LANDS |
| <b>Development of national land and geographic information systems</b>                      | Fiji land information portal enhanced  | LANDS |
|   | New file & tracking procedure implemented  | LANDS |
|   | Advanced LIS systems developed   | LANDS |
|   | Verification of LD file and compliance to lease conditions in progress                         | LANDS |
|   | Vendor selected and digital imagery acquired   | LANDS |
| <b>Compliance of environment legislation for sustainable development of the environment</b> | Improved landfill in Lautoka and minimization of solid waste problems in Lautoka and Nadi area | DOE   |
|   | Rehabilitation of Lami rubbish dump  | DOE   |
|   | National solid/liquid waste management strategy implemented                                    | DOE   |
|   | Increased tonnage received at Naboro Landfill  | DOE   |
|   | Ozone depleting substances managed in compliance to ODS Act and Montreal Protocol              | DOE   |
|   | Environment units established to facilitate activities within approving authorities            | DOE   |
|   | Environmental tribunal established to ensure best practises                                    | DOE   |
|   | Negative environmental impacts of new development proposals eliminated                         | DOE   |
|   | Action plan for national capacity self-assessment (NCSA) compiled                              | DOE   |
|   | Increased environmental awareness among varied citizens  | DOE   |

### 5.3.1. f Phase 1 and 2 Additional Indicative Budget

Since establishment, the DOE has been allocated its budget from the Ministry of Finance under a range of departments and ministries (see 4.2.1 above). With reference to an earlier in-depth assessment<sup>11</sup> of the financial capacity of the department, budget allocated to the DOE has increased over the past 18 years. However there remain specific units in the department that still require injection of financial resources to ensure that their functions can be fulfilled. This financing includes:

- a. The newly established Climate Change Unit administered by a Climate Change Officer at Environment Officer level has no allocated budget from Government for 2009 other than costs for staff salary; this is perhaps because the position was newly created in 2009. It is recommended that in 2010, the DOE submit in its proposal to Government via the Ministry of Finance for a proper allocation of funds for implementation and proper coordination of the UNFCCC. (Indicative Budget: \$60,000.00 to be inclusive of staff salary and operations)
- b. The Education and Awareness Unit only receives government funds for Environment Week; there are no allocated funds to maximize education and awareness programmes

<sup>11</sup> Kailola, P.J. 2008 Section 5.3 – Institutional – Department of Environment. In; . *Thematic Assessment report for the Convention on Biological Diversity and the Cartagena Protocol on Biosafety, Fiji Islands*. Report prepared for the Department of Environment, Suva, Fiji, and UNDP-GEF.

for each year. The current fund specified in the budget of \$60,000.00 for 2009 allocated for the Education and Awareness Unit will solely be used by the Legal Unit for EMA Awareness purpose. The Indicative Budget is \$30,000.00 Therefore, it is recommended that:

- i. Donor support is required to strengthen capacity for the education and awareness Unit to initiate awareness initiatives, in-house capacity building and training for staff at DOE and other relevant stakeholders throughout the year – in addition to Environment Week.
  - ii. Donor support is also required to strengthen library resource and reading materials in DOE.
  - iii. Relevant stakeholders to contribute through inclusion and involvement of the Education and Awareness Units and its staff in their individual awareness programmes or community work. Such action would maximize participation and involvement of Education and Awareness programme of DOE.
- c. The DOE being centrally located is identified as a capacity constraint that restricts wide provision of services from DOE that the Central Division is privilege to receive. Although decentralizing the DOE to the West and North districts is recommended, we also have to be mindful of the cost and the much needed resources that would be required with proper allocation of budget. The NSAP recommends the decentralization of the Department of Environment after achievement of Phase 3 of Institutional Strengthening. However the NSAP recommends on a short term basis an alternative arrangement which is most feasible at this time and less cost to government. This includes the establishment of Environment Management Units in other major sectors in government, statutory bodies, municipal councils and other bodies as specified in the Environment Management Act. This establishment of EMU is currently being initiated by the Legal Unit of DOE. To properly initiate, coordinate and monitor the establishment of EMU, it is recommended that the Legal Unit be given appropriate funding from both donor and government for the initiation of EMU and its monitoring. The set-up of EMU and cost sharing arrangement of DOE is to be agreed between DOE and the organisation concerned. The Indicative Budget is \$20,000.00 p.a for monitoring of the function and operation of EMU.

Currently the department is drawing up a Terms of Reference that these stakeholders could use for the formations of these Environment Management Units within their respective organisations. The Terms of Reference would include inputs from both the DOE and the different interested stakeholders and after proper consultations this would become standard conditions for any organisations that want to Establish Environment Management Unit.

These TOR would include:

- Role;
- Reporting Procedure;
- Means of communications; and
- Work and Functions.

- d. The in-depth assessment reports prepared for each Rio convention recognized the effort contributed to the DOE workforce by recruited voluntary attachés. The volunteers gain in

terms of work experience and they depart with a reference from DOE. However they have contributed as support staff to the units of the Department and due to the lack of capacity for staff at DOE, the voluntary attaché are often given task and responsibilities of which they are not properly compensated for. It is recommended that the contribution of volunteers be properly recognized with initiation of a joint partnership program between DOE and the Ministry of Youth that allows the voluntary attachés be registered under the Ministry of Youth's National Youth Service Scheme. With this partnership, 50% allowance would be provided by the Ministry of Youth and the other 50% by the DOE. It is recommended in the NSAP that DOE seek proper funding support from donors to support this scheme until Phase 1 and 2 of Institutional Strengthening is achieved. It is recommended that a maximum of \$50.00 - \$60.00 (FD) per week allowance is reasonable. The Indicative Budget is \$6,000.00 p.a. In the DOE the volunteers are assisting in the following Units that includes:

- i. Resource Management Unit
  - ii. Waste
  - iii. EIA
  - iv. IT
  - v. Projects
  - vi. Education and Awareness
- e. Another in-house capacity building initiative is that the staff training program be incorporated into the DOE Corporate Plan. In that plan, pre-determined training programmes that address capacity needs such as Project Management, Training for Inspectors, Financial Management, Occupational Health and Safety are carried out. The Education and Awareness Unit should be given the responsibility of coordinating and initiating in-house capacity building programmes in close liaison with other unit section heads. The Indicative Budget is \$2,000.00 p.a.
- f. Another proposed recommendation is the establishment of proper Laboratory that would tests for all the gases that are mentioned by the EMA (2005) and is further elaborated in later chapters. There are many labs that are operating in Fiji but proper international accreditations are needed for these labs to meet standards that are required for them to operate. In Fiji an accredited lab is the University of The South Pacific Laboratory but it only tests for some of the gases that are listed on the Act. Some of the capacity gaps for the establishment of these labs are:
- Lack of proper monitoring equipments to be used for gases test
  - Lack of technical expertise qualified to carry out test for the above gases
  - There is no proper baseline survey in the status of these gases in Fiji

### **5.3.2 INSTITUTIONAL STRENGTHENING OF THE LANDUSE SECTION OF THE MINISTRY OF AGRICULTURE**

#### **Goal**

Development of Institutional Capability for Integrated Land Use Planning

#### **Objective**

To establish an independent Land Use Division / Authority, staffed by a range of appropriate experts, and having access to authority and direct support to the executive; and the

Division / Authority having both the support of the rural people and authority and resources of Government.

### **Rationale**

In general, individual land users are not always well aware of the consequences of their actions with the land. This is in part due to lack of information about 'best practice', legislation and sources for technical support. Without long-term planning and government intervention about rural land use options and issues we have a 'market forces' environment; i.e. where a large number of land use/practice decisions are being taken by many land users for their own private ends. Current climatic, economic and social pressures are forcing many land users into actions to satisfy their short-term needs – actions that can have adverse long-term consequences.

### **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, a training programme; and
7. Establish the Land Use Authority and implement recommendations.

### **Targets**

1. Recommendations for establishment of Land Use Division / Authority (LUD/LUA) to be prepared by the end of 2009;
2. Implementation of an institutional strengthening project to commence by 2010;
3. LUD/LUA fully established by January, 2015.

### **Institutional Arrangement**

|                     |   |   |
|---------------------|---|---|
| Executing agency    | - | Ministry of Agriculture                         |
| Implementing agency | - | Land Use Section of the Ministry of Agriculture |
| Supporting agencies | - | Public Service Commission, Ministry of Finance  |

### **Financial Resources**

|                       |   |  |
|-----------------------|---|--|
| Resource mobilization | - | Government of Fiji and external donors |
| Indicative budget     | - | \$10 million (FD)                      |

**Institutional Strengthening Strategy of the UNCCD Focal Point** should be undertaken in three phases.

#### **5.3.2a Phase 1: Filling in currently unfunded posts and vacant positions [Short Term]**

The following position is either unfunded or vacant: **Senior Research Officer (SRO)** Landuse Northern Division (unfunded), **Technical Officer 11 (TO11)** Central (unfunded), **Senior Technical Assistant (STA)** Central (vacant),

### **Resources Needs**

Staff Salary – 1) Current structure:

2) Strengthened structure for three positions: **\$51, 380**

**Table 1: Land Use Section P1 Structure**

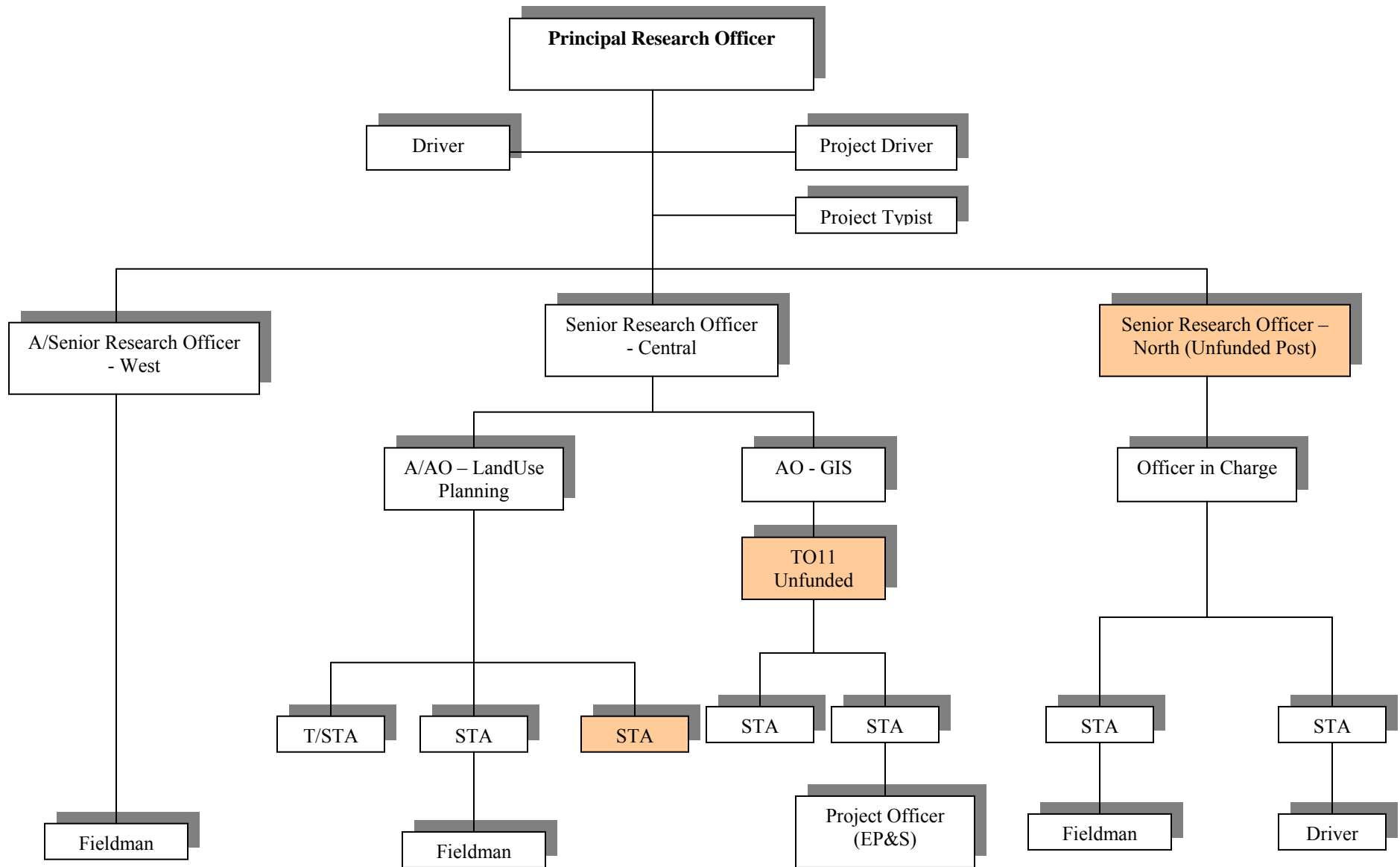
| <b>Position</b> | <b>Grade</b> | <b>Salary</b>   |
|-----------------|--------------|-----------------|
| SRO (North)     | SC02         | 27,597          |
| TO2 (Central)   | ES05         | 15,691          |
| STA (Central)   | ST05         | 8,092           |
|                 | <b>TOTAL</b> | <b>\$51,380</b> |

**Operating Budget**

Although the budgeted amount is nil from 2007–08 we recommend that this be increased to FJ\$300,000.00 from 2010, making it equivalent to the allocation the Landuse Section received prior to 1998.



## Land Use Section Current Structure (Phase 1)



### **5.3.2b Phase 2: Strengthening of the Western and Northern Division Offices [Medium Term]**

The following positions should be established: **Agricultural Officer (AO)** West, **STA** West (three new positions), one **STA** North, one driver West, **STA** North, and establish the typist position that is currently project funded from Venezuela.

#### **Resources Needs**

Staff Salary – 1) Strengthened structure

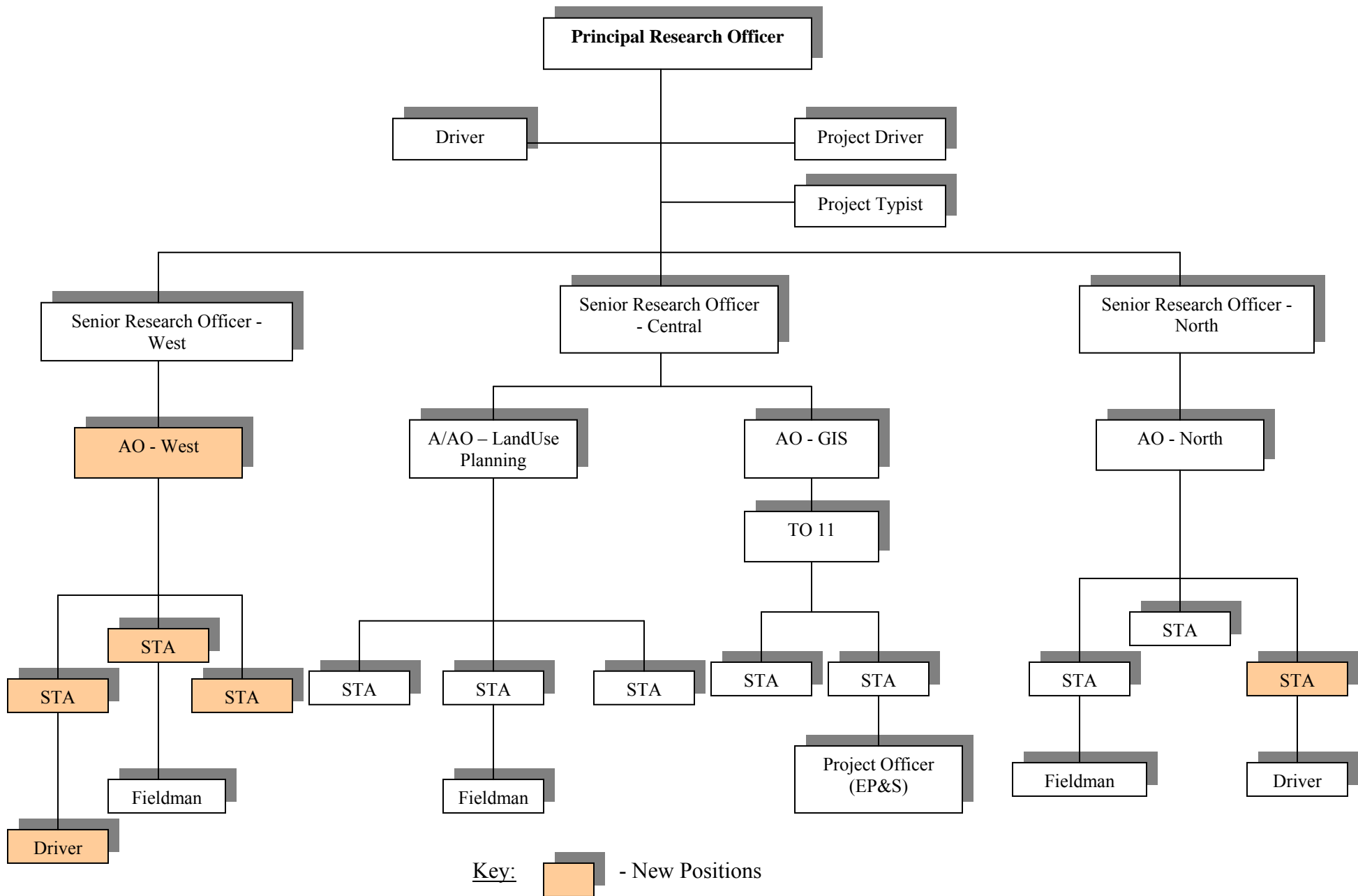
2) Phase 2 structure **\$69,580**

**Table 2: Land Use Section P2 Structure**

| <b>Position</b>          | <b>Grade</b> | <b>Salary</b>   |
|--------------------------|--------------|-----------------|
| AO (West)                | PR03         | 20,335          |
| STA (West)               | ST05         | 8092            |
| STA (West)               | ST05         | 8092            |
| STA (West)               | ST05         | 8092            |
| STA (North)              | ST05         | 8092            |
| Project Typist (Central) | SS05         | 8092            |
| Driver (West)            |              | 8785            |
|                          | <b>TOTAL</b> | <b>\$69,580</b> |

**Operating Budget** – 100% increase (i.e. \$600,000.00)

## Land Use Section Phase 2 Structure



### **5.3.2c Phase 3: Establishment of a Landuse Division / Authority**

Director Landuse Division, one **Principal Research Officer (PRO)** West, one **PRO** North, one Typist - North, one Typist - West, **AO (Geographical Information System (GIS))** - West, **TO 11** West, two **STA** West, **AO-GIS** North, **TO11** North, two **STA** North.

#### **Resources Needs**

Staff Salary – Phase 2 structure:

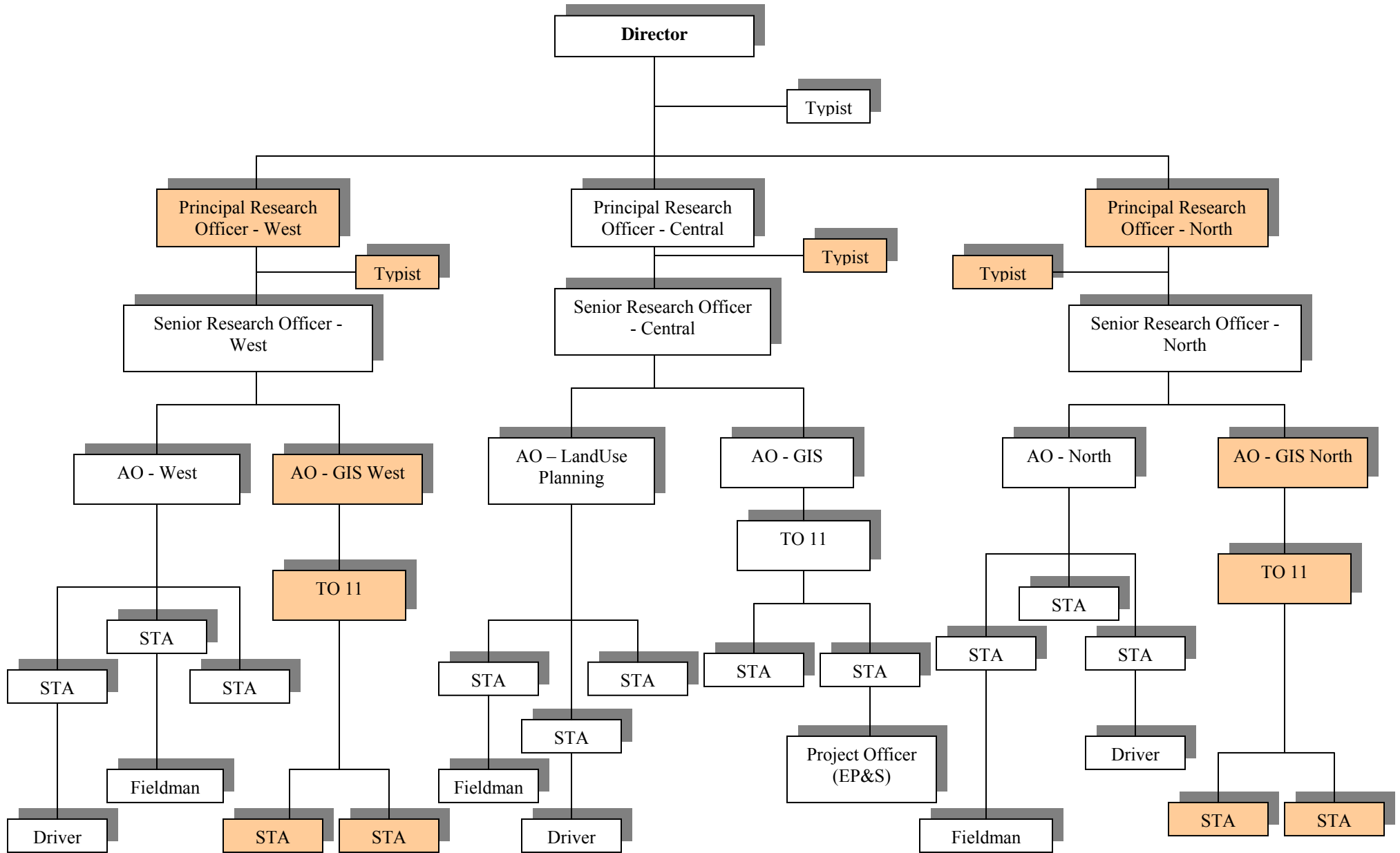
Landuse Division salary **\$201,168**

Operating Budget – 100% increase (i.e. FJ\$1,000,000.00)

**Table 3: Land Use Section P3 Structure**

| <b>Position</b>  | <b>Grade</b> | <b>Salary</b>    |
|------------------|--------------|------------------|
| PRO (West)       | SC01         | 36,236           |
| Typist (West)    | SS05         | 8,092            |
| AO-GIS (West)    | PR03         | 20,335           |
| TO2 (West)       | ES05         | 15,691           |
| STA (West)       | ST05         | 8,092            |
| STA (West)       | ST05         | 8,092            |
| Typist (Central) | SS05         | 8,092            |
| PRO (North)      | SC01         | 36,236           |
| Typist (North)   | SS05         | 8,092            |
| TO2 (North)      | ES05         | 15,691           |
| STA (North)      | ST05         | 8,092            |
| STA (North)      | ST05         | 8,092            |
| AO-GIS (North)   | PR03         | 20,335           |
|                  | <b>TOTAL</b> | <b>\$201,168</b> |

### Land Use Section Phase 3 Structure



Key:

 - New Positions

**TABLE 5.3: Strengthening Organizational Arrangement, Coordination Role and Decision Making process of Focal Points**

| <ul style="list-style-type: none"> <li>• High priority but government may constrained by current cabinet position on budgetary constraint</li> <li>• A priority for a short to medium term commitment (2009-2010)</li> </ul> |   |  |   |  |                                      |
|--|---|--|---|--|--------------------------------------|
| STRATEGY   | KEY ACTIONS   | EXPECTED RESULT  | RESPONSIBLE AGENCY  | KEY PERFORMANCE INDICATORS   | TIMEFRAME                            |
| Strengthening organizational structure and decision making process at national, provincial and community level and NGOs at all levels for mainstreaming the three conventions recognizing its cross sectoral dimensions      | <p>Identify and establish most appropriate and accountable organizational arrangement(s) decision making processes and budgetary allocation for mainstreaming the three conventions at national, provincial and community levels</p> <p>Develop a guideline on the practice of the conventions programmes and activities within sectors, including review of functions, capabilities in the delivery of services and outputs and relation to specific projects critical to the sectors</p> <p>Review and develop sectoral regulatory and planning processes for each conventions (e.g. development license approval, landuse planning, environmental impact</p> | <p>Accountable set of organizational arrangement and decision-making processes and budgetary allocation are established for each of the conventions.</p> <p>Secretariat plan outline developed and accepted by all sectors</p> <p>Conventions obligations reflected in development planning and approval processes and regulatory and incentive based management instruments developed and implemented.</p> <p>All sectoral Corporate, business and budget plans provide for the three conventions activities.</p> | <p>DOE and Landuse Agriculture, Ministry of Finance and National Planning</p> <p>DOE and Landuse Agriculture</p> <p>DOE and Landuse Agriculture</p> <p>DOE and Landuse Agriculture, Ministry of Finance and National Planning</p> | <p>Accountable Organizational arrangements</p> <p>Budgetary allocations for each convention</p> <p>Development of guideline on the practice of the conventions programmes and activities within sectors.</p> <p>Mainstreaming convention obligation in development planning and approval processes and regulatory and incentive based management instruments</p> <p>Development of prioritized conventions programmes and activities</p> <p>Provision for the 3 Convention activities incorporated into corporate and business plans and budgets</p> | <p>October- 2009</p> <p>November</p> |

|   |  |  |  |  |   |
|---|--|--|--|--|---|
|   | <p>assessments, resource development and management, building codes as appropriate)</p> <p>At each sector level, develop prioritized conventions programmes and activities<br/>Including identifying priority areas requiring attention and measures to deal with them and incorporate into corporate and business plans and budgets</p>   |  |  |  |   |
| Strengthening organizational structure and decision making process at national, provincial and community level and NGOs at all levels for mainstreaming the three conventions recognizing its cross sectoral dimensions | <p>At the provincial and community levels, develop conventions programmes and activities, including identifying priority areas requiring attention and measures to deal with them and incorporate into the respective plans and budgets.</p> <p>Encourage business sector to comply with regulations such as EIAs, EMA and landuse regulations and development their own mechanism to reduce impact of</p> | <p>Provincial and community plans provide for the three conventions</p> <p>Communities and business sectors risk are reduced and recovery enhanced</p> | <p>Ministry of Indigenous affairs and Provincial Development</p> <p>DOE and Landuse Agriculture, Ministry of Finance and National Planning</p> <p>DOE and Landuse Agriculture, Ministry of</p> | <p>Number of Conventions programmes developed and resourced for the provincial and community levels</p> <p>Reduction in the number of cases for non-compliance</p> | <p>October, 2009</p> <p>December 2009</p> |

|  |   |   |  |   |   |
|--|---|---|--|---|---|
|  | <p>development on resources.</p> <p>Encourage public private sector-partner to develop financial scheme for resource management and conservation particularly insurance, re-insurance and other financial modalities</p> <p>Include traditional knowledge and practices in the national sector, private, provincial and community plans pertaining to each of the three conventions.</p> <p>Review institutional and organizational arrangement, resources and operating budgets including the current location of the convention obligations to ensure effective and accountable secretariat operation</p> | <p>Financial mechanisms are available for implementation of relevant priority programmes under each thematic areas of the three conventions</p> <p>Appropriate traditional knowledge and practices integrated into national, sector, provincial and community plans for the conventions appropriate thematic areas.</p> <p>Community level development programmes reflected most of the relevant conventions thematic programmes and priority themes.</p> | <p>Finance and National Planning</p> <p>Ministry of Indigenous affairs and Provincial Development</p> <p>Ministry of Indigenous affairs and Provincial Development</p> | <p>Level of use of financial schemes for the conventions implementation and facilitation</p> <p>Number of plans with appropriate level of integration of traditional knowledge's and practices</p> <p>Number of Development programmes that explicitly includes the conventions programmes most pertinent to community scheme of plans.</p> | <p>December 2009</p> <p>December 2009</p> <p>October 2009</p> |
| Strengthening organizational structure and decision making process at national, provincial and community level and | Develop an effective mechanism for ministerial and senior official overview, coordination and accountability for each   | An effective and appropriately resourced conventions secretariats that will allow it to provide support to all areas of   | DOE and Landuse Agriculture, Ministry of Finance and National Planning   | Effective whole of country coordination being provided for response, resource conservation and management   | October 2009  |



|  |  |   |   |   |              |
|--|--|---|---|---|--------------|
| NGOs at all levels for mainstreaming the three conventions recognizing its cross sectoral dimensions | of the conventions obligations.<br><br>Review, and develop the national corporate plans for integration of the conventions obligations, clarifying roles, responsibilities and operational arrangement for each of the conventions at sector levels, including links to regional environmental institutions, academic institutions, welfare support groups, NGOs, CBOs and arrangements for accessing international support. | government and community planning and coordination<br><br>Clear and accountable organizational arrangement at senior official and ministerial levels              | DOE and Landuse Agriculture, Ministry of Finance and National Planning, Indigenous Affairs and Provincial Development | Ministerial and senior officials accountability being exercised   | October 2009 |
|  | Develop sector, provincial (including infrastructure) and community plans and operational arrangements and budgets for management of the conventions priority areas relevant to them such as public awareness and education  | A clear and effective national management plan exists and communities are better able to respond to and integrate with in regards to the conventions obligations. | DOE and Landuse Agriculture, Ministry of Finance and National Planning, Indigenous Affairs and Provincial Development | Development of plans(sector, provincial (including infrastructure) and community plans and operational arrangements and budgets) for management of the conventions priority areas relevant to stakeholders such as public awareness and education | October 2009 |

## **5.4 Project 4 Development of Communication Strategy**

### **Background**

The development of a Communication Strategy is vital in initiating the processes under the programmes mentioned in the NSAP. This strategy is drawn up to create a consistent, unified voice that links diverse activities and the goals with the executing agencies and other relevant stakeholders. The implementation of this project will help in the facilitations and operations of the projects by providing a clear and concise channel of communication between the executing, implementing and supporting agencies.

### **Objective**

The objective of this Communication Strategy is to:

- Identify the effective channels of communication to source and channel out funding and implementation of the NSAP
- Identify stakeholders level of participation and commitment
- Establish proper reporting requirements

### **How Does it Address Capacity**

It strengthens the capacity for effective and efficient communication and as well as strengthens networking between the various agencies involved.

What are the expected outcomes?

- Proper communication strategy for the implementation of the NSAP.
- Increase level of participation and commitment from stakeholders.
- Improved information sharing and networking.
- Achieve accountability and transparency.

### **Institutional Arrangement**

Executing Agency: DOE

Implementing Agency: DOE & LANDS

Supporting Agency: All relevant stakeholders identified in the NSAP

### **Financial Resources**

Resource Mobilisation: Government and External Funding

Indicative Budget: \$10,000

## **6.0 Programme 2: Projects Addressing Cross-cutting Issues**

### **6.1 Project 1: Review and formulate relevant legislation and policies**

Recommendations written below are summarized and supported ignitable 6.1, presented at the end of this section

### **Background**

Review of existing legislation and policies and formulation of new once is a vital step towards strengthening the capacity to better implement the three thematic of the Rio Convention that addresses (Climate Change, Conservation and Biodiversity, Land Degradation and Desertification).

Some specific capacity gaps in legislations identified in previous NCSA Thematic Assessment Report for Fiji include:

- developing comprehensive legislation and policies for the two thematic areas of Conservation and Biodiversity and Climate Change: existing legislation and policies are fragmented, in some instance overlapping and there is no clear demarcation of boundaries. According to previous NCSA Thematic Assessment Report, some

legislations were prepared in the absence of proper networking and wide consultative process.

- ineffective legislation (e.g. poor implementation or enforcement);
- a reactive rather than proactive approach by Government to development of legislation;
- inappropriate legislation and policies with sometimes overlapping mandates between government ministries and statutory bodies which themselves may have contradictory portfolios and unclear boundary demarcations; and
- a need to clearly define and harmonize ecological linkages between various legislation and policies.

A review of 16 cross-cutting pieces of legislation that will meet the objectives of the three Rio conventions is recommended, and required.

### **Objective**

To address the above capacity gaps in legislation that would strengthen powers to enable better protection and conservation of biodiversity, enable Fiji to better adapt and mitigate effects of Climate Change, as well as better preparedness and mitigate degradation and desertification of land.

### **How this addresses capacity**

It addresses the capacity gap in legislation in terms of formulation of new policy and legislation, the review of existing legislation so to address overlapping boundaries and mandates. It also ensures that there is proper legislation in place to properly address and implement the three Thematic Areas at the conventions dealing with Climate Change, Conservation & Biodiversity Land Degradation and Desertification.

### **Expected Outcomes**

Relevant legislation and policies that enable the commitments of the three Rio conventions to be addressed adequately:

### **Activities**

- Development of Legislation for Climate Change with specific focus on mitigation and adaptation.
- Development of a Policy on Clean Development Mechanism (CDM).
- Development of Legislation with specific focus for the protection of biodiversity.
- Review, strengthen and harmonize existing legislation that addresses Climate Change as listed by Vanualailai<sup>12</sup>

### **a.) UNFCCC**

#### **Background**

All institutes globally have moved towards climate change. The issue of environmental sustainability is all determined through climate related phenomenon which is through sea level rise, flooding and inundation of coastal areas, food security and others. This has a

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<sup>12</sup> Vanualailai, P. 2008. *Thematic Assessment on Climate Change. United Nations Framework Convention to Climate Change (UNFCCC)*. Report prepared for the Department of Environment, Suva, Fiji, and UNDP-GEF.

direct impact on our socio-economic progress and impeaches on food security for Pacific Island and also has direct impact on ecosystem.

While most legislation is now geared towards resource utilization for economic development most existing legislation we have in Fiji is not sufficient to address climate change issues.

Current government policies and legislation although may mention or has some provision to safe guard the environment or the natural resources however economic development is foremost thus no prioritization of environment conservation. Thus a formulation of a new legislation on its own on Climate Change will be able to fully address adaptation and mitigation measures to climate change as well as legislate carbon trading under the clean development mechanism.

For Climate Change, one of the main binding documents is the Kyoto Protocol and their main theme now is Carbon Trading. Fiji is the only second country in the pacific that is mandated to trade. This has been what the global environment financial institution and facilities are gearing towards which a shift towards renewable energy is related projects under CDM with millions of dollars in revenue can be earned for the country.

The NSAP recommends a formulation of a Climate Change Legislation to be for a medium term 2-3 years. The Legislation is to account for Trade Links between countries, Strengthen powers for dissemination and attaining of required information needed to establish baseline of emission status in the country, Develop existing policy into legislation but expand its scope to cover Food Security, Poverty Alleviation and Others.

As with the UNCBD, the UNFCCC does not obligate its country members to formulate legislation that addresses Climate Change. However appropriate legislation is still required to properly address the above. The NSAP proposes the development of the current policy on Climate Change to a new legislation be drafted (to be called the Climate Change Act). The legislation is to focus both the mitigation and adaptation measure to climate change and the Clean Development Mechanism (CDM).

For the formulation of the Climate Change Act, the following activities are recommended be undertaken that includes the:

- 1) Recruitment of a consultant with a renowned legislative drafting and policy background draft the Climate Change Act. It is also recommended that the legislation be formulated through a consultative process and facilitated by the Legal Unit of the Department of Environment in coordination with the Climate Change Unit.
- 2) It is recommended that a Policy be formulated for Clean Development Mechanism

There are advantage and disadvantages of development of a legislation that includes the following:

**(i) Advantages:**

- (i) a separate legislation would adequately cover all the issues and concerns of climate change; and
- (ii) a separate legislation would encourage an integrated approach to managing climate change: it should obviate duplication of work and, with shared resources, maximize outputs.

**(ii) Disadvantage:**

- (i) the challenge of ensuring the legislation addresses the various interests of stakeholders in climate change would be very considerable; and
- (ii) the process may be lengthy and costly in relation to the required time, resources and coordination.

**Indicative Budget:**

| Activity                             | Cost (FD)    |
|--------------------------------------|--------------|
| 1. Formulation of Climate Change Act | \$50,000.00  |
| 2. Formulation of Policy on CDM      | \$30,000.000 |

**b. UNCBD**

The UNCBD does not obligate its country party to develop legislation that addresses conservation and biodiversity. However it is recommended that appropriate legislation be developed for the same. The existing Endangered and Protected Species Act only refers to fauna and flora for export, and the Environment Management Act (EMA) is limited to the administration and functioning of the Resource Management Unit, although Section 11 of the Act enables the DOE to meet and implement its obligations under the UNCBD (see Section 4.2.1, Box 2 - above).

Developing a regulation under EMA for conservation of biodiversity is therefore recommended. The new regulation should be in harmony with other related and existing legislations.

Developing a regulation under EMA for conservation of biodiversity on the other hand would require another review of the existing Act. It is recommended therefore that new legislation be developed for conservation and biodiversity that would envelop the entire spectrum of conservation within Fiji. The new legislation would be in harmony with other related and existing legislation and also with the NBSAP; for example, the duties of the NEC (as identified in Section 11 of the EMA) could be woven into the new legislation.

**Indicative Budget:**

| Activity                    | Cost (FD)   |
|-----------------------------|-------------|
| 1. Formulation of a CBD Act | \$50,000.00 |

**c. UNCCD**

The draft Land and Water Resource Management Act (the amended Land Conservation Improvement Act) was developed as an obligation to the UNCCD; it recently was reviewed and finalised. Although submitted, it has not progressed through the Solicitor-General's Office for ultimate Cabinet endorsement.

## 6.1.1 Review of Relevant Legislations and Policies and Other Issues to Consider

### 6.1.1a Additional capacity gap in legislation

Ineffective legislation due to poor implementation, and low capacity for enforcement and monitoring. To address this matter, the Focal Point is provided with three options which would require time and much needed resources; however option 3 being the most feasible considering constrained resources.

- (a) The focal point either may

- 1). Strengthen capacity of its unit for enforcement staff or
- 2). Establish a separate Unit for enforcement (implementation) and monitoring of legislation working in close coordination with the Legal Unit or
- 3). Establish and Strengthen the Environment Management Unit (as discussed above. The most feasible option is 3 with the Establishment of EMU with other relevant agencies however with terms of agreement and work and resource sharing arrangement agreed between the Focal Point and the second party. An EMU strategy is further discussed under Programme 2.

**6.1.1b(b)** The Education Awareness Unit in close coordination with other Units of the Department increase its work programme apart from the yearly celebration of Environment Week include frequent community programme to explain the requirements of legislation to the public and Government.

### **6.1.2 Overlapping Legislation and Mandates**

- b. The criteria for developing any policy should be based on the mandate of a given organization. If there are overlaps in mandates, they should be carefully reviewed so that the parties are able to work effectively together and support the other's policies or legislations. If that cooperation cannot be achieved, a single organisation should be given the overriding jurisdiction. A case to note as an example is the jurisdiction over 'conservation' of soil and water resources between EMA under the DOE, the Land Conservation and Improvement Act under the Ministry of Agriculture, and the National Trust of Fiji.
- c. All legislations should reviewed on an ecosystem basis – something not done for earlier legislation, and partially evident in some recent legislation.

**6.1.2a** The DOE once it establishes and strengthen the capacity for the Legal Unit with additional staff at Senior level (as reflected in Phase 2 of the DOE Structure) it is recommended that it undertake additional tasks other than focusing on EMA which is the review of existing and overlapping legislation encompassing the environment perhaps reviewed on an ecosystem basis and oversee the formulation of legislation that address specifically Climate Change and Conservation and Biodiversity. The DOE through its strengthened Legal Unit to be mandated to develop effective legislation where required that strengthen the protection of the environment.

**6.1.2b** In line with issues raised above, the size of penalties, and the manner whereby penalties are extracted (through the courts or on-the-spot fines) should be appraised on a cost-benefit analysis. For example, where small penalties are identified, the cost of recovering those penalties through the court system can be prohibitive in time and resources.

### **6.1.3 Relevant pieces of cross-cutting legislation that require immediate review are:**

- Agricultural Landlord and Tenants Act Cap 270. The legislation conspicuously does not address limits to the use of farmland. Issues such as retaining remnant vegetation, preserving groundwater quality, soil compaction, and enrichment of surface water are all neglected in the Act. An appreciation of environmental sustainability should be addressed by the Act.
- Climate Change Policy or Regulation under EMMA 2005 to be inclusive of post-Kyoto Commitments. This bill will cover issues such as saving of forests, lowering of

carbon emission through fossil fuel switch, utilizing renewable energies such as solar, wind and hydro, biodiversity protection and resource management and methane capture.

- Environmental Management Act 2005 and Regulations 2008 [EMA]. This recent legislation needs to be reviewed to take into consideration the following: (a) elaboration of convention commitments; (b) post-establishment environmental audits of industries and commercial developments (presently the Act only requires EIAs for new developments), (c) carbon trading (not addressed), (d) more effective implementation of its provisions for natural resource management (e.g. the required Natural Resource Inventory), and (e) the capacity of its Environmental Trust Fund. It is acknowledged however, that the capacity constraints faced by the Department of Environment may contribute to this.
  - Forest Decree 1992 and Forest Policy 2007. The Forest Decree is being reviewed. The Sustainable Land Management provisions of the Forest Policy need to be implemented, as well as the relevant policies related to mangrove protection and commercial mangrove harvesting ban identified in the Fiji Forest Policy.
  - Irrigation Act Cap 144A. The Irrigation Act is an instrument designed to optimise agricultural production – environmental needs are non-existent. For example, under the legislation farmers can be compelled to remove vegetation from their land, a policy that can contribute to massive environmental degradation.
  - Land Conservation and Improvement Act Cap 141 This is currently being reviewed. Fiji really needs a proper legislation that will ensure sustainable land management are observed, implemented and properly monitored.
  - The Mangrove Management Plan (1984 and 1987) and the attendant National Policy Plan for Fijian Mangroves (1986) need to be reviewed and legislated.
- National Biodiversity Strategy and Action Plan (NBSAP) needs to be reviewed in line with the National Environment Strategy (1993). The DOE should take a more active role in its implementation rather leaving it to NGO's and academic institutions.
- National Trust for Fiji Act Cap 265. Although this Act is comprehensive in its purpose, it contains no advice on how the purpose can be fulfilled.
  - Roads Act Cap 175. This Act enables the construction of public roads. However, there is no provision in the Act for environment considerations when so doing.
  - Rural Land Use Policy needs to be reviewed and endorsed.
  - State Lands Act Cap 132. This Act provides for foreshore development and the sale and leasing of State land. Little thought is given to environmental issues in leasing decisions – and in view of the existing trend in Fiji to 'develop' (or degrade) foreshores, this Act requires attention.

**6.1.4** Introduce a 'user pay policy' where appropriate. The income generated can be held in the DOE's Environmental Trust Fund.

**6.1.5** The powers of enforcement and monitoring should be strengthened in legislation as enforcement staff at focal point is strengthened.

**6.1.6** It is recommended that an Information Paper be prepared and presented to Cabinet on the current state of affairs and the needs. The Paper should emphasize roles and responsibilities and list the policies and pieces of legislation to be reviewed.

**TABLE 6.1: Policy and legislation in general**

| <ul style="list-style-type: none"> <li>• High priority but government may constrained by current cabinet position on amending legislation</li> <li>• A priority for a short to medium term commitment (2009-2010)</li> </ul> |   |   |   |  |   |
|--|---|---|---|--|---|
| STRATEGY   | KEY ACTIONS   | EXPECTED RESULT   | RESPONSIBLE AGENCY  | INDICATORS   | COMPLETION  |
| Strengthen national policy, legislation, Organisational and decision making arrangement for coordinated and effective UNCCD, CBD & UNFCCC facilitation and implementation  | <p>Supplement document on UNCCD, CBD &amp; UNFCCC</p> <p>Present to the NEC Action Plan on Proposed supplement documents to the UNCCD, CBD &amp; UNFCCC</p>   | <p>Approval of cabinet paper on supplementary document</p> <p>Incorporation of the proposed supplementary document into the UNCCD, CBD &amp; UNFCCC with endorsement from NEC</p> | <p>DOE &amp; Solicitor General and Prime Minister's office</p> <p>DOE &amp; Landuse</p> | <p>Supplement document stated as priorities in cabinet paper</p> <p>Action plan distributed and widely used</p>                          | <p>April-May 2009 (5-6months)</p> <p>December 2009</p>          |
| Strengthen national policy, legislation, Organisational and decision making arrangement for coordinated and effective UNCCD, CBD & UNFCCC facilitation and implementation  | <p>Prepare a national policy paper on organisational, decision making, legislative and traditional arrangement for UNCCD, CBD &amp; UNFCCC at national, provincial and community levels</p> <p>Define and adopt organisational decisional making, monitoring reporting and accountability arrangement for UNCCD, CBD &amp; UNFCCC</p> | <p>National policy paper to be adopted by DOE</p> <p>Transparent and accountable organisational arrangement established</p>   | <p>DOE &amp; Landuse</p> <p>National Planning, DOE, and Landuse</p>                     | <p>National policy and strategy for DOE in place and widely used</p> <p>UNCCD, CBD &amp; UNFCCC with appropriate legislative backing</p> | <p>December 2009-June 2010</p> <p>December 2009 – June 2010</p> |



**Institutional Arrangement**

Executing Agency : DOE& Land Use

Implementing Agency: DOE, Fisheries, Forestry, Lands, Energy and Agriculture

Supporting Agency : Attorney Generals Office, National Planning & PSC

**Financial Resources**

Resource Mobilization: Government of Fiji & External Donors

Indicative Budget : \$200, 000.00 (FD)

**6.2 Project 2: Promote and establish cross-sector cooperation****Background**

The Land Use Section of the Ministry of Agriculture is the focal point for the UNCCD while the Department of Environment under the Ministry of Local Government, Housing Urban Development and Environment is the focal point for both the UNFCCC and the UNCBD. This arrangement in itself poses a challenge when collaboration at both the policy and implementation levels are required to fully realize the opportunities for synergies in fulfilling the requirements of the three conventions.

Government departments generally do not communicate effectively with each other, resulting in a lack of coordination with focal points and with other stakeholders (in industry, private companies, NGOs and community-based organizations). Lack of stakeholder involvement in planning engenders poor programme performance, duplication and non-realization of identified outcomes.

Commitment and broad government support will only come about through properly structured linkages that engender a sense of ownership and responsibility.

**Objective**

To promote and strengthen cross-sector cooperation and a participatory and integrated approach to the implementation of the Rio conventions and environmental programmes at national and local levels.

**How it addresses Capacity**

- The approach will ensure that the Focal Point will benefit from the strengths of other stakeholders in both management and technical level.
- Strengthen coordination and networking through a coordinated and integrated approach
- Maximize uses of shared resource and expertise
- On the long term this will enable the transfer of knowledge and skills across sectors.

**Expected Outcomes**

- (i) Strengthened sectoral cooperation and ownership of programmes and initiatives.
- (ii) Improved networking amongst sectors.
- (iii) Integration of environment and convention obligations in sectoral plans.

## Project Strategy

| <b>TABLE 6.2. PROMOTE AND ESTABLISH CROSS-SECTOR COOPERATION</b><br><b>• Immediate priority for implementation (2009-2010)</b> |   |   |  |                  |
|--|---|---|--|------------------|
| <b>Strategy</b>  | <b>Key Actions</b>  | <b>Indicators</b>   | <b>Means of verification</b>   | <b>Timeframe</b> |
| Establish effective coordination and networking system   | <p>Mandate NEC to assume the responsibility of overseeing the implementation of MEAs.</p> <p>Review and issue MOUs having proper guidelines on relevant environment programmes and reporting requirements, to relevant parties (line ministries, NGO's)</p>   | <p>Improved networking and coordination efficiency</p> <p>Relevant Parties (line ministries, NGO's) fulfil reporting requirements</p>   | <p>Quarterly reports of the NEC meeting</p> <p>Quarterly reports of the LCB meeting</p>                      | On-going         |
| Establish a centralised information system   | <p>Establish a centralised environment information centre and data base at DOE.</p> <p>Disseminate data and share information</p>   | <p>Liaison officer recruited to coordinate the monitoring and sharing of database under the information centre</p>  | <p>Full and consistent representative of NEC and LCB</p>   | 2009-2010        |
| 3. Implement Integrated Project.   | <p>Identify and formulate joint project proposals</p> <p>Replicate the Drawa SLM/SFM project.</p> <p>Recruitment of a consultant to explore and Assess an opportunities for integrated approach and shared resources in Education and Awareness Programme, Climate Change Programme, Conservation Programme, addressing Land Degradation and Desertification programme that involves all major key players such as 1. DOE 2. Min of Health 3. Min of Agriculture 4. Min of Education 5. NGOs 6. Dept of Forestry and Fisheries, the Provincial Office and</p> | <p>Relevant stakeholders form an integrated approach on the identification and formulation of project proposals</p> <p>Consultant familiarized with areas of opportunities for integrated approach</p> <p>Awareness raising conducted in areas or communities where an integrated approach project is implemented</p> | <p>Endorsed Cabinet directive for enlarged membership and strict participation</p> <p>TOR for Consultant</p> | 2009-2010        |

|  |   |   |  |   |
|--|---|---|--|---|
|  | other sectors identified as relevant for the programme.   |   |  |   |
| Sectoral plans are inclusive of convention obligations                     | Review sectoral plans for inclusion of convention obligations and environment issues  | Inclusion of convention obligations and environmental issues in sectoral plans  | Cabinet Paper and stakeholder participation  | On-going  |
| Enlarge membership and participation mandated for both the NEC and the LCB | Review membership and get Cabinet directive for membership and participation.<br>Review of Powers of the NEC  | High level representation from all relevant stakeholders  |  |   |
| Strengthen linkages from the provincial, tikina and village council        | <p>Recruit Individual to assess the current linkages under Fijian Affairs Board and assess capacity gap from community/ koro to Tikina / provincial level up to national level</p> <p>To ensure the institutional arrangement provides a better strategic management allows proper channel of communication and implementation</p> <p>Develop a paper that explains the above that can be disseminate to stakeholders that sets a defined guideline so that all projects should go through this institutional arrangement.</p> <p>Ensuring National Strategic Plan at all level from community to Tikina / Provincial level to national level on any related environmental concerns dealing with the three thematic areas</p> | <p>Have reps from provinces to communicate regularly with FAB</p> <p>Each individual aware of the proper channel of communication to be followed.</p> <p>Better strategic management through proper channel of communication and implementation</p> <p>Endorsement of guideline paper</p> | <p>FAB updates on communication from provincial reps</p> <p>Implementation of Guideline Paper</p> <p>Linkages between provincial, tikina and village council strengthened</p> <p>Cabinet Paper</p> | <p>Proper channel of communication achieved</p> <p>Institutional arrangement achieved</p> |

**Institutional Arrangement**

|                                     |   |   |
|-------------------------------------|---|---|
| Executing Agency                    | - | Department of Environment                           |
| Implementing Agency - Affairs Board |   | Department of Environment, Land Use Section, Fijian |
| Supporting Agency:                  | - | Other relevant Agencies (membership of LCB and NEC) |

**Financial Resources**

|                       |   |                                       |
|-----------------------|---|---------------------------------------|
| Resource Mobilization | - | Government of Fiji and External Donor |
| Indicative Budget     | - | \$20,000 Fiji Dollars (FD)            |

**Indicative budget breakdown per activity**

| Activity   | Indicative Budget (FD)              |
|--|-------------------------------------|
| Mandate NEC to assume the responsibility of overseeing the implementation of MEAs.                                       | \$1,000                             |
| Review and issue MOU's having proper guidelines on relevant environment programmes, to relevant line ministries and NGOs | \$3,000                             |
| Establish a centralised environment information centre and data base at DOE.   | \$5,000                             |
| Disseminate data and share information   | Addressed in Programme 2, Project 7 |
| Identify and formulate joint project proposals   | Addressed in Programme 3            |
| Replicate the Drawa SLM/SFM project.   | Addressed in Programme 3            |
| Review sectoral plans for inclusion of convention obligations and environment issues                                     | \$,2000                             |
| Review membership and get cabinet directive for membership and participation   | \$1,000                             |
| Strengthen linkages from the provincial, tikina and village council  | \$8,000.00                          |

**6.3 Project 3: Establish proper performance and reporting mechanisms****Background**

The focal point of the UNCCD has been timely in forwarding national reports; however, the focal point for the UNCBD and UNFCCC capacity for reporting is recommended be strengthened. A National Biodiversity Strategy and Action Plan (NBSAP) has been prepared under the UNCBD. The Fiji Climate Change Programme has just recently been formalized within DOE with establishment of a Climate Change Officer thus has demonstrated a national interest and commitment by the Government to establishing the CC unit as a permanent programme. The NSAP recommends the strengthening of the Climate Change Unit to be achieved through Institutional Strengthening that would also strengthen capacity for reporting.

Some other activities that have lapsed are the proper implementation of the NBSAP and more inclusive reporting of the UNCCD programmes. Dependence on donor funding of reports to convention Conference of the Parties (COPs) has made reporting vulnerable to changing donor priorities and has occasioned non-reporting in some instances. Government funding is infrequently allocated to reporting because the activity is rarely reported in staff job descriptions

Liaison and monitoring of programmes and projects carried out by stakeholders (e.g. NGOs) is often ineffective because of lack of capacity and resource constraints. In general,

knowledge about what different stakeholders are doing with regard to the different convention obligations is not – or rarely – shared.

### Objectives

- Encourage and establish proper performance and reporting mechanisms across all stakeholders.
- Strengthen capacity of the Focal Point for Reporting.
- Encourage follow-through of existing convention-related programmes (e.g. NBSAP),
- Government to support convention-reporting activities, and
- Information exchange to support enhanced reporting and performance is facilitated through the establishment of an appropriate Clearing House Mechanism (CHM).

### How it address Capacity:

Strengthen Capacity of the Focal Point In:

1. attaining relevant information and updates on what some progress of work done in Fiji to address the three thematic areas.
2. ensuring proper and factual reports to convention secretariat is taking place that is reflective of the capacity.
3. ensuring proper monitoring at the works done in Fiji

### Expected Outcomes

- Reporting of convention activities enhanced nationally and internationally.
- Performance of convention activities enhanced through better sharing of information.
- Established and functioning Clearing House Mechanism
- Improved networking amongst sectors.

### Project Strategy

| TABLE 6.3. PERFORMANCE AND REPORTING MECHANISM      |  |   |                           |   |  |
|---|--|---|---------------------------|---|--|
| • Immediate priority for implementation (2009-2010) |  |   |                           |   |  |
| STRATEGY  | KEY ACTIONS  | EXPECTED RESULT   | RESPONSIBLE AGENCY        | INDICATORS  | COMPLETION   |
| Establish a Clearing House Mechanism                | Establish clearing house for data at UNCCD Focal Point Landuse and at DOE coordinated by the IT Unit in close liaison with EO Liaison and EO Awareness focusing on activities and progress of environment programme implementation | Approval of Cabinet paper on establishment of the Clearing House Mechanism                                    | DOE and National Planning | Percentage of annual national budget allocated for DOE programmes           | Reflected in the December 2009 Budget address for 2010 |
|   |  | Incorporation of the proposed clearing house mechanism into the Climate Change Bill with endorsement from NEC | DOE and National Planning | Percentage of ministerial budget allocated for DOE Clearing House Mechanism | Reflected in the December 2008 Budget address for 2010 |
|   |  | Clearing House  | DOE and National Planning | Established Clearing House Mechanism unit within CC, CBD and                | Reflected in the December 2009 Budget address for 2010 |
|   | Expand job description and remuneration  |   |                           |   |  |

|  |  |   |                                    |  |                  |
|--|--|---|------------------------------------|--|------------------|
| <p>Strengthen Climate Change Unit within the DOE</p> | <p>of IT Officer to monitor information flow from UNFCCC, CBD, Biosafety and other environmental treaties and obligation and manage CHM.</p> <p>Work closely with Ministry of information, Ministry of Foreign Affairs.</p> <p>Device a central database at Focal Point managed with the strengthened IT Unit.</p> <p>As reflected under Institutional Strengthening under Phase 1: the strengthening of existing climate change unit and expansion of structure under phase 2 so to strengthen capacity for reporting</p> | <p>Mechanism to be adopted by DOE</p> <p>Transparent and accountable unit arrangement established</p> <p>Capacity Building at institutional level and strengthening &amp; expansion of climate change unit.</p> | <p>DOE, National Planning, PSC</p> | <p>UNFCCC</p> <p>More technical staff working on climate change.</p> <p>Secure of funds from both government, donors, convention secretariat on Climate Change</p> <p>Staff of Climate Change Unit assists, reporting to Convention secretariat.</p> | <p>2009-2010</p> |
|--|--|---|------------------------------------|--|------------------|

|  |  |   |  |   |             |
|--|--|---|--|---|-------------|
| Closely Coordinate and Monitor Progress of Project Implementation.   | Establish position of a EO Liaison at DOE to coordinate and network with stakeholders  | Projects are closely coordinated and monitored by Focal Point                                       | DOE Land Use Section ...                         | Close Coordination and network from focal point with key implementers of Rio Convention                                   | 2009 – 2011 |
|  | Recruit consultant to Review and Formulate new standard MOU, Review and strengthen existing MOU, Strengthen Reporting Requirement under MOU. Strengthen capacity for monitoring of MOU (to be achieved through institutional strengthening of Focal Point) | Strengthened capacity for monitoring of MOU and strengthened Reporting Requirement under MOU        |  | Proper reporting from key implementers to Focal Point   |             |
|  |  |   |  | Updated progress status on what is done in Fiji to address the three thematic areas                                       |             |
|  |  |   |  | Correct Reporting to Convention Secretariat   |             |
| International Treaties/Compliance Section – the establishment of MEA Unit to be established in the DOE in Phase 2 of Institutional Strengthening | Review relevance of international treaties and coordinate implementation of Convention obligation  | Coordination of implementation of Convention obligation   | Convention Focal Point                           |   | 2009-2011   |
|  | Ensure reporting deadlines are met   | Ensure submission of updated factual report in a timely manner                                      | DOE, Landuse Section, Fiji Metrological Services | Reports to Convention Secretariat submitted on time   | 2009-2011   |
|  | Strengthen linkages & coordination between convention secretariat, focal point & other relevant key implementers of Rio Convention   | Strengthen linkages & coordination from convention secretariat with focal point to key implementers |  | Integrated coordination between convention secretariat, focal point and other relevant key implementers of Rio Convention |             |
| Review, reporting and collaboration  |  | Re-prioritization of NBSAP  | DOE, Landuse Section, Fiji Metrological Services |   | 2009-2011   |

|  |   |  |                      |  |           |
|--|---|--|----------------------|--|-----------|
|  | Immediate review of the NBSAP and re-prioritizing of strategies of NBSAP<br>Enhanced collaboration of the UNCCD focal point with the Disaster Management Office & Fiji Metrological Service | Strengthen collaboration of Focal Point with DISMAC and Fiji Met |                      | Reviewing of NBSAP<br><br>Increased coordination between the UNCCD focal point with the Disaster Management Office & Fiji Metrological Service |           |
| Strengthen Reporting Capacity of the UNCCD Focal Point | Provision of a dedicated staff (SRO) Central to be responsible for reporting on the UNCCD to be achieved through institutional strengthening  | Strengthen capacity for reporting at the UNCCD Focal Point       | DOE, Landuse Section | Institutional Strengthening  | 2009-2011 |

### **Institutional Arrangement**

Executing Agency - Department of Environment  
 Implementing Agency - Department of Environment, Land Use Section and other sectors

### **Financial Resources**

Resource Mobilization - Government of Fiji and External Donor  
 Indicative Budget - \$32,000.00 (FD)

### **Indicative budget breakdown per activity**

| <b>Activity</b>   | <b>Indicative Budget (FD)</b>                |
|---|--|
| Establish CHM<br>1. Central Database, Equipment and Resources<br>2. Institutional strengthening of IT (1 SIT), 1<br>3. 3. Equipment and Resources     | \$20,000                                     |
| 2. Strengthen Climate Change Unit   | Refer to institutional strengthening of DOE. |
| 3 Monitor Projects<br>1. Formulation of standard MOU AND Review of existing MOU with reporting requirement<br>2. Institutional strengthening -Liaison | \$6,000.00                                   |
| 4. International Treaty –MEA Unit<br>Institutional Strengthening  | Refer to institutional strength.             |



|  |  |
|--|--|
| 5 NBSAP Review<br>Enhance collaboration UNCCD with Fiji Met and DISMAC<br>(Project Based Integrated Approach –refer program 4 project 3) | Currently implemented by<br>Resource Management Unit<br>at DOE |
| Institutional Strengthening of UNCCD – Reporting   | \$6000.00  |
| <b>Total</b>   | <b>\$32,000.00</b>   |

#### **6.4 Project 4: Establish sustainable financing mechanisms**

##### **Background**

Lack of adequate funding is one of the most significant factors negatively affecting implementation of convention objectives due to government limited budgetary allocations. In turn, focal points and stakeholders had to resort to outside source of funds. The funding sources on the other hand is not sustained and secure because of changing donor priorities and are usually for a specified timeline or on a short duration of time.

Establishing a sustainable financing mechanism to ensure a proper system in place that incorporates a joint effort and partnership of both government and donors in ensuring continuous support and funding to initiatives under the three thematic areas that is sustainable.

##### **Objective**

- Establish a sustainable financing mechanism that takes into consideration the limited government budgetary allocations, the limited resources and the unsustained and secured donor\_funding because of changing donor priorities that and are usually for a specified timeline or on a short duration of time.
- Suggest strategies for focal point that ensures prioritisation of its needs in the national agenda considering the government funding may not be reliable over the long term as it depends on alternative and competing priorities.

##### **How it addresses capacity**

It addresses the capacity gap in unsustained funding and support for initiatives that addresses the three thematic areas of the convention.

## Project Strategy

**Table 6.4. FINANCIAL MECHANISM**

- Immediate priority for implementation (2009-2010)

| STRATEGY  | KEY ACTIONS   | EXPECTED RESULT   | RESPONSIBLE AGENCY                        | INDICATORS   | COMPLETION |
|---|---|---|---|--|------------|
| Mainstreaming UNFCCC, CBD & UNCCD into national macroeconomic policy and fiscal policy and national budgetary processes | Integrate UNFCCC, CBD & UNCCD into national macroeconomic policy and fiscal policy and national budgetary processes | Government forward economic growth projections reflect possible national commitments to each of the thematic issues<br>UNCCD, CDB & UNFCCC are specific budget line item in each ministerial budget allocation<br>Sustainable financial mechanism established to support responses for each thematic topics | Ministry of Finance and National Planning | Percentage of annual national budget allocated for the three conventions | 2009-2010  |

|   |   |  |   |  |           |
|---|---|--|---|--|-----------|
| Mainstreaming UNFCCC, CBD & UNCCD into national macroeconomic policy and fiscal policy and national budgetary processes | Ministerial Budget Committee to allocate budget for support and inline ministries and departments reflecting prioritized strategies for DOE under the three thematic topics   |  | Ministry of Finance and National Planning | Percentage of Ministerial budget allocated for the three conventions Sustainable financial mechanism established | 2009-2010 |
|   | Develop a sustainable national financing mechanism for supporting responses for each thematic topics  | Annual budget request to reflect work done on environmental health, social welfare (poverty alleviation) and sustainable development | Ministry of Finance and National Planning | Annual budget request timely submitted   | 2009-2010 |
|   | Focal points (and other government stakeholders) submit their annual budget requests that is linked to environmental health, social welfare (poverty alleviation) and sustainable development that is clearly demonstrated effectively. |  |   |  |           |
| Financial sourcing management and expertise   | A recruitment of a Senior Accounts Officer at DOE as a dedicated resource person whose job it is to prepare proposals,  | Availability of Funds  | Ministry of Finance and National Planning | TOR finalized and endorsed by DOE  | 2009-2010 |

|   |   |  |   |   |           |
|---|---|--|---|---|-----------|
|   | <p>be familiar with donors and their funding cycles, and submit timely applications. This is to be achieved under Institutional Strengthening in Phase 2.</p> <p>While awaiting the above, short term recruited consultant to be engaged on a short term basis.</p> <p>3. Alternatively, the assistance of technical expertise from Regional Organisation such as SPREP, SOPAC, SPC to be explored and sought for provision of this service at no cost incurred</p> | Terms of reference drawn up  |   |   |           |
| Enhancing Political awareness and support | <p>Focal point being vocal and persistent with their request to government for support</p> <p>A review of all convention-related projects since access to funds can be enhanced if it can be demonstrated that the projects for which they are identified are viable and worthy and</p>   | <p>Focal point to justify the need for the support needed</p> <p>Database updated.</p> <p>Relevant officers carry out surveys on the project location and report on the gaps to be addressed</p> | <p>Convention Focal Points, National Planning</p> <p>Convention Focal Points, National Planning</p> | <p>Government support forthcoming</p> <p>Project implementation</p> | 2009-2010 |

|   |   |   |   |   |           |
|---|---|---|---|---|-----------|
|   | to be carried out as a matter of priority.  |   |   |   |           |
| Policies that generate income for biodiversity, combat desertification and climate change adaptation and mitigation to be implemented | <p>Recruitment of a Legal Consultant to explore opportunities for user pay policies</p> <p>User-pay policies such as levies on access to conservation and coastal recreational areas, on logged timber and cleared hectares for agriculture.</p> <p>User pay to reflect initiatives that are private sector market driven and not formal sector driven projects<br/>Money generated can be put into a conservation trust fund – or the <u>Environmental Trust Fund</u> identified in Section 55 of the EMA.</p> | <p>Availability of funds and resources in terms of Legal Consultant recruitment</p> <p>Officers to carry out surveys on the different areas and markets in which the user pay policy be best introduced to in order to produce a good outcome</p> <p>Areas in which the money generated from this user pay policy can be used on to be clearly identified</p> | <p>Convention Focal Points, National Planning</p> <p>Convention Focal Points, National Planning</p> | <p>User Pay Policies opportunities identified</p> <p>Proper coordination and network between different stakeholders</p> <p>Revenue generated for the country</p> <p>Markets identified.</p> <p>Section 55 of the EMA is properly followed</p> | 2009-2010 |
| Mechanism to transfer (share) equipment, training personnel, and technical items both between government organizations                | Country study be undertaken on the country resource inventory in terms of Human Resources, Financial Resources and Infrastructure in Government conducted by the Bureau of Statistics.  | Relevant ministries and departments be cooperative in providing necessary information on Human Resources, Financial Resource and Infrastructure in Government   | Convention Focal Points, National Planning, FNRC  | Human Resources, Financial Resource and Infrastructure resource inventory updated   | 2009-2010 |

|  |  |  |  |                    |           |
|--|--|--|--|--------------------|-----------|
| Mechanism to transfer (share) equipment, training personnel, and technical items both between government organizations | A mechanism be put in place thorough consultative process that is agreeable to all that allows transfer (share) equipment, training personnel, and technical in government | Mechanism be agreed by all ministries and departments involved | Convention Focal Points, National Planning, FNRC | Mechanism endorsed | 2009-2010 |
|--|--|--|--|--------------------|-----------|

**Institutional Arrangement**

Executing Agency : DOE& Land Use  
 Implementing Agency: : PSC, Ministry of Finance, National Planning, Bureau of Statistics  
 Supporting Agency : Attorney Generals Office, National Planning & PSC

**Financial Resources**

Resource Mobilization: Government of Fiji & External Donors  
 Indicative Budget: \$43,000.00

**Indicative Budget Breakdown per Activity**

| STRATEGY   | ALLOCATED BUDGET  |
|--|---|
| Mainstreaming UNFCCC, CBD & UNCCD into national macroeconomic policy and fiscal policy and national budgetary processes  | \$10,000.00   |
| Financial sourcing management and expertise  | With reference to Institutional Strengthening of Focal Point with the capacity building of Accounts Unit. \$12,000.00 for recruitment of short term consultant on a short term basis to assist in preparation of funding proposals. |
| Enhancing Political awareness and support  | With reference to Programme 1 Project 1: Securing Fiji Government's commitment for NSAP   |
| Recruitment of Short Term Consultant to Explore Policies that generate income for biodiversity, combat desertification and climate change adaptation and mitigation to be implemented. | \$20,000.000  |
| Explore on Mechanism to transfer (share) equipment, training personnel, and technical items both between government organizations  | \$8,000.000   |
| <b>TOTAL</b>   | <b>\$50,000.00</b>  |

**6.5 Project 5: Establish a systematic research and monitoring system****Background**

The basis for effective decision making and implementation are sound research and monitoring activities. Presently however, there is no integrated research and monitoring strategy within government. The coordination of research and implementation of research results are slow (this constraint is common to individual government departments, other institutions and NGOs). Lack of coordination and information sharing encourages tremendous inefficiencies in applying research results to development and also waste resources due to duplicated effort.

In an attempt to remedy this situation, the government recently (October 2008) announced the establishment of a Fiji National Research Council (FNRC) to centralize all Government research. Environment data also will be kept in the FNRC. It is not yet known whether the FNRC will oversee and coordinate all research and monitoring of environmental and biodiversity issues in Fiji.

**Objective**

- Establish a systematic research and monitoring system

**How it addresses capacity**

- It strengthen capacity for research and monitoring system through an integrated approach
- Encourages a coordinated effort in information sharing that avoids duplication of research work and unnecessary wastage of resources.

## Project Strategy

| <b>Table 6.5 SYSTEMIC RESEARCH AND MONITORING</b><br>• Immediate priority for implementation (2009-2010)   |   |   |   |  |  |
|--|---|---|---|--|--|
| STRATEGY   | KEY ACTIONS   | EXPECTED RESULT   | RESPONSIBLE AGENCY  | INDICATORS   | COMPLETION   |
| Strengthen monitoring and evaluation of the Government's effort to ensure progress and improvement in systematic research and monitoring in regard the three conventions | Establish M&E and reporting mechanism with feedback for improvement in the Convention programmes consistent with organizational structures                      | National M&E mechanism for Conventions are established and functioning  | Agency responsible in collaboration with provincial, sectoral agencies, and communal leaders  | M&E mechanism established and effectively functioning  | Commence June 2009   |
|  | Devise a set of relevant national, social, sectoral, provincial, community indicators for monitoring and reporting progress of the Conventions programmes       | Indicators relevant to national, sectoral, provincial, community level monitoring and reporting on the progress of the Conventions are developed and adopted      | Agency responsible in collaboration with provincial, sectoral agencies, and communal leaders  | Agreed sets of indicators for monitoring progress identified & in use                          | Commence June 2009 -ongoing  |
| Strengthen monitoring and evaluation of the Government's effort to ensure progress and improvement in systematic research and monitoring in regard the three conventions | Develop a set of relevant national, social, sectoral, provincial, community indicators for monitoring and reporting effectiveness of the Conventions programmes | Indicators relevant to national, sectoral, provincial, community level monitoring and reporting on the effectiveness of the Conventions are developed and adopted | Agency responsible in collaboration with Ministry of Finance and Economic Management, provincial, sectoral agencies, and communal leaders | Agreed sets of indicators for monitoring and reporting on the effectiveness of the conventions | Define indicators by June 2009 and commence reporting by June 2010 |
|  | Ensure that national indicators are consistent with regional and internationally used indicators for each Conventions   | National indicators are consistent with regional and internationally used indicators for each Conventions   | Agency responsible for each conventions   | Internationally and regionally consistent set of indicators in use in Fiji                     | June 2009  |
|  | Prepare and Disseminate M&E reports on each conventions. Aggregating information from communities, provinces and sectors, and review programmes as appropriate  | Quality and informative Convention's programme reports prepared, disseminated, and  | Agency responsible  | M& E report completed and acted upon   | June 2010  |



|   |  |  |  |   |  |
|---|--|--|--|---|--|
| <p>To strengthen the Fiji National Research Council (FNRC) or Government Information and Referral Centre (GIRC) to centralize all Government research and data.</p> | <p>Ensure that national M&amp;E are used for regional and international reporting</p> <p>To strengthen FNRC as an integrated research and monitoring facility that is inclusive of everything and not only depending on the interest of the academics, the donors of NGOs.</p> <p>To be the Focal Point and Coordinate all research and monitoring of environmental and biodiversity issues in Fiji.</p> | <p>informed reviews and revisions of the convention's programmes</p> <p>National reports used to underpin regional &amp; international reports reducing Fiji's reporting burden with respect to the conventions.</p> <p>More information offered that is easily accessed by the public</p> | <p>for each conventions in collaboration provincial, sectoral agencies, and communal leaders</p> <p>Governmental agency responsible for reporting on regional and international commitment in collaboration with agency responsible for each conventions</p> <p>FNRC, DOE, National Planning, Academic institutions</p> <p>FNRC, DOE, National Planning, Academic institutions</p> | <p>Regional and international report on UNFCCC, UNCCD &amp; UNCBD programmes are based on the national M&amp;E on the conventions.</p> <p>Capacity needs addressed</p> <p>Integrated approach by the different departments and organizations achieved</p> | <p>Commence June 2010 -ongoing</p> <p>2009-2010</p> <p>2009-2010</p> |
|   |  |  |  |   |  |
|   |  |  |  |   |  |

|  |   |  |  |   |           |
|--|---|--|--|---|-----------|
| <p>To strengthen the Fiji National Research Council (FNRC) or Government Information and Referral Centre (GIRC) to centralize all Government research and data.</p> <p>DOE to fully resource its Library and research facilities to attain the following information</p> | <p>(1) should be instrumental in developing a policy for data acquisition and national ownership of that data, and (2) establish a central, integrated information management system or clearing house mechanism for all convention-related information on Fiji.</p> <p>Strengthen staffing capacity for FNRC specifically a Liaison Officers that coordinate the central database.</p> <p>FNRC not to be a duplication of existing, independent research centers (i.e. the USP and FIT) thus a <u>MOU is to be established</u> between the FNRC, convention focal points, all relevant line ministries and associated stakeholders.</p> <p>Central coordinating body for structuring research within Fiji: the National Environment Council's role to be expanded to take on this responsibility</p> | <p>Database updated with information forthcoming from the relevant departments and organisations</p>   | <p>FNRC, DOE, National Planning, Academic institutions</p> <p>FNRC, DOE, National Planning, Academic institutions, NGO's</p> | <p>Integrated approach by the different departments and organizations achieved</p>  | 2009-2010 |
|  |   | <p>Recruitment of a Liaison officer</p> <p>MOU drawn up by the legal officer and vetted</p> <p>More roles be identified by the NEC</p> <p>Updated information to be provided to the Library with each units of DOE contributing with the assistance of the different stakeholders they deal with</p> | <p>FNRC, DOE, National Planning, Academic institutions, NGO's</p> <p>FNRC, DOE, National Planning, Academic institutions</p> | <p>Staffing capacity strengthened</p> <p>MOU established</p> <p>Identified source of funds</p> <p>National Environment Council's role expanded</p> <p>Information forthcoming</p> | 2009-2010 |

|   |  |  |   |  |           |
|---|--|--|---|--|-----------|
|   |  |  |   | Public aware of the different jobs performed by DOE  | 2009-2010 |
| DOE to fully resource its Library and research facilities to attain the following information | Updated Information with regard to the inventory of GHG. Vulnerability assessment, specific climatic and weather information in regard to climate variability and conditions of Fiji (e.g. impact of sea level rise on coastal zones, oral literature of traditions and customs, resilience of community to face changes in global weather systems, adaptation and mitigation options in the forestry, agriculture, food security, coastal zone management and water management. | Updated information to be provided to the Library with each units of DOE contributing with the assistance of the different stakeholders they deal with   | FNRC, DOE, National Planning, Academic institutions               | Public aware of the changing weather patterns  | 2009-2010 |
| Payment of Ecosystem Services (PES)   | Valuation of Ecosystem Service for compensation purpose when major developments such as tourism developments takes places in coastal areas where resource owners or stakeholders, in particular indigenous communities are directly dependant on the services of these natural systems for their subsistence and economic livelihood. Compensation such the value of a mangrove in the protection of foreshores,   | EIA done on these major development sites.<br><br>On approval, valuer to estimate the amount of money to be compensated to the resource owners for the use or for the damage of their resources. | DOE, National Planning, Lands Department, Town & Country Planning | Development either approved or terminated<br><br>Both parties (resource owner and developer) satisfied | 2009-2010 |

|  |   |  |   |   |                                   |
|--|---|--|---|---|-----------------------------------|
|  | Value of a tree in sequestering carbon dioxide and the Value of coral reefs for nursery and wave dissipation services. These are important to compensate  |  |   |   |                                   |
| Establishment of a Climate Change Institution in Fiji. | <p>Main purpose to provide technical research on climate and weather modelling, sea level rise, vulnerability and adaptation, and integrated coastal zone management (ICZM).</p> <p>This unit is tasked to manage national projects that include renewable energy projects such as hydro, solar, wind and generation of electricity from geothermal hot springs. Biomass project e.g. Conversion of fallow land into fuel wood. Bio-fuel e.g. production of Ethanol from Cassava and Molasses. Bio-diesel- e.g. production of coco diesel from coconut oil and jatropa. Reforestation projects e.g. replanting of logged areas afforestation - e.g. planting of forest on degraded land. Biodigesters – e.g. bundling of integrated piggery and waste management plant (village level).</p> | <p>Gather existing information on current change in climatic conditions</p> <p>Availability of funds from Government and donor agencies to ensure timely delivery of implementation of national projects</p> <p>Awareness raising down to the community level on their participation</p> | <p>FNRC, DOE, National Planning, Academic institutions</p> <p>FNRC, DOE, National Planning, Academic institutions</p> | <p>Technical research provided</p> <p>National projects implemented</p> <p>Communities aware of these national projects</p> | <p>2009-2010</p> <p>2009-2010</p> |
| Natural Resource Inventory                             | Formulation, implementation   | Availability of staff to   | DOE   | Natural   | 2009-2010                         |

|   |  |   |                                      |  |           |
|---|--|---|--------------------------------------|--|-----------|
|   | <p>monitoring and reviewing the National Resource Management Plan.</p> <p>Conduction of Natural Resource Inventory exercise</p>  | <p>carry out implementation, monitoring and reviewing</p> <p>Availability of staff to carry out National Resource Inventory exercise</p>                                |                                      | <p>Resource Inventory reviewed</p> <p>Natural Resource Inventory completed</p> |           |
| National Survey and Assessment be undertaken on the following | (1) Soil Inventory (2) Update on status and causes of land degradation in Fiji, (3) national land use in Fiji (3) forest and forest cover survey and (4) Conduction of Natural Resource Inventory exercise | <p>Soil database reviewed.</p> <p>Surveys and researches conducted on causes of land degradation in Fiji, (3) national land use in Fiji (3) forest and forest cover</p> | DOE, Landuse, Agriculture Department | <p>Soil inventory updated</p> <p>Research completed</p>                        | 2009-2010 |

### **Institutional Arrangement**

Executing Agency : DOE& Land Use  
Implementing Agency: : NGO's, Bureau of Statistics, Academic Institution  
Supporting Agency : FNRC

### **Financial Resources**

Resource Mobilization: Government of Fiji & External Donors  
Indicative Budget: \$155,000.00 (FD)

### **Indicative Budget Breakdown per Activity**

| STRATEGY   | ALLOCATED BUDGET   |
|--|--|
| Strengthen monitoring and evaluation of the Government's effort to ensure progress and improvement in systematic research and monitoring in regard the three conventions | \$10,000.00  |
| To strengthen the Fiji National Research Council (FNRC) to centralize all Government research  | \$50,000.00  |
| DOE to fully resource its Library and research facilities to attain the following information  | With reference to Institutional Strengthening of Focal Point with the capacity building of Education and Awareness Unit. |
| Payment of Ecosystem Services (PES)  | \$35,000.00  |
| Establishment of a Climate Change Institution in Fiji.   | With reference to Institutional Strengthening of Focal Point with the Climate Change Unit.                               |
| National Survey and Assessment be undertaken   | \$60,000.00  |

## **6.6 Project 6: Develop and support relevant training and education**

### **Background**

All three of the conventions identify training and education as underlying, specific intentions. Two levels of training and education are required: professional and in-house.

In Fiji there are several local and regional tertiary training and education institutions. Even so, professionals in several convention-related disciplines are obliged to study overseas because top-level relevant training courses are not offered at those institutions – perhaps because of the expense required to set them up. Courses required for natural resource management include forestry, archaeology, and invasive species, natural resource economics

Secondary schools include general environment topics in their teaching but they are handicapped by only having inadequate study material. Teachers are also handicapped by having had limited education themselves in the more 'recent' disciplines of climate change, land degradation and environmental management.

Just as important is the need for in-house training, particularly in human resource techniques and project management skills: capacity assessments revealed that inabilities in these areas are the causes of many constraints in program implementation and development.

Thus the capacity building of governmental workers seems to be focused on a lot of short term skill training locally and abroad, scholarship opportunities to enhance their academic careers, workshops, conferences and meetings, locally and abroad, but the mechanism to hold them and allow them to generate income for the government is very much lacking in almost all sectors of technical expertise for instance civil engineers in government are allowed to be engaged as consultants outside their normal civil servant working hours. Areas that should be looked at are the follow:

Weather forecast personnel at FMS  
 Environmental Scientist at DOE  
 Civil Engineers and Constructors workers at PWD  
 GIS expert at the Forestry and Agriculture Department  
 Mineralogists and Geologists at MRD  
 Vets with the Ministry of Agriculture

### Objective

- More technically skilled Fijians are available to steer national conservation-related activities.
- School curricula updated to include more 'environmental' information.
- Staffs in (mainly) Government institutions have skills in project and team management, reporting, and relevant disciplines such as audio-visual, information technology and mapping.
- Focal point (and other stakeholder) staff have the required technical, economic and social assessment skills to implement conventions obligations and programs

### How it addresses capacity

- It addresses capacity development at individual level through correctly identifying job requirements and skill levels, Is the appropriate learning taking place and what opportunities are there to allow individuals to advance and develop professionally. It also ensure  
 There is adequate access to needed information and there is contact and exchanging knowledge with appropriate peers

### Expected Outcomes

- Strengthened ownership of programs and initiatives (i.e. independent of local and regional NGO influences)
- Enhanced ability to conserve Fiji's environment
- Improved and strengthened capacity to manage convention programs
- Improved and strengthened capacity to implement, facilitate and manage conservation, environment, climate change and land use issues at ministerial, national, sectoral and provincial levels

### Project Strategy

| Table 6.6 TRAINING AND EDUCATION                    |  |   |   |           |
|---|--|---|---|-----------|
| • Immediate priority for implementation (2009-2010) |  |   |   |           |
| Strategy  | Key Action   | Indicators  | Means of verification   | Timeframe |
| Skilled professionals                               | Attachments to overseas institutions, including government departments | More relevant attachments and scholarships made available and more staff accessing them | Better management of Conventions  | On-going  |
|   | Scholarships to overseas tertiary institutions                         | Local tertiary institutions (e.g. TPAF) offer courses relevant to climate               | High 'profile' of focal point and other government (stakeholder) staff in |           |

|  |  |  |   |           |
|--|--|--|---|-----------|
|  | <p>Enhanced capacity of local tertiary institutions to offer relevant training</p> <p>Utilise training offered under COPs and international organisations (e.g. UNDP, GEF)</p> <p>Ensure training material is available in government workplaces</p>   | <p>change, conservation and land management</p> <p>Local tertiary institutions accredited to international standards</p>                         | <p>conservation-related work</p> <p>Better management of Fiji's environment and increased identification of opportunities</p> <p>Standard of local staff in government and other stakeholder institutions increased over time</p> |           |
| School curricula relevant to Convention obligations  | <p>Review and revise school curricula</p> <p>Secure additional training for teachers in environment subjects</p> <p>Compilation of the latest information in a resource kit with the latest and the info that is most relevant to FIJI or pacific.</p> | <p>School curricular revised</p> <p>Thematic topics mainstreamed in Ministry of Education</p> <p>Teachers undertake relevant skills training</p> | <p>Greater awareness of conservation and environment issues in Fiji</p> <p>Better management of projects</p> <p>More efficient use of resources</p>   | 2009-2010 |
| Focal point and other government staff have ability in human resource and project management | <p>Training through TPAF and other institutions in Fiji</p> <p>Government supports training in office hours and by offering incentives</p>   | <p>Greater attendance at training courses</p>  | <p>More effective communication and transfer of skills to communities engaged in conservation-related projects</p>  | 2009-2010 |
| Focal point staff have skills in audio-visual, information technology,                       | <p>Attachments to NGOs and local and overseas institutions</p>   | <p>Institutions identified.</p> <p>PSC approval sought.</p>  |   |           |



|   |   |  |  |  |
|---|---|--|--|--|
| mapping, recording and other relevant disciplines | Mentoring by NGOs, including understudying expatriate experts |  |  |  |
|---|---|--|--|--|

### **Institutional Arrangement**

Executing Agency - DOE, Government of Fiji; Ministry of Education  
Implementing Agency - DOE, LUS, Ministry of Education

### **Financial Resources**

Resource Mobilization - Government of Fiji and External Donors; Pacific Islands Forum; also private sector

**Indicative Budget** -

### **Indicative budget breakdown per activity**

| <b>Activity</b>  | <b>Indicative Budget (FD)</b> |
|--|-------------------------------|
| Review school curricula  | \$8,000.00                    |
| Review skills of teachers  | \$10,000.00                   |
| Support implementation of new courses in school curricula  | \$6,000.00                    |
| Appraise capacity needs in Government stakeholders to ensure better management of Convention-related programs – focus on both human resource and project management, and technical skills (such as analytical skills, modelling, audio-visual, information technology, natural resource economics) | \$10,000.00                   |
| Identify courses and attachments available in Fiji and overseas  | \$5,000.00                    |
| Identify funding for in-service training   |                               |
| Support conduct of relevant training courses by tertiary and technical institutions in Fiji  | \$30,000.00                   |
| Purchase (or provision) of training material – hard copy or computer programs  | \$30,000.00                   |

## **6.7 Project 7: Strengthen communication and awareness raising**

### **Background**

Lack of awareness of the importance of the environment pervades all levels of Government and the public in Fiji, and this lack has had an effect on Fiji's current environment, government programmes and resource allocation. The strong link between environment, poverty and sustainable development is yet to be fully acknowledged by Government.

Information is central to the development of capacity. It depends partly on effective exchange of information, and partly on raised awareness. There is much information in Fiji and the region on matters relevant to the three Rio Conventions (e.g. biodiversity component, traditional knowledge, climate change and sustainable land management) but it presently is contained in pockets of knowledge and so is not available.

By having access to information on climate change and sustainable land use practices, local communities and farmers can adapt more easily to the extreme effects of climate change (such as hurricane, inundation, and coastal erosion, and loss of coral reefs from bleaching, and long

period of droughts associated with El Niño and La Nina phenomena). It will enable them to have greater food security and water management, by managing their farms more sustainably.

In addition, appreciation of Fiji's native biodiversity will engender respect for it, and ensure that it is considered in any planned and actual development activities. Biodiversity awareness will encourage pride in Fiji and enhance the Government's attempts at nation-building.

Recently the Government has officiated the establishment of a Government Information Referral Centre (GIRC) which is a partnership arrangement between Public Service Commission and the Information Technology Centre of Ministry of Finance. The GIRC is to become the focal point for information and offers many modes of communication, make available to public forms and information to be accessed. It is recommended in this NSAP that the Focal Point for the Rio Convention (the Department of Environment and Landuse Section of Ministry of Agriculture) take advantage of this opportunity and maximize its benefit in strengthening capacity for education and awareness.

### **Objective**

- Full utilization of existing knowledge on biodiversity, land use, and climate change events by Convention focal points, stakeholders, and Government.
- Heighten access by communities and the general public to such knowledge.
- Enhance access by decision makers (e.g. Government) to information on biodiversity, climate change and sustainable land use practices
- Greater resource (especially financial) commitment to biodiversity by the Fiji Government
- Ensure available information is better shared and information needs are identified

### **How it addresses capacity**

It strengthens capacity for awareness and dissemination of information as well as strengthens capacity for sharing of information and networking.

### **Expected Outcomes**

- Better informed public (communities, farmers, urban dwellers) on components of biodiversity in Fiji and the need for better environmental management.
- Better informed public (communities, farmers, urban dwellers.) on the possible and real effects of climate change
- Better informed Government
- Increased commitment by Government to focal points
- Integration of the environment and convention obligations in sectoral plans.
- Enhanced sharing of information between Convention stakeholders

## Project Strategy

**Table 6.7 COMMUNICATION AND AWARENESS RAISING**

• Immediate priority for implementation (2009-2010)

| Strategy   | Key Action   | Indicators   | Means of verification   | Priority/Timeframe  |
|--|--|--|---|---------------------|
| A public environment awareness strategy  | <p>Piggy back with existing CC &amp; biodiversity information in NGOs and regional institutions such as WWF, SOPAC, SPREP, FORUM SECRETARIAT, and USP's IAS, PACE &amp; MSP</p> <p>Nominate a lead agency (such as the Live &amp; Learn Environment Education NGO) to develop strategy</p> | <p>Awareness strategy developed</p> <p>Regional institutions &amp; NGOs willing to assist in development of awareness strategy</p>                                   | <p>Awareness strategy funded</p> <p>Better informed Fiji community</p> <p>Cleaner Fiji environment</p> <p>More sustainable farming (and household) practiced throughout Fiji</p>    | Urgent – Short term |
| Increase environment awareness programs and make them available to all communities | <p>Piggy back with existing CC &amp; biodiversity information in NGOs and regional institutions such as WWF, SOPAC, SPREP, FORUM SECRETARIAT, and USP's IAS, PACE &amp; MSP</p> <p>Secure more funds to support development of awareness programs</p>                                      | <p>Regional institutions &amp; NGOs willing to assist in development of awareness strategy</p> <p>Donors identified for assistance to develop awareness programs</p> | <p>Programs developed</p> <p>Environmental 'out-reach' program active and accessible throughout Fiji</p> <p>DOE offices established in Lautoka or Nadi, Labasa, and Vanuabalavu</p> | Short to long term  |

|   |  |   |  |   |
|---|--|---|--|---|
| Decentralize and overhaul the DOE   | <p>Prepare submissions to Government for establishment of DOE offices in other Fiji Districts to be achieved after Phase 3 of the Institutional Strengthening of DOE</p> <p>Review operations of DOE w.r.t awareness program Development and delivery</p>  | <p>Submissions accepted by Government; staff and resources identified</p> <p>Review carried out</p>   | <p>Environment Units present in NLTB, FAB, Provincial and District offices, and large environment-related companies such as FHL, Tropik Woods<br/>Trained staff available</p> <p>Database/mechanism exists (tangible)</p> <p>Information submitted to database</p> | Short to medium term  |
| Establish centralised information system for Convention information relevant to Fiji be included and incorporated into the GIRC | Collate Information into database  | Database/mechanism exists (tangible)  | Establishment of centralised information system for Convention information relevant to Fiji be included and incorporated into the GIRC   | Short to medium term  |
| (Re) establish Environment Units in Government, statutory and large commercial organisations                                    | <p>Prepare submissions to Government and relevant private organizations for (re) establishment of Environment Units.</p> <p>Draw up TOR, Standard Operating Procedure, Communication Strategy, Agree to Funding Arrangement and draw up MOU (when required) for establishment of Environment Units in Government, statutory and large commercial organizations.</p> <p>Conduct consultation workshop for EMU establishment.<br/>Obtain endorsement of NEC and Preparation of Cabinet Endorsement</p> | <p>Submissions accepted; staff and resources identified</p> <p>TOR, Standard Operating Procedure &amp; Communication Strategy put in place</p> <p>Number of workshops conducted</p> | <p>Endorsement of Cabinet Paper on establishment of EMU's</p> <p>TOR, Standard Operating Procedure &amp; Communication Strategy Documents</p> <p>EMU Inception Workshop</p>  | <p>Short to medium term</p> <p>Short to medium term</p> <p>Short to medium term</p> |
| Maximize benefit of   |  |   |  |   |

|   |   |  |  |  |
|---|---|--|--|--|
| Government Information Referral Centre (GIRC)                               | for establishment of EMU.<br><br>Clearing house mechanism (or centralised information system) established for Convention information relevant to Fiji be included and incorporated into the GIRC  | Endorsement of Cabinet Paper on establishment of EMU's<br><br>Agreement to establish mechanism   | reports<br><br>EMU Established<br><br>MOU's between Government and related stakeholders involved with the establishment of the mechanism | Short to medium term<br><br>Short to medium term                             |
| Maximize benefit of Government Information Referral Centre (GIRC)           | Appoint the EO- Liaison and EO Awareness to be responsible for coordination and inclusion of Education and Awareness Information, Forms and Permits etc with GIRC<br><br>Gain support from stakeholders by preparing briefing papers and holding workshops<br><br>Engage (or train) staff to manage the mechanism | Agreement to establish mechanism<br><br>Proper coordination and communication between GIRC and relevant stakeholders<br><br>Number of workshops conducted<br><br>Improved productivity and efficiency in managing GIRC | Information sent out to all stakeholders<br><br>Feedback from stakeholders<br><br>Trained Staff available for management of mechanism    | Short to medium term<br><br>Short to medium term<br><br>Short to medium term |
| NGOs and other non-Government stakeholders make their information available | Agreement reached for access to information through MOUs  | NGOs willing to provide information  | Information provided and verified  | Short to medium term   |

**Institutional Arrangement**

Executing Agency - DOE  
 Implementing Agency - DOE, Live & Learn Environment Education; Department of Education; NGOs

**Financial Resources**

Resource Mobilization - Government of Fiji & External Donor  
 Indicative Budget - \$20,000.00

**Indicative budget breakdown per activity**

| Activity   | Indicative Budget (FD)  |
|--|---|
| Development of environment awareness strategy                                      | \$15,000.00   |
| Establishment of clearing house mechanism (database)                               | Already addressed under Performance and Reporting Mechanism.  |
| Training of staff to manage database   | Already addressed under Performance and Reporting Mechanism   |
| Development of relevant program for public, private and Government sectors in Fiji | With reference to Institutional Strengthening of Focal Point with the capacity building of Education and Awareness Unit |
| Decentralization of DOE  | With reference to Institutional Strengthening of Focal Point  |
| (Re) establishment of Environment Units in Government and statutory organisations  | With reference to Institutional Strengthening of Focal Point  |
| Maximize benefit of Government Information Referral Centre (GIRC)                  | \$5,000.000   |

## **7.0 Programme 3 - Environmental and Sustainable Natural Resources Management Projects [Medium to Long Term]**

(These are projects that are expected to produce outcomes and benefits that transcends across the three thematic areas.)

### ***7.1 Project 1: Promote and strengthen sustainable land management***

**Background**

Fiji is in the process of reviewing the Land Conservation and Improvement Act, and this should be endorsed through Cabinet by the end of 2008. Hopefully with this endorsement, the revised Act would be implemented and enforced by 2009. The Rural Land Use and the Fiji Forest policy have both being formulated and endorsed. Hopefully the positive outcomes, in terms of the policy guidance they provide to the stakeholders and the rural communities would be realized in the coming years.

There are relevant projects implemented by relevant Departments and organizations, either jointly or independently. Most of these projects are relatively small in size and are or have been externally funded. Though this is acceptable, however in regards to sustainability, this also could be a risk as funding at times are dictated by external factors. Furthermore, the implementation of "small size" projects stretches already limited resources in terms of implementation management, coordination and reporting, thereby inadvertently in some cases basically skimming only the principles of projects.

In 2008, the Ministry of Agriculture, Fisheries and Forests received funding from the Global Environment Facility (GEF), through UNDP for the implementation of a four year Sustainable Land Management (SLM) project. The project is being implemented by the Land Resource Planning Division (LRPD).

This project proposal is aimed at addressing most of the already identified needs in terms of ensuring the protection and sustainable utilization of Fiji's land resources, as contained in the Fiji UNCCD National Action Plan (NAP) and the Fiji Rural Land Use Policy, but at a more sustained way through better strategic planning and with bigger funding.

### **Objectives**

To protect and ensure that the land, water and forest resources are used in an ecologically sustainable manner, through effective regulatory mechanisms and sound land, water and forest use practices.

### **Specific Objectives**

- (i) To prepare an authoritative national land use plan
- (ii) Protection of water and soil values
- (iii) To increase public awareness that Land Resources including soil, water and flora are interdependent and must be sustainable managed in an integrated way
- (iv) To increase awareness of individual land users and community regarding their responsibilities for preventing and or mitigating land degradation

### **Expected Outcomes**

- Protection of water and soil values
- Increased public awareness that land resources including soil, water and flora are interdependent and must be sustainable managed in an integrated way
- Capacity building of individual land user and community to be responsibility for preventing and or mitigating land degradation

## Project Strategy

**Table 7.1 PROMOTE AND STRENGTHEN SUSTAINABLE LAND MANAGEMENT**

• **Medium to Long term (2009-2010)**

| Objectives   | Strategies  | Activities  | Key Performance Indicators   | Organizations Responsible  |
|--|---|---|--|--|
| To prepare an authoritative national land use plan | Produce a national land zone at both peri-urban and national levels<br><br>Produce a national land use plan at the Provincial/Divisional Level  | List the range of potential land users<br><br>Collate natural resources information in GIS<br><br>Generate specific use-suitability and general land use maps from GIS<br><br>Map recommended land zones and boundaries of protected areas<br><br>Define land zones and guidelines for use within each zone<br><br>Conduct extensive consultation with land users/owners, officials and public at large | National land zone completed by 2015<br><br>A national land use plan completed by 2015<br><br>Generation of large scale land use maps<br><br>Mapping and digitisation of protected area with protection status<br><br>Appropriate treatment of land parcels per zone identified<br><br>Survey of land users and owners | Town and Country Planning<br>Land Department<br>National Planning<br>Provincial Development<br><br>Town and Country Planning<br>Land Department<br>National Planning<br>Provincial Development<br><br>Ministry of Agriculture<br>Town and Country Planning<br>NLTB<br>Land Department<br>Forestry<br>National Planning<br>Provincial Development |
| To prepare an authoritative national land use plan | Produce a national land zone at both peri-urban and national levels<br><br>Produce a national land use plan at the Provincial/ Divisional Level | Legislate the national land zone<br><br>Assess land use Policy<br><br>Select methodologies and develop approach   | Legislate the national land zone<br><br>Assess land use Policy<br><br>Select methodologies and develop approach  | Town and Country Planning<br>Land Department<br><br>Town and Country Planning<br>Land Department<br>National Planning<br>Provincial Development<br><br>Town and Country Planning<br>Land Department<br>National Planning   |



|  |  |   |   |   |
|--|--|---|---|---|
|  |  | <p>Conduct formal public consultations</p> <p>Collate biophysical data from land resources surveys</p> <p>Evaluate land suitability and generate maps via GIS</p> <p>Evaluate and apply land use models from land information system</p> <p>Analyse environmental, economic and social impacts</p> <p>Develop and present viable land use options at public forums</p> <p>Prepare land use plan</p> | <p>Conduct formal public consultations</p> <p>Collate biophysical data from land resources surveys</p> <p>Evaluate land suitability and generate maps via GIS</p> <p>Evaluate and apply land use models from land information system</p> <p>Analyse environmental, economic and social impacts</p> <p>Develop and present viable land use options at public forums</p> <p>Prepare land use plan</p> | <p>Provincial Development</p> <p>Town and Country Planning<br/>Land Department<br/>National Planning<br/>Provincial Development</p> <p>Ministry of Agriculture<br/>Town and Country Planning<br/>NLTB<br/>Land Department<br/>Forestry<br/>National Planning<br/>Provincial Development</p> <p>Town and Country Planning<br/>Land Department<br/>National Planning<br/>Provincial Development</p> |
|--|--|---|---|---|

|                                     |   |   |   |   |
|-------------------------------------|---|---|---|---|
| Protection of water and soil values | <p>Compilation of national soil inventory</p> <p>Produce a Land Use inventory of Fiji</p> <p>Monitor and Evaluate the status of land degradation in Fiji</p> <p>GIS modelling on Water and Soil Parameters for impact assessments</p> | <p>Conduct the Soil Inventory Survey of all districts in Fiji</p> <p>Digital capturing of surveyed information into spatial &amp; attribute database</p> <p>Field survey and mapping of present land use</p> <p>Digital capturing of surveyed information into spatial database</p> <p>Conduct the Land Degradation Assessment of all districts in Fiji</p> <p>Acquire and compile climate, soils and plant information</p> | <p>Soil Inventory of Fiji completed by 2013</p> <p>Creation of database</p> <p>Survey report compiled</p> <p>National Present Land Use Inventory update every five years</p> <p>Updated report and maps produced every five years</p> <p>Land Suitability &amp; Erosion prediction model for Fiji</p> | <p>Ministry of Agriculture</p> <p>Department of Lands</p> <p>Ministry of Agriculture Forestry</p> <p>Department of Lands</p> <p>Ministry of Agriculture Forestry Environment NGO's, USP</p> <p>Ministry of Agriculture Meteorology Forestry</p> |
|-------------------------------------|---|---|---|---|

|   |   |  |  |  |
|---|---|--|--|--|
| <p>Increase public awareness</p> <p>Land Resources including soil, water and flora are interdependent and must be sustainable managed in an integrated way (Review of executed GEF/UNDP funded programme currently implemented for Phase 2)</p> | <p>Public awareness on the sustainable uses of land and water resources</p> <p>Develop appropriate education and awareness programs for sustainable land based management</p> <p>Development of low cost appropriate SLM technologies</p> <p>Increased Public awareness of the value of trees and forests</p> | <p>Conduct awareness program on the sustainable use of land and water resources in all districts of Fiji's 14 Provinces</p> <p>Develop teaching material on SLM</p> <p>Transfer of SLM technologies</p> <p>Adoption of sound land use practices</p> <p>Educational curriculum to include trees and forestry subjects</p> <p>Develop strategic guidelines for public access to indigenous forests</p> | <p>187 training carried out in the 187 districts by 2013</p> <p>Low cost sustainable land management technologies adopted</p> <p>Number of Demonstration and Conservation farms established.</p> <p>Adoption of sound land use practices</p> <p>All schools to include tree and forestry subjects in their curriculum</p> <p>Access routes &amp; procedures identified</p> | <p>NLTB, Ministries of; Agriculture Education, Forestry, Environment, Finance &amp; National Planning Provincial Development, Lands &amp; Surveys, Town &amp; Country Planning, FAB, Relevant NGO'S, Fiji Hardwood Corporation, Fijian Affairs, Women</p> <p>Provincial Development</p> <p>NLTB, Ministries of; Agriculture</p> <p>Ministries of Education</p> <p>Ministries of Forestry</p> |
| <p>The individual land user and community have responsibility for preventing and or mitigating land degradation</p>   | <p>Participatory District Based Land Use planning</p> <p>Identification and training of Landcare facilitators</p> <p>Promotion of Land Care concept</p>   | <p>Development and Implementation of Participatory Tikina Based Land Use Plan</p> <p>Carry out participatory Tikina Based Land Use Survey</p> <p>Land care facilitators fully trained in SLBRM</p> <p>Identification and training of Landcare facilitators</p> <p>Formulation of Land care Groups</p>  | <p>187 Tikina Based Land Use Plans developed</p> <p>National Land Use Plan at the Tikina level developed</p> <p>187 Landcare facilitators fully trained in SLBRM</p> <p>Number of Land Care Groups formed</p> <p>187 Landcare Groups formed</p>  | <p>Ministry of Agriculture Provincial Development</p> <p>Provincial Development</p> <p>Ministry of Agriculture</p> <p>Ministry of Agriculture Provincial Development</p>   |

**Institutional Arrangement**

Executing Agency - Ministry of Agriculture  
Implementing Agency - As indicated in the table

**Financial Resources**

Resource Mobilization - Government of Fiji and External Donors  
Indicative Budget - \$6.5 million (FD)

**Indicative budget breakdown per activity**

| <b>Activity</b>  | <b>Indicative Budget (FD)</b> |
|--|-------------------------------|
| Preparation of an authoritative national land use plan and national land zone plan | \$500,000                     |
| Protection of water and soil values through surveys and monitoring                 | \$1.5 million                 |
| Review SLM project, formulate and implement SLM Phase 2                            | \$1.5 million                 |
| Capacity building of stakeholder for participatory planning at Tikina level        | \$3 million                   |

**7.2 Project 2: Promote and establish integrated watershed management****Background**

Most of the major watersheds in Fiji are highly degraded, particularly from human activities such as indiscriminate logging, poor cultivation practices and intensive grazing. These activities have significantly affected the hydrological flows, with the occurrence of heavy situation along the river channels.

Fiji has been confronted with frequent occurrences of flooding in recent years with damages to infrastructures, crops and livestock, amounting to millions of dollars. There have been a number of reactive approaches in an attempt to mitigate flooding such as dredging of the main rivers; however a more proactive approach is needed that is holistic. This holistic approach to mitigate flooding can be achieved through the use of the integrated watershed management approach.

The Land and Water Resource Management at the Ministry of Agriculture in collaboration with SOPAC have secured a GEF funding for the implementation of the Nadi watershed management project. This proposal focuses on other two major watersheds, the Ba and the Labasa watersheds.

**Goal**

The goal of project is to achieve sustainable natural resources management and sustainable development planning for the long term protection and conservation of natural ecosystems within the major watersheds of Fiji, through the application of an integrated assessment and action methodology. The Ba and Labasa watersheds will be pilot sites for this project due to the frequent occurrences of devastating floods causing adverse impacts to humans and infrastructures.

**Specific Objectives:**

The specific objectives of the proposal may be stated as:

- To apply an integrated assessment and action methodology in order to acquire an in-depth knowledge and understanding of the various social, economic and environmental drivers of change and stresses on the natural resources and ecosystems;
- To accurately quantify, map and characterize the existing natural resources within the five major watersheds;

- To evaluate the vulnerability and adaptation assessment of internal and external stresses including natural disasters and climate change;
- To identify and critically assess adaptation options and facilitate the formulation of adaptation plans to address external stresses including natural disasters and climate change;
- Through the derived information, facilitate the communities to develop sustainable natural resources management and sustainable development plans;
- Provide the government of Fiji the baseline information to assist in the formulation of five Watershed Master Plans; and
- To facilitate the actual implementation of some of the identified activities wherever practicable or feasible within the limits of the project funding

## **Rationale**

The problems that this research would attempt to address are multi-faceted; they include the environmental, sociological and economic dimensions. The primary problems that have been identified by the Department of Agriculture in terms of land and natural resources degradation and mismanagement include: (i) deforestation; (ii) unsustainable logging; (iii) intensive sloping land cultivation; (iv) intensive flat land cultivation; (v) improperly managed commercial livestock farming; (vi) reclamation of freshwater swamps; (vii) demographic changes; (viii) over dependence on the sugar industry; (ix) non application of appropriate technologies; (x) weak institutional infrastructure; (xi) lack of proper water resources policy; (xii) inappropriate land use in watersheds; (xiii) ineffective information dissemination; (xiv) complex land tenure system; (xv) poverty; and (xvi) poor local control, responsibility and incentive because of central government control.

## **Expected Outcomes**

- Through the various surveys, an in-depth knowledge and understanding of the biophysical environment and prevalent socio-economic systems would be obtained, documented and discussed, for the two watersheds.
- The project communities, the general public and policy makers will acquire both the knowledge and understanding of what and why sustainable natural resources management is important, particularly at the watershed level and its linkages to other ecosystems such as the coastal zone and the marine and reef ecosystems.
- The ensuing developments in the Ba and Labasa watersheds would be proper and with environmental integrity as these would be governed by masterplans that are based on ensuring that the natural resources and environment are sustainably managed and properly protected respectively.
- The natural resources, including soil, water and forest resources are managed sustainably and the environment protected as communities take ownership of the planning processes and utilise the natural resources within the framework of their own sustainable development plans.
- The level of funding required for and the frequency of dredging the major river mouths in Fiji would be expected to decrease substantially in the future, once the identified programmes and formulated community plans and policies are implemented.
- The adverse impacts of climate change and natural disasters such as drought, cyclones and flooding would be mitigated to acceptable levels as communities and the Fiji Government implement relevant programmes that would increase the resilience and decrease the vulnerability of project communities and the natural ecosystems.
- The lessons learnt from this pilot project would assist in managing other major and minor watersheds in Fiji.

**Activities:**

The following is a summary of activities within the 7 phases of the integrated methodology.

**Phase 1: Project Formulation**

This Phase will involve a careful realignment of the methodology to meet the research objectives and cater for the research project management system, as well as its applicability at the watershed scale.

**Phase 2: Project Coordination**

This phase involves the setting up of the project management and coordination mechanisms and infrastructural requirement. The other activity is the setting up of a project advisory team with an agreed Term of Reference (TOR) for their involvement in the project.

**Phase 3: Stakeholder Consultations**

This phase involves the initial consultations with the various communities living within the two watersheds. This will be accompanied by well structured awareness programmes related to sustainable resources management and presentation of other socio-economic and environmental induced stresses. The levels and types of participation and involvement expected of the various stakeholders would also be discussed in this phase.

**Phase 4: Assessment**

In terms of gathering data and information, the study will involve the following activities: (i) literature review; (ii) stakeholder interviews; (iii) structured field surveys for resource mapping, including aerial photo and satellite imagery interpretation; and (iv) community workshops.

**Phase 5: Information Synthesis and Planning**

This phase involves the use of the gathered data and information to assist in the formulation of the project communities sustainable natural resources management plans, including the development of the Ba and Labasa watershed master plans.

**Phase 6: Implementation**

This phase involves the implementation of the various activities contained in the endorsed sustainable natural resources plans. For this research project, those measures which the communities themselves could undertake with relatively low to medium external financial assistance would be implemented. The other measures requiring high financial capital would have to be submitted through further government and external funding.

**Phase 7: Evaluation and Monitoring**

This phase involves the evaluation of and the effectiveness & efficiency of the execution of the overall project and monitoring of the effectiveness of the implemented sustainable resources management activities during the project period and up to a maximum of ten years after the end of the project.

**Project duration and timetable (\*Agreement to Fund (ATF))**

| Activities      | Year 1<br>[months] | Year 2 | Year 3 |
|-----------------|--------------------|--------|--------|
| 1. Formulation  | *ATF + 0 – 6       |        |        |
| 2. Coordination | ATF + 0 – 6        |        |        |
| 3. Consultation | ATF + 3 – 6        |        |        |
| 4. Assessment   | ATF + 6 – 18       |        |        |

|                            |              |               |  |
|----------------------------|--------------|---------------|--|
| 5. Planning                | ATF + 6 – 24 |               |  |
| 6. Implementation          |              | ATF + 12 –36  |  |
| 7. Evaluation & Monitoring |              | ATF + 12 - 36 |  |

### **Institutional Arrangement**

- Executing Agency - Ministry of Agriculture
- Implementing Agency - Ministry of Agriculture, Ministry of Forest, PACE-SD (USP)

### **Financial Resources**

- Resource Mobilisation - Government of Fiji and External Donors
- Indicative Budget - \$5.282 million (FD)

### **Indicative budget breakdown per activity**

| Expenditure          | Donor Funding |           |         | Co-funding (In Kind) |         |         |
|----------------------|---------------|-----------|---------|----------------------|---------|---------|
|                      | Year 1        | Year 2    | Year 3  | Year 1               | Year 2  | Year 3  |
| Personnel            | 400,000       | 400,000   | 400,000 | 120,000              | 120,000 | 120,000 |
| Supplies & operation | 600,000       | 200,000   | 200,000 | 40,000               | 40,000  | 40,000  |
| Equipment            | 1,400,000     | 600,000   | 200,000 | 60,000               | 60,000  | 60,000  |
| Training/Workshops   | 60,000        | 20,000    | 60,000  |                      |         |         |
| National Travel      | 20,000        | 20,000    | 10,000  | 4,000                | 4,000   | 4,000   |
| Publications         |               |           | 20,000  |                      |         |         |
| Other expenses       |               |           |         |                      |         |         |
| Annual BUDGET        | 2,480,000     | 1,240,000 | 890,000 | 224,000              | 224,000 | 224,000 |
| TOTAL BUDGET         | \$4,610,000   |           |         | \$672,000            |         |         |

## **7.3 Project 3: Promote and Replicate Sustainable Management of Water Resources**

### **Background:**

The world is enduring a serious water crisis. It is mainly caused by the unsustainable management of water resources, and not primarily water scarcity as such. Having a holistic river/lake basin and ecosystem approach is the response to managing all water resources. A better evaluation and recognition of the values and functions of water-related ecosystems as well as the valuation of current water usage patterns that are unsustainable should be a first start.

Sustaining and maintaining clean water sources for communities both in rural and urban areas is threatened by both climate change and various development processes that threatens the sustainability of freshwater sources. Climate Change could impact the hydrological cycle and water management systems. The increasing temperatures and projected decrease in precipitation would lead to decreased water supplies and increased water demands.

There have been established projects focusing on fulfilling communities freshwater supply needs initiated by government and civil societies. These approaches have used community based approach in which the community identifies the problem and needs upon which the project is developed accordingly. Government have contributed in terms of infrastructure and

making water accessible to the communities. In areas outside the main water supply systems, joint partnership between government and civil societies including donors should be encouraged so that sustainable water management systems should be replicated, especially in vulnerable areas.

### Objective

To properly manage and protect Fiji's water resources so that it can sustain basic human needs without compromising its ecological services in a sustainable manner.

### How this addresses capacity

(i) Water managers and relevant stakeholders would be engaged in formulating relevant policies for the sustainable use of water resources.

(ii) The implementation of appropriate projects and programmes would promote capacity building for the relevant stakeholders.

| <b>Table 7.3 PROMOTE AND REPLICATE SUSTAINABLE MANAGEMENT OF WATER RESOURCES</b>                          |  |  |  |  |
|---|--|--|--|--|
| • <b>Medium to Long term (2009-2010)</b>  |  |  |  |  |
| <b>STRATEGY</b>   | <b>KEY ACTIONS</b>   | <b>EXPECTED RESULT</b>   | <b>RESPONSIBLE &amp; COLLABORATING AGENCIES</b>  | <b>INDICATORS</b>                                      |
| Holistic Ecosystem Approach   | Formulate an ecosystem-based approach as a strategy for integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable fashion | Agriculture Ministry and other stakeholders involved to come together and give ideas on the best way to promote conservation and sustainable resource management | Ministry of Agriculture, Fisheries and Forest, Department of Mineral Resources, Department of Water and Sewerage, Department of Forestry, Department of Hydrology, Fiji Meteorological Services, Native Land Trust Board, Fijian Affairs, Ministry of Regional Development, Department of Tourism, Department of Lands, SOPAC and USP. | Holistic ecosystem approach established                |
| Improve Infrastructure both for storage and delivery of clean and safe water, especially to urban centres | Extensions and improvements in infrastructure, and reforms through implementation of the Water and Sewerage Department Reorganization Charter.   | Water and Sewerage Department set up an organized way of infrastructure that benefits both parties   | Department of Mineral Resources, Department of Water and Sewerage, Department of Hydrology, Fiji Meteorological Services, Native Land Trust Board, Department of Lands, SOPAC and USP.   | Infrastructure for water delivery and storage improved |



|  |   |   |  |   |
|--|---|---|--|---|
|  | <p>Identifying, repairing and monitoring of leakages within the system.</p> <p>Formulation of project proposal for proper maintenance</p> <p>Formulated proposals for capital projects that will fulfil current and future demand for water</p>   | <p>Technicians check on infrastructure regularly</p> <p>Availability of funds</p> <p>Hiring of experts to look into the proper maintenance and improvement of infrastructure</p>  | <p>Department of Water and Sewerage, Department of Hydrology</p> <p>Department of Mineral Resources, Department of Water and Sewerage, Department of Hydrology</p> <p>Department of Mineral Resources, Department of Water and Sewerage, Department of Hydrology, SOPAC and USP</p>  | <p>Leakage problems addressed and minimized</p> <p>Funding available</p> <p>Infrastructure designed to meet the current and future demands for water</p>  |
| Intensive Research Studies be undertaken in the following area | <p>Assessment of Water Quality, supply and demand</p> <p>Protection of water resources quality and aquatic ecosystems services</p> <p>Improve drinking water supply and ensure sustainability</p> <p>In-depth assessment on the impact of climate change on water resources.</p> <p>Assessment of the extent of over exploitation of ground water aquifers</p> <p>Assessment of pollution caused by agricultural chemicals on water bodies.</p> | <p>Observe the trend of the usage of water in different areas</p> <p>Do monitoring on all areas of the aquatic system</p> <p>Accredited laboratories regularly do tests on main water sources</p> <p>Look into recent research or studies done locally on climate change.</p> <p>Raise awareness to communities and the</p> | <p>Department of Water and Sewerage, Department of Hydrology, Fiji</p> <p>Meteorological Services, Department of Lands, SOPAC and USP.</p> <p>Department of Water and Sewerage, Department of Hydrology, Fiji Meteorological Services, Department of Lands, SOPAC and USP.</p> <p>Department of Lands</p> <p>Ministry of Agriculture</p> | <p>Intensive research completed</p> <p>Aquatic system monitoring ongoing</p> <p>Efficient supply of drinking water</p> <p>In-depth assessment accomplished</p> <p>People aware of the extent of over exploitation</p> <p>Public</p> |

|  |  |   |   |  |
|--|--|---|---|--|
|  |  | general public on the proper usage of land<br><br>Report on agricultural chemicals that cause water pollution |   | awareness and concern on impacts of chemical to water bodies |
| Policy in place on the Sustainable Management of Water Resources         | Engage legal and other relevant specialist to develop a sustainable national water resources management policy   | An accepted Sustainable national water resources management policy in place                                   | Ministry of Agriculture, Fisheries and Forest, Department of Mineral Resources, Department of Water and Sewerage, Department of Forestry, Department of Hydrology, Fiji Meteorological Services, Native Land Trust Board, Fijian Affairs, Department of Lands, SOPAC and USP. | Relevant Policy completed                                    |
| Creation of a national water consumption, status and management database | Prepare a database that would give a true picture of availability and consumption patterns of water useful in determining and forecasting the levels of scarcity or abundance. | Water and Sewerage Department officers provide water usage activities data                                    | Ministry of Agriculture, Department of Mineral Resources, Department of Water and Sewerage, Department of Hydrology, Department of Lands and SOPAC  | Database completed   |

### **Institutional Arrangement**

- Executing Agency - Ministry of Agriculture, Fisheries and Forest
- Implementing Agencies - Ministry of Agriculture, Fisheries and Forest, Department of Water and Sewerage, Department of Hydrology, Department of Mineral Resources, Department of Forestry, Department of Lands, Native Lands Trust Board, USP & SOPAC
- Collaborating Agencies - Fiji Meteorological Services, Native Land Trust Board, Fijian Affairs, Ministry of Regional Development, Department of Tourism, Department of Lands

### **Financial Resources**

- Resource Mobilization - Government of Fiji and External Donor
- Indicative Budget: - \$3,430,000.00 (FD)

### **Indicative budget breakdown per activity**

| <b>Activity</b>   | <b>Indicative Budget (FD)</b> |
|---|-------------------------------|
| 1.0 Holistic Ecosystem Approach   | \$30,000.00                   |
| 2.0 Improve Infrastructure both for storage and delivery of clean and safe water, especially to urban centres (Phase 1) | \$3,000,000.00                |
| 3.0 Intensive Research Studies be undertaken in the following area  | \$200,000.00                  |
| 4.0 Policy on Sustainable Management of Water   | \$100,000.00                  |
| 5.0 Creation of a national water consumption, status and management database  | \$100,000.00                  |

## ***7.4 Project 4: Promote and Replicate Integrated Coastal Zone Management***

### **Background**

The major political, social and economic centres are located on low-lying coastal zones and the impact of sea level rise such as inundation and/or coastal flooding, salinity intrusion and tsunamis are increasing every year. This puts a lot of pressures on small island countries including Fiji. Therefore it is imperative that the Government of Fiji should initiate and support a programme that would coordinate and regulate all developments that are located within the coastal zone.

Integrated Coastal Zone Management (ICZM) has been one of the least prioritized thematic areas under the CC scope of implementation. It was observed that the Institute of Applied Science, under the auspices of the University of the South Pacific has taken the lead role in facilitating the sustainability of ICZM in Fiji. However due to lack of funding the programme has been discontinued for the last three years.

“Top down approach” has been the classical example of development in Fiji, where things are pushed from the top right down to the bottom with little or no integration of a “bottom up approach”. This has been very problematic due to its inclusiveness, with little or no transparency and little ownership of the projects by the resource people at the grass root level who feel that they are always left out in all the projects that governments implemented at the top echelon of the decision making body. Thus in 1995, an integrated coastal zone management tool was prepared for DOE. This tool was used as a basis to look at coastal zone development from a multi-dimensional perspective. Its purpose was to allow for an integrated bottom up and top down approach at all levels of management in government. This project is intended to assess and replicate the approach in selected sites and islands within Fiji.

### **Objective**

To promote integrated coastal zone management as a programme for coordinating and regulating developments, management and protection of the coastal zone.

### **How this addresses capacity**

- It maximizes achievement of output that addresses climate change and adaptation through an integrated approach with shared capacity for resources.
- An integrated management approach that provides a holistic approach that enhances coordination and networking in addressing adaptation and mitigation to climate change

- The replication of the Integrated Coastal Zone Management Project better fulfils the government's obligation to the UNFCCC for appropriate adaptation to the impacts of climate change

### Project Strategy

| <b>Table 7.4 PROMOTE AND REPLICATE INTEGRATED COASTAL ZONE MANAGEMENT</b><br><b>• Medium to Long term (2009-2010)</b> |   |   |   |  |
|---|---|---|---|--|
| <b>Objectives</b>   | <b>KEY ACTIONS</b>  | <b>EXPECTED RESULT</b>  | <b>RESPONSIBLE AGENCY</b>   | <b>INDICATORS</b>  |
| The NEC to mandate the formation of an Integrated Coastal Zone Management Committee.                                  | The Integrated Coastal Management Committee to address complex issue that includes approval of coastal projects including its climate implication | Channel of approval clearly identified  | DOE, Department of Lands, Department of Forestry, Department of Fisheries and USP | NEC had endorsed an Integrated Coastal Zone Management Committee |
|   | Ensure best practice are replicated and inappropriate measures are not promoted   | Encourage transparency and promote good management                                | DOE, Department of Lands, Department of Forestry, Department of Fisheries and USP | Streamlining of integrated work                                  |
|   | To make directions to DOE on policy formulation, issues and information relating to coastal development.  | DOE will be better informed on issues relating to coastal activity and management | Department of Lands, Department of Forestry, Department of Fisheries and USP      | Low cost adaptation measures for Integrated Coastal Zone         |

|   |   |  |  |   |
|---|---|--|--|---|
| Replicate Good Practice of Integrated Coastal Zone Management initiative particularly (low cost) to other identified priority area. | <p>Establish Baseline Information of all existing Coastal Zone Management in the following:</p> <ul style="list-style-type: none"> <li>- Initiative carried out in Fiji by all sectors that inclusive of government and civil society</li> <li>- coastal profile</li> <li>- coastal processes (scientific data)</li> <li>- economic zone, political and socio-economic zone</li> <li>- Identify problem and strategy in place to address it</li> <li>- Funding Arrangement and Total Cost for implementation. e.g. Good Practice and Lesson Learnt.</li> </ul> <p>Provincial and District Office to provide listing of all vulnerable areas in Fiji in which Integrated Coastal Zone Management can be replicated to.</p> <p>Integrated coastal zone management committee of NEC to be tasked to Prioritise and select project site for integrated coastal zone management project.</p> | <p>Capacity addressed</p> <p>Availability of funds</p> <p>Communities encouraged practicing low cost adaptation measures of adapting to coastal erosion.</p> <p>Identification of a site which is representative of the priority sector area in Fiji</p> | <p>DOE, Department of Lands, Department of Forestry, Department of Fisheries and USP</p> <p>DOE, Department of Lands, Department of Forestry, Department of Fisheries and USP</p> <p>National Environment Council</p> <p>DOE, Department of Lands, Department of Forestry, Department of Fisheries and USP</p> <p>Department of Lands, Department of Forestry,</p> | <p>Management being practiced in some communities such as Buretu, Tailevu.</p> <p>Ongoing adaptation measures adopted by other communities</p> <p>Consensus amongst all stakeholders on site selection</p> <p>Awareness programme on coastal degradation adaptation done to communities</p> <p>Ongoing monitoring of mangrove usage</p> |
| Mangrove Management Plan be mandated under the Integrated Coastal Zone Management Committee of NEC                                  | <p>NEC to endorse the Integrated Coastal Zone Management Committee in overseeing the Mangrove Management Plan.</p> <p>Review provisions</p>   | <p>Legal unit identify appropriate clause to amend</p>   |  |   |

|                              |   |   |   |  |
|------------------------------|---|---|---|--|
|                              | <p>under EMA, Lands Act, Forestry Degree and Rivers and Streams Act on the extension of boundaries from 30m landward from high water mark covered by mangrove.</p> <p>Recommend an inventory be done on a renewed zonation of mangrove areas.</p> <p>Mangrove distribution is widely dispersed thus capacity for monitoring of planned usage of mangrove area is lacking thus it is recommended that coastal committee and the community as warden to monitor usage on the ground</p> <p>The Integrated Coastal Zone Management Committee of NEC to be included in the list of referrals by the Lands Department on the conformity of application to planned usage of the mangrove area</p> | <p>Intensive survey on mangrove land area</p> <p>Consultations between interest groups, including legislative drafters</p> <p>Funds and staff (wardens) be available</p> <p>More feedback to the approving authorities (DOE, Lands Dept. etc) on the progress of mangrove usage</p> <p>Usage of mangroves based on sustainable traditional practices</p> <p>Through involvement and consultation of the NEC in planning usage of mangrove areas</p> | <p>Department of Fisheries</p> <p>DOE, Department of Lands, Department of Forestry, Department of Fisheries and USP</p> <p>Department of Lands</p> <p>Department of Fisheries and USP</p> <p>NEC, DOE, Department of Fisheries and USP</p> <p>NEC, DOE, Department of Fisheries and USP</p> | <p>Draft amended Act developed and finalised</p> <p>Approving authorities regularly updated</p> <p>Sustained mangrove management by community warden</p> <p>Wide consultation on mangrove area usage</p> |
| Define existing intellectual | Review studies done on existing   | Information gathered and  | DOE, Department of  | Compilation of traditional   |

|   |  |  |   |  |
|---|--|--|---|--|
| knowledge of conservation methods by the local community to mitigate and adapt to changing global and local environment | <p>information and related stakeholders</p> <p>To carry out compilation of raw data (information) on knowledge of conservation</p> <p>Prepare a paper to assist in defining better strategic planning and decision making</p>  | <p>report compiled</p> <p>Inventory Database filed and completed</p> <p>Guidelines on strategic planning and decision making</p>   | <p>Forestry, Department of Fisheries and USP</p> <p>DOE</p> <p>DOE, Department of Forestry, Department of Fisheries and USP</p> | <p>adaptative measures</p> <p>Formulation of database on conservation methods</p> <p>Locally focused plans on strategic decision making</p>                |
| Engagement of Private Sector in the Conservation and management of coastal zone   | <p>An inventory of all private sectors Awareness Program</p> <p>Assess existing practices in the private sectors in terms of strategic planning that captures environment themes</p> <p>Engage in a dialogue to establish if an agreement needs to be drawn or establish an Environment Code of Practice, MOU etc.</p> | <p>An established baseline on all sectors implementing or upholding integrated coastal zone management initiative</p> <p>Environment Code of Practice with a binding MOU</p> | <p>DOE, Department of Lands, Department of Forestry, USP</p> <p>DOE, Department of Lands, Department of Forestry, USP</p>       | <p>two way benefit with regards to private sector involvement in sound environmental management</p> <p>establishment of a Environment Code of practice</p> |

### **Institutional Arrangement**

Executing Agency - DOE  
 Implementing Agency - Department of Lands, Department of Forestry, USP (PACE-SD & IAS)

### **Financial Resources**

Resource Mobilization - Government of Fiji and External Donor  
 Indicative Budget - \$6,040,000.00 (FD)

### Indicative budget breakdown per activity

| Objectives   | Indicative Budget (FD) |
|--|------------------------|
| 1.0 The NEC to mandate the formation of an Integrated Coastal Zone Management Committee.   | \$10,000.00            |
| 2.0 Replicate Good Practice of Integrated Coastal Zone Management initiative particularly (low cost) to other identified priority area               | \$3,000,000.00         |
| 3.0 Mangrove Management Plan be mandated under the Integrated Coastal Zone Management Committee of NEC   | \$3,000,000.00         |
| 4.0 Define existing intellectual knowledge of conservation methods by the local community to mitigate and adapt to changing global and environmental | \$20,000.00            |
| 5.0 Engagement of Private Sector in the Conservation and management of coastal zone  | \$10,0000.00           |

## 7.5 Project 5: Promote and strengthen sustainable forest management

### Background

The forestry situation in Fiji is reported to have worsened over the past decade. It is conservatively estimated that 70,000 hectares of native forest in Fiji has been lost in the past 15 years and forest loss continues; clearing appears to be occurring at a rate of 0.5% to 0.8% per year. Forest degradation in Fiji is through agricultural clearance, plantation establishment and destructive and unsustainable logging in large areas of the remaining tropical rainforests of Fiji: even though the proportion of land area covered by forest has increased (now at about 57% land area) this increase has been due to establishment of mahogany (non-native) plantations.

Fiji's forestry situation is of concern for species and habitat conservation, as the loss of forest causes ecosystem degradation, erosion, sedimentation and predator and weed invasion. Apart from establishment of mahogany forests (in 2009 proclaimed as inadmissible by the Fiji Interim Government) forest conversion to agriculture continues to negatively affect the sustainability of native forest. Furthermore, forest loss through logging and secondary effects leads to forest fragmentation, themselves more susceptible to threats such as fire and invasive alien species, and more likely to slowly lose their bird and biodiversity value unless they regenerate their connections with other fragments.

There now is increased emphasis on sustainable forest management and heightened aspirations of landowners however. A Forest Policy was completed and endorsed in 2007 November 2007 and the Forest Decree is being reviewed along with a review of the National Code of Logging Practice. A forest certification standard (Fiji Forest Certification Standard) – is coming into the industry in Fiji: it is a quality assurance mechanism and targets all species. Uncertified timber can be stopped only if it is for export, however (i.e. can be sold domestically).

Constraints in the forestry industry include disputed boundary definitions, reassessment of logging license numbers and duration, overall negative environmental effects of logging roads and timber extraction, adequacy of returns to landowners and sale of timber extracted by portable sawmills, overall management of native forests, and general lack of support from Government in training, monitoring, data collection, adequacy of material resources, and insufficiency of field staff.

In Fiji, mangroves fall in between two legislations: they are owned by the Crown but harvest licences are issued by the Department of Forestry (although no monitoring is performed). This lack of clear jurisdiction is further compounded by legislation governing activities of the Department of Environment and Department of Town and Country Planning. In 1986, Cabinet endorsed the National Policy Plan for Fijian Mangroves that highlights the national value of mangroves as a resource base for capture fisheries, a protective barrier



against storms and sea surges, a 'cleaner' of polluted water, and a renewable source of products that contribute significantly to the quality of life of associated coastal communities. However, no action has been taken since on the Mangrove Management Plan, except recently (May 2009) the NEC replaced the Mangrove Management Committee with the Coastal Management Committee, whose secretariat would be in the DOE, assisted by the Department of Lands.

Mangrove areas are converted for agriculture land, aquaculture, and are dredged for flood mitigation. They are used also for building poles, and for wood for cooking – especially in per-urban squatter settlements. A mangrove clearing for sub-standard housing is increasing because of poverty levels and population displacements in Fiji.

### Objectives

- Increase workforce of trained forestry staff – both at professional and field officer levels. Better trained staff are required particularly in the area of sustainable forest management (presently few staff are expected to manage huge areas and without sufficient equipment which simply cannot be done).
- Review legislation governing management and harvesting of mangrove forests
- Studies of mangrove forests to determine suitable harvesting rates (if any)
- Raise awareness in the communities of the value of native hardwood forests and mangrove forests
- Decrease in squatter houses in mangrove areas

### Expected Outcomes

- Better trained forestry staff
- Better managed native hardwood forests
- Better managed mangrove forests

### How this addresses capacity

Enhancing the capacity of forestry staff to manage native and mangrove forests will lead to better forest management. It will also encourage landowners and settlers to recognise the value of forests in stabilizing soil, enhancing biodiversity, ensuring cleaner fresh waters, and protecting shorelines.

### Project Strategy

| Table 7.5 PROMOTE AND STRENGTHEN SUSTAINABLE FOREST MANAGEMENT |   |  |                                       |                     |
|--|---|--|---------------------------------------|---------------------|
| • Medium to Long term (2009-2010)                              |   |  |                                       |                     |
| STRATEGY   | KEY ACTIONS   | EXPECTED RESULT                                  | RESPONSIBLE AGENCY                    | INDICATORS          |
| Trained forestry staff   | Encourage tertiary institutions (such as FIT) to provide training courses for field staff               | Interest by FIT, USP and UF to establish courses | Dept of Forestry                      | Courses set up      |
|  | Secure attachments for field staff to regional forestry departments – e.g. in Australia and New Zealand | Donors willing to support courses                | Dept of Lands, GTZ Forestry, DOE, SPC | Legislation revised |
|  |   | Donors willing to support                        | Dept of Lands,                        | Legislation         |

|   |  |  |  |   |
|---|--|--|--|---|
|   | Secure scholarships for foresters to train at tertiary institutions in Australia or New Zealand<br><br>Explore the possibility of establishing university courses in forestry at USP or UF.  | attachments and scholarships<br><br>Collaborated effort into establishing a draft programme at the tertiary level  | GTZ Forestry, DOE, SPC<br><br>Dept of Lands, GTZ Forestry, DOE, SPC  | implemented<br><br>Draft Programmes and units enlisted and or identified under existing curriculum  |
| Promote and Replicate an integrated approach for SFM that is sustainable on withdrawal of funding support | Encourage the continuation of an integrated approach that provides other alternative source of livelihood option such as the involvement of Landuse with SLM initiative, aquaculture from Min of Agriculture, Women's Group and Small Microbusiness Enterprise.<br><br>Empower the community concerned with proper training on the operational and financial management of the SFM Project thus the community itself is able to harvest its forest trees, use portable sawmill to produce timber and establish its own business with a timber industry.<br><br>Explore other avenues of which the good practice of SFM in Drawa be replicated. | Consensuses among relevant stakeholders on alternative livelihood programmes<br><br>Self sustenance through local capacity development<br><br>Identify other modes of transferring the practice of SFM<br><br>Identify self sustenance and donor support to achieve long | Department of Forestry, Dept of Lands, DOE, GTZ Forestry, SPC<br><br>Department of Forestry, Dept of Lands, DOE, GTZ Forestry, SPC<br><br>Department of Forestry, Dept of Lands, DOE, GTZ Forestry, SPC<br><br>Department of Forestry, Dept of Lands, DOE, GTZ Forestry, | Native hardwood and mangrove forests management based on stock assessments.<br><br>Contribution of forests to sustainable development determined<br><br>No new houses in mangrove areas adjacent to urban areas<br><br>Replication of SFM in other areas<br><br>Initiation funding sought |

|   |  |  |   |  |
|---|--|--|---|--|
|   | To explore avenues for funding support to the Forestry Department for the replication of the SFM that accounts for the following activities:<br>1. Awareness and Initiation of Programme<br>2. Community Training<br>3. Purchase of portable sawmill and equipment | term progression   | SPC   |  |
| Community awareness programs to sustain and replicate possible areas for replanting of mangroves    | Develop programs<br><br>Disseminate programs – active campaign by NGOs and Government  | Awareness programs funded and activated  | Department of Forestry, Dept of Lands, DOE, GTZ Forestry, SPC | Acceptance and appreciation of positive effects of mangrove replanting |
| Dept of Housing to explore possible alternative areas to resettle those residing in mangrove areas. | 1. Work with NGOs (e.g. ECREA), Government and landowners to find alternative housing land   | Landowners and settlers willing to cooperate<br><br>Government willing to assist | Department of Forestry, Dept of Lands, DOE, GTZ Forestry, SPC | Shift of residential areas from mangrove swamps and its periphery      |

### **Institutional Arrangement**

Executing Agency - Department of Forestry  
 Implementing Agency - Department of Forestry, Dept of Lands, DOE, GTZ Forestry, SPC

### **Financial Resources**

Resource Mobilisation - Department of Forestry, Dept of Lands, + donor funding  
 Indicative Budget - FD 260,000

### Indicative budget breakdown per activity

| Activity   | Indicative Budget (FD) |
|--|------------------------|
| Train forestry staff in sustainable forest harvesting and forest management  | \$70,000.00 p.a.       |
| Promote and Replicate Integrated Approach of SFM   | \$100,000.00 p.a       |
| Scientific assessment of mangrove forests and application of results   | \$30,000 p.a.          |
| Produce awareness raising material on value of native hardwood and mangrove forests to Fiji's environment, and distribute it | \$60,000               |
| TOTAL  | \$260,000              |

## 7.6 Project 6: Establish additional protected areas and boundary reserves

### Background

Article 8 (i) of the Convention on Biological Diversity states that a system of protected areas must be established to conserve biological diversity, and that guidelines must be developed for the selection, establishment and management of protected areas. Furthermore, Article 8 (iv) of the CBD states that States should promote environmentally sound and sustainable development in areas adjacent to protected areas.

Despite the best efforts of conservation stakeholders, Fiji's Protected Areas System remains poorly developed – at least, concerning terrestrial areas (largely through the industry of FLMMA, more than 200 **MPAs** or *tabu* sites have been established or identified along Fiji's coasts). 'Protected areas' in Fiji comprise Reserve Status sites, where sites are selected on an ad-hoc and rudimentary system, other priority sites now selected on the basis of biodiversity value (yet still lacking a representative system) and a long-developed and well-used 'Sites of National Significance' register spanning terrestrial, freshwater, coastal and marine biodiversity. There is even confusion over the actual number of sites, or whatever category!

In recent decades, numerous protected areas have been proposed for Fiji. In 1980, the National Trust of Fiji – in collaboration with IUCN – produced a report that proposed a system of 88 national parks and reserves, set out guidelines for establishment and management of these sites, and included draft national parks legislation. The 1992 National Environment Strategy identified 140 sites of national significance, and recommended a formal legislative process to enhance protection of these sites. In recent years, a number of proposals for protected areas have also been made by non-government organisations. There have been four national policy statements on protected area establishment since 1993, the latest being the Forest Policy of 2007. In 2008 a coordinating team (called the National Protected Areas Committee) of representatives from The National Trust, Department of Environment, the USP and two NGOs (BI and IUCN) was established upon approval of the Fiji Cabinet. Its preliminary aims were to prepare an initial report by leading biodiversity/protected area specialists and government, conduct a workshop to determine next actions, and prepare the final version of the Programme of Work on Protected Areas (**PoWPA**) analysis.

Fiji does not have any dedicated protected areas legislation. Nonetheless, there are a variety of existing statutory mechanisms with the potential to deliver site-based conservation benefits. Several pieces of legislation (such as the Native Land Trust Act, Forest Decree, Water Supply Act, National Trust of Fiji Act) provide for reserve, conservation, heritage, or protected site status to varying degrees.

Clarke and Gillespie (TBD) concluded that:

1. Concerted action by conservation organisations, government agencies and local communities is required if Fiji is to achieve the protected area objectives set out in its NBSAP (and meet the obligations of the CBD);

2. The existing legal framework in Fiji offers a range of mechanisms with the potential to support the establishment and management of terrestrial protected areas. The conservation potential of these legal mechanisms is currently underutilized; and
3. The absence of a coherent legal framework for protected areas presents challenges for the current generation of proposed protected areas. In particular, the existing legal mechanisms are not well-suited to the establishment and long-term management of large, co-managed conservation areas.

Currently, the PoWPA Committee's projects are to (a) complete ecological gap analyses and proposing a plan for protected areas accounting for community engagement and (b) continue to pursue the legal basis for improved protected areas in Fiji. At the recent meeting of the NEC (May 2009), the POWPA Committee provided reasons for protection of three biodiversity rich areas in Fiji.

### Objectives

- A plan for protected areas that accounts for community engagement, and considers biodiversity, social and economic benefits
- Legal basis for protected areas established
- Agreed criteria for selection of protected areas

### Expected Outcomes

- A plan that is agreed to by all parties.
- Successful completion of research that encompassed biological, sociological and economic study
- Comprehensive and modern legislation that is 'workable'

### How this addresses capacity

The comprehensive studies that develop the concept and adherence to protected areas in Fiji could be a template for studies in other areas – e.g. in coastal zone management. The development and implementation of appropriate legislation, and the attendant awareness raising will benefit Fiji's adherence to that part of the UNCBD.

### Project Strategy

| Table 7.6 ESTABLISH ADDITIONAL PROTECTED AREAS AND BOUNDARY RESERVES |  |  |  |   |
|--|--|--|--|---|
| • Medium to Long term (2009-2010)                                    |  |  |  |   |
| STRATEGY   | KEY ACTIONS  | EXPECTED RESULT                            | RESPONSIBLE AGENCY   | INDICATORS  |
| Develop a plan for protected areas                                   | Review all existing information  | Timeline established                       | National Trust, IUCN, Birdlife International, other NGO partners in the PoWPA. Also the DOE. | Greater familiarity with protected areas initiatives in Fiji            |
|  | Complete ecological gap analysis   | Report on ecological gaps                  |  |   |
|  | Keep moving the PoWPA forward  | Enhanced interest in protected areas       |  |   |
|  | Ensure that timelines are identified through regular discussions with all stakeholders | Better response to commitment on the UNCBD |  |   |
|  |  | Milestones met                             | National Trust, IUCN, Birdlife International<br>DOE  | Greater impetus in determining value of areas (marine and terrestrial). |

|   |  |  |  |   |
|---|--|--|--|---|
|   | <p>Ensure that identified milestones are met</p> <p>Disseminate information on the Protected Areas</p>   | <p>Raised awareness and appreciation</p>   | <p>DOE</p> <p>National Trust, IUCN, Birdlife International, other NGO partners in the PoWPA. Also the DOE.</p>   | <p>Appreciation of need to conserve endangered species</p>  |
| <p>Initiate and continue with research of potentially high value biodiversity areas in Fiji</p> | <p>Secure funds and resources to continue with researching Fiji's terrestrial and marine environments</p> <p>Encourage collaborative research, engaging other NGOs and Government institutions.</p> <p>Ensure the sociological and economic situations of each identified area are also researched</p> <p>Make information available to the public (as a stakeholder).</p> <p>Engage in consultation with landowners of identified PAs</p> | <p>Enhanced information on potential PAs.</p> <p>More comprehensive dataset for each potential PA (following NEC's 2009 request)</p> <p>Better response to commitment on the UNCBD</p> <p>Better informed and participatory public.</p> <p>Advise landowners on pros and cons of PAs</p> | <p>National Trust, IUCN, Birdlife International, other NGO partners in the PoWPA. Also the DOE.</p> <p>National Trust, IUCN, Birdlife International</p> <p>DOE</p> <p>National Trust, IUCN, Birdlife International, other NGO partners</p> <p>National Trust, IUCN, Birdlife International, other NGO partners in the PoWPA. Also the DOE.</p> | <p>Establishment of more PAs.</p> <p>Collective participation on establishing PAs datasets</p> <p>Socioeconomic factors identified</p> <p>Enhanced participation by all stakeholders</p> <p>Greater interest and participation by landowners</p> <p>Application of legislation.</p> <p>Creation of legal protected areas.</p> |
| <p>Development of appropriate legislation</p>   | <p>Follow up on the recent review of existing legislation done by Clarke and Gillespie</p> <p>Consult with stakeholders and draft appropriate legislation</p> <p>Ensure legislation can be implemented</p>   | <p>Legislation drafted, as agreed by all stakeholders</p> <p>Legislation passed by Cabinet/Government</p> <p>Better response to commitment on the UNCBD</p>  | <p>DOE</p> <p>National Trust, IUCN, Birdlife International, other NGO partners in the PoWPA</p>  |   |

### **Institutional Arrangement**

Executing Agency - The National Trust, IUCN and Birdlife International with DOE  
Implementing Agency - The National Trust, IUCN and Birdlife International

### **Financial Resources**

Resource Mobilization - The National Trust, IUCN and Birdlife International + donor funds (GEF, the Global Conservation Fund, and SPREP)  
Indicative Budget - FJD170,000

### **Indicative budget breakdown per activity**

| <b>Activity</b>  | <b>Indicative Budget (FD)</b> |
|--|-------------------------------|
| Develop a plan for protected areas, based on consultation and analyses                   | 30,000                        |
| Assess social and economic implications of establishing Protected Areas                  | 30,000                        |
| Initiate and continue with research of potentially high value biodiversity areas in Fiji | 60,000                        |
| <b>Activity</b>  | <b>Indicative Budget (FD)</b> |
| Consultation with landowners   | 10,000                        |
| Develop appropriate legislation; draft legislation                                       | 25,000                        |
| Raise awareness on legislation; consultation with communities                            | 15,000                        |
| TOTAL  | 170,000                       |

## **7.7 Project 7: Establish a National Drought Mitigation Programme**

### **Background**

Fiji is a country normally affected by frequent tropical cyclones. El Niño events tend to push normal areas of cyclone generation eastward. Hence, during El Niño years, many cyclones track to the east of Fiji. The most serious effect of strong El Niño events in the Fiji region is reduction in rainfall and eventual drought. However, since Fiji lies within the transition zone of the Southern Oscillation, the effects of El Niño events are not always distinct or predictable. Often there is a significant (4-6 month) delay between El Niño indicators and the onset of damaging drought in Fiji (e.g. in 1982 and 1997) although effects of El Niño events that begin in the dry season may show up earlier in the form of reduced rainfall (e.g. 1987). Once begun in the western parts of the main islands, El Niño droughts spread first along the northern coasts and eventually to the islands in the south-east of the Fiji group over a period of 6-12 months. Recent El Niño-related drought conditions have lasted for between 12 and 18 months. The El Niño events of 1986-99 and 1997-98 have been associated with the worst droughts recorded in the country.

The needs in the sugarcane areas include a review of criteria and policy regulating distribution of relief food, discontinuing sugarcane planting on marginal land and, instead, encouraging the planting of other tree crops, introducing irrigation to intensify production in some suitable areas, providing grants for drainage maintenance, supplying vegetable seeds and rations on a food-for-labour basis, and providing access to credit and micro-financing.

The needs in other agriculture and forestry sectors include meeting food and planting material shortages through low-technology means, addressing the long-term food supply issues of malnutrition and anaemia, re-developing education and awareness programmes targeted at

food security, establishing a drought-rating classification and identifying reliable indicators, and establishing databases and disaster management plans for this sector.

Needs in the water sector include a nation-wide education and awareness programme targeted at improving and maintaining roof-fed water supply and storage systems, providing assistance to sustainably develop more groundwater resources, rapidly implementing urban water-supply master plans, developing and enforcing guidelines for biological water monitoring and remediation, and developing alternative sources of water for some areas (e.g. solar-distillation plants).

Short-term needs in the health and nutrition sector include a national awareness programme to target micronutrient deficiencies, particularly for women of childbearing age, multisectoral support to the Fiji Plan of Action for Nutrition, strengthening aspects of food security and feeding practices in agriculture and health extension programs, respectively, and developing standards for nutritional requirements with respect to future drought rations.

The main needs identified in the education sector are developing adequate water supply and storage systems, and developing strategies to maintain school gardens under drought conditions.

### **Objectives**

To prepare communities to prepare for and mitigate the effects of drought through proper planning, issuing and publishing timely El Nino- and drought related forecasts together with appropriate resources mobilization.

### **How it addresses capacity**

It strengthens capacity for preparedness towards drastic environmental effects such as the El Nino and La Nina effect.

### **Expected Outcomes**

- Development of a crop rehabilitation programme that is highly effective in aiding rapid economic recovery from drought
- Establishing active cooperation among disaster managers, water users, and meteorologists in the development of effective and timely forecasting and early warning systems with least a 6-12 month lead, and with good linkages with media organizations.
- Developing drought-response strategies by key agencies in the form of timely alleviation plans.
- Increasing information supply with the establishment of drought indices and key monitoring strategies to assess El Niño-related drought impacts on all sectors.
- Improving awareness and education programmes to assist communities in drought preparedness and response
- Improving water management by improving household self-reliance, better managing of reticulated systems, identifying and sustaining the exploitation of groundwater resources, more active management of catchment systems (including changes induced by commercial forestry) and assessing the vulnerability of water sources.



## Project Strategy

| Table 7.7 FORMULATE A NATIONAL DROUGHT MITIGATION PLAN<br>• Medium to Long term (2009-2010)                         |  |  |  |  |
|---|--|--|--|--|
| STRATEGY  | KEY ACTIONS  | EXPECTED RESULT  | RESPONSIBLE AGENCY   | INDICATORS   |
| Effective drought-response action plan  | Appropriate and timely drought-impact alleviation plans<br><br>Procedures for moving livestock out of the expected drought-affected areas                        | National drought-response action plan<br><br>Relocation plans for livestock                                  | NDMO, Fiji Meteorological Services, Ministry of Agriculture, FSC, Mineral Resources Department, other stakeholders | Timely result driven plans that can suppress the harder impacts of droughts<br><br>Decreased livestock mortality |
| Development of Crop Rehabilitation Program that are highly effective in aiding rapid economic recovery from drought | Conduct research and develop sugarcane Crop Rehabilitation Program to mitigate El Nino-related droughts.<br><br>Improved understanding of drought-tolerant crops | Improved crop resilience to drought conditions<br><br>Dissemination of information on drought tolerant crops | NDMO, Fiji Meteorological Services, Ministry of Agriculture, FSC, Mineral Resources Department, other stakeholders | Sustained crop yield under drought conditions<br><br>Increased food security                                     |
| Establishment of active cooperation key stakeholders  | Establishment of active cooperation among disaster managers, water users, and meteorologists in the development of forecasting and early warning systems.        | Improved cooperation and information sharing between key stakeholders  | NDMO, Fiji Meteorological Services, Ministry of Agriculture, FSC, Public Water Board, other stakeholders           | Increased awareness amongst water users and improved information sharing between stakeholders                    |
| Improvement in awareness and education programs to assist communities in drought preparedness and response          | Develop and conduct awareness and education programs to assist communities in drought preparedness and response.   | Development of relevant and practical programmes to increase preparedness of communities                     | Ministry of Agriculture, Department of Lands, Department of Forestry, Fiji Meteorological Services                 | Sufficient awareness amongst communities on drought preparedness and response                                    |
| Improvement of water management systems   | Promote household self-reliance<br><br>Develop and promote better management of  | Development of intersectoral programmes on research, dissemination and implementation                        | Department of Lands, Department of Forestry, ministry of Agriculture, National Drainage                            | Sustained water availability at various levels   |

|  |   |   |   |  |
|--|---|---|---|--|
|  | <p>reticulated systems</p> <p>Identification and sustainable exploitation of groundwater resources,</p> <p>Implement proper catchment management systems</p> <p>Conduct assessment of the vulnerability of water sources.</p>   | on water management issues at various user levels   | Board, Public Works Department, Water Department  |  |
| Improved Forecasting and Early Warning Systems | <p>Simple housekeeping chores are still the best response actions and basic first-mitigation responses</p> <p>Strengthen the working relations among meteorologists, water managers, and disaster managers</p> <p>Undertake assessments of the vulnerability to drought of water sources such as wells, streams and roof catchments</p> <p>Users require at least 6-12 months lead time to purchase materials</p> <p>Establish good linkages and understanding with the media</p> | <p>Technical framework on the cooperation of meteorologists, water managers, and disaster managers</p> <p>Communications strategy on water management</p> <p>Geographical and technical representation of vulnerable water sources</p> <p>Preparedness for anticipated hazard</p> <p>Appropriate dissemination of adaptative measures</p> | <p>NDMO, Fiji Meteorological Services, Ministry of Agriculture, FSC, Public Water Board, other stakeholders</p> <p>NDMO, Fiji Meteorological Services, Ministry of Agriculture, FSC, Public Water Board</p> <p>Fiji Meteorological Services, Public Water Board</p> <p>NDMO, Fiji Meteorological Services</p> <p>NDMO</p> | <p>Improved understanding of droughts and indicator events</p> <p>Improved flow of preparedness information from stakeholders to grassroots level</p> <p>Vulnerability Assessment utilised in water management plans</p> <p>Purchase of materials</p> <p>Public awareness on adaptative measures</p> |

**Institutional Arrangement**

Executing Agency - National Disaster Management Office (NDMO)  
 Implementing Agency - NDMO, Fiji Meteorological Services, Ministry of Agriculture, FSC, Mineral Resources Department, other stakeholders

**Financial Resources**

Resource Mobilization - Government of Fiji and External Donors  
 Indicative Budget - \$136,000.00

**Indicative budget breakdown per activity**

| Activity   | Indicative Budget (FD) |
|--|------------------------|
| Effective drought-response action plan   | \$40,000.00            |
| 1. Development of Crop Rehabilitation Program that are highly effective in aiding rapid economic recovery from drought | \$30,000.00            |
| 2 Establishment of active cooperation key stakeholders   | \$8,000.00             |
| 3. Improvement in awareness and education programs to assist communities in drought preparedness and response          | \$8,000.00             |
| 4. Improvement of water management systems   | \$20,000.00            |
| Improved Forecasting and Early Warning Systems   | \$30,000.00            |

## 8.0 Programme 4 - Specific Priority Desertification and Land Degradation Mitigation Projects

### 8.1 Project 1: Development of appropriate irrigation systems and upgrading of existing systems within the agriculture sector

**Background**

Most of the irrigation systems developed in the past have been related to improving the productivity in vegetable farming, particularly in alluvial areas close to the major river mouths in the Western Division and the Dreketi irrigation rice scheme in Vanua Levu. The use of irrigation systems in sugarcane farms has been trialled in the past; however this has yet to be adopted by the industry. With the predicted changes in the rainfall, particularly during El Nino periods, together with the predicted impacts of climate change, there is a real need for a proper assessments and feasibility studies to be carried out on the application of irrigation systems at a wider scale, and to cover other crops apart from vegetables and rice farming.

**Objectives**

(i) To carry out assessment for the improvement of existing irrigation systems in use in the vegetable and rice farming areas.

(ii) To carry out feasibility studies and setting up of trial irrigation systems on other economically important crops

### Expected Outcomes

- Improvement of existing irrigation systems
- Use of appropriate irrigation systems in other economically important crops
- Increase in agricultural productivity as well as the protection of crops during periods of droughts
- Capacity building of relevant stakeholders in the application and maintenance of appropriate irrigation systems

### Project Strategy

| <b>Table 8.1 DEVELOPMENT OF APPROPRIATE IRRIGATION SYSTEMS AND UPGRADING OF EXISTING SYSTEMS WITHIN THE AGRICULTURE SECTOR</b> |  |  |   |  |
|--|--|--|---|--|
| <b>Objectives</b>  | <b>Strategies</b>  | <b>Activities</b>  | <b>Key Performance Indicators</b>   | <b>Organizations Responsible</b>             |
| Assessment and improvement of existing irrigation systems in use in the vegetable and rice farming areas.                      | Improve the exiting irrigation systems from conducting proper assessment and implementing appropriate maintenance. | Conduct assessment on existing irrigation systems within the vegetables farming areas  | An assessment report prepared by the end of 2010                                    | Ministry of Agriculture Hydrology Department |
|  |  | Conduct assessment on existing irrigation systems within the rice growing areas  | Assessment report highlighting the state of the current existing irrigation systems | Ministry of Agriculture Hydrology Department |
|  |  | Submit proposal for the cost of maintenance and upgrading of existing irrigation systems                                     | A proposal for the cost of the upgrade submitted by the end of 2010                 | Ministry of Agriculture                      |
| Assessment and improvement of existing irrigation systems in use in the vegetable and rice farming areas.                      | Improve the exiting irrigation systems from conducting proper assessment and implementing appropriate maintenance. | Conduct upgrades and or appropriate maintenance on existing irrigation system in use in the vegetable and rice farming areas | The appropriate upgrades and maintenance to be completed by the end of 2014         | Ministry of Agriculture Hydrology Department |
| To carry out feasibility studies and setting up of trial irrigation systems on other economically important crops              | To adopt appropriate irrigation systems on other economically important crops by carrying out                      | Conduct a feasibility study on the use of irrigation systems in other economically important crops                           | The feasibility study completed by the end of 2011                                  | Ministry of Agriculture Hydrology Department |

|  |  |  |   |  |
|--|--|--|---|--|
|  | feasibility studies and field trialling of selected irrigation systems | Set up selected irrigation systems for field trials in appropriate areas and sites | Selection of sites and field trials started by 2013 | Ministry of Agriculture<br>Hydrology Department<br>Fiji<br>Meteorological Services |
|--|--|--|---|--|

### **Institutional Arrangement**

Executing Agency - Ministry of Agriculture  
 Implementing Agency - Ministry of Agriculture  
 Collaborating Agencies - Hydrology Department of PWD, Fiji Meteorological Services

### **Financial Resources**

Resource Mobilisation - Government of Fiji and External Donors  
 Indicative Budget - \$10.6 million (FD)

### **Indicative budget breakdown per activity**

| <b>Activity</b>  | <b>Indicative Budget (FD)</b> |
|--|-------------------------------|
| 1.1.1 Conduct assessment on existing irrigation systems within the vegetables farming areas  | \$20,000.00                   |
| 1.1.2 Conduct assessment on existing irrigation systems within the rice growing areas  | \$50,000.00                   |
| 1.1.3 Formulate and submit proposal for the cost of maintenance and upgrading of existing irrigation systems                       | \$50,000.00                   |
| 1.1.4 Conduct upgrades and or appropriate maintenance on existing irrigation system in use in the vegetable and rice farming areas | \$10,000,000.00               |
| 2.1.1 Conduct a feasibility study on the use of irrigation systems in other economically important crops                           | \$30,000.00                   |
| 2.1.2 Set up selected irrigation systems for field trials in appropriate areas and sites   | \$500,000.00                  |

## **8.2 Project 2: Development of appropriate irrigation systems for sugar cane farming**

### **Background**

Most of the irrigation systems developed in the past have been related to improving the productivity in vegetable farming, particularly in alluvial areas close to the major river mouths in the western division and the Dreketi irrigation rice scheme in Vanua Levu. The use of irrigation systems in the sugar cane farms have been trialled in the past; however this has yet to be adopted by the industry. With the predicted changes in the rainfall, particularly during El Nino periods, together with the predicted impacts of climate change, there is a real need for a proper assessments, feasibility studies and adaptive research to be carried out on the application of irrigation systems particularly related to sugar cane farming.

### **Objectives**

To carry out feasibility studies and setting up of trial irrigation systems within the sugar cane farming system

### Expected Outcomes

- Use of appropriate irrigation systems within the sugar industry
- Increase in sugar cane productivity as well as the protection of cane crops during periods of droughts
- Capacity building of relevant stakeholders in the application and maintenance of appropriate irrigation systems

### Project Strategy

| <b>Table 8.2 DEVELOPMENT OF APPROPRIATE IRRIGATION SYSTEMS FOR SUGAR CANE FARMING</b>                         |  |   |  |  |
|---|--|---|--|--|
| <b>Objectives</b>   | <b>Strategies</b>  | <b>Activities</b>   | <b>Key Performance Indicators</b>  | <b>Organizations Responsible</b>   |
| To carry out feasibility studies and setting up trial irrigation systems within the sugar cane farming system | To adopt appropriate irrigation systems in the sugar cane farming systems by carrying out feasibility studies and field trialling of selected irrigation systems | <p>Conduct a feasibility study on the use of irrigation systems in the sugar cane farming system</p> <p>Setting up of selected irrigation systems for field trials in appropriate areas and sites</p> | <p>The feasibility study completed by the end of 2011</p> <p>Selection of sites and field trials started by the 2013</p> | <p>Ministry of Agriculture</p> <p>Fiji Sugar Corporation</p> <p>Hydrology Department</p> <p>Fiji Meteorological Services</p> |

### Institutional Arrangement

|                        |   |
|------------------------|---|
| Executing Agency       | - Ministry of Agriculture                                   |
| Implementing Agency    | - Fiji Sugar Corporation                                    |
| Collaborating Agencies | - Hydrology Department of PWD, Fiji Meteorological Services |

### Financial Resources

|                       |  |
|-----------------------|--|
| Resource Mobilisation | - Government of Fiji and External Donors |
| Indicative Budget     | - \$7.1 million (FD)                     |

### Indicative budget breakdown per activity

| <b>Activity</b>  | <b>Indicative Budget (FD)</b> |
|--|-------------------------------|
| 1.1.1 Conduct a feasibility study on the use of irrigation systems in the sugar cane farming system                | \$100,000.00                  |
| 1.1.2 Set up selected irrigation systems for field trials in appropriate sites within the sugar cane growing areas | \$7,000,000.00                |

### **8.3 Project 3: Implement community-based drought and land degradation mitigation projects**

#### **Background**

Subsistence and semi-commercial farming systems practiced by rural communities contributes significant to the so called informal economic sector of the country. These farming systems are mainly rain-fed and rely almost entirely on the natural fertility of the soil for sustaining the farm outputs. In areas where there is available land, shifting cultivation is practiced.

As such, these types of farming systems usually result in land degradation and are also vulnerable to the adverse impacts of drought.

With the predicted changes in the rainfall, particularly during El Nino periods, together with the predicted impacts of climate change, there is a real need for a proper assessments and feasibility studies to be carried out on the application of appropriate irrigation systems and the promotion of proper land management at the subsistence farming system level.

#### **Objectives**

- (i) To carry out feasibility studies and setting up of trial irrigation systems at the subsistence farming system level to mitigate the adverse impacts of drought.
- (ii) To promote proper land management system at subsistence farming system level to minimize land degradation and address the adverse impacts of climate change.

#### **Expected Outcomes**

- Use of appropriate irrigation systems at the subsistence farming system level.
- Increase in subsistence crop productivity as well as the protection of subsistence crops during periods of droughts
- Land degradation will be mitigated at project areas through the application of proper land management systems
- Capacity building of relevant stakeholders and the communities in the application and maintenance of appropriate irrigation systems

#### **Project Strategy**

| <b>Table 8.3 IMPLEMENT COMMUNITY-BASED DROUGHT AND LAND DEGRADATION MITIGATION PROJECTS</b>   |  |  |   |   |
|---|--|--|---|---|
| <b>Objectives</b>   | <b>Strategies</b>  | <b>Activities</b>  | <b>Key Performance Indicators</b>   | <b>Organizations Responsible</b>  |
| To promote appropriate irrigation systems at subsistence farming system level to address the adverse impacts of drought and climate change. | To adopt appropriate irrigation systems at the subsistence farming system level by carrying out feasibility studies and field trialling of selected irrigation systems | Conduct a feasibility study on the use of irrigation systems at the subsistence farming system level<br><br>Set up selected irrigation systems for field trials in | The feasibility study completed by the end of 2011<br><br>Selection of sites and field trials started by 2013 | Ministry of Agriculture<br><br>Ministry of Regional Development<br><br>Fijian Affairs<br><br>Hydrology Department<br><br>Fiji |

|   |  |  |   |  |
|---|--|--|---|--|
|   |  | appropriate areas and sites  |   | Meteorological Services                        |
| To promote proper land management system at subsistence farming system level to minimize land degradation and address the adverse impacts of climate change | This objective would be addressed in the Tikina-based land use plans, refer to Programme 3 – Project 1: Promote & strengthen sustainable land management | Development and Implementation of Participatory Tikina Based Land Use Plan | 187 Tikina Based Land Use Plans developed | Ministry of Agriculture Provincial Development |

### **Institutional Arrangement**

|                        |   |
|------------------------|---|
| Executing Agency       | - Ministry of Agriculture   |
| Implementing Agency    | - Ministry of Agriculture   |
| Collaborating Agencies | - Fijian Affairs, Ministry of Regional Development, Hydrology Department of PWD, Fiji Meteorological Services |

### **Financial Resources**

|                       |  |
|-----------------------|--|
| Resource Mobilization | - Government of Fiji and External Donors |
| Indicative Budget     | - \$0.55 million (FD)                    |

### **Indicative budget breakdown per activity**

| <b>Activity</b>  | <b>Indicative Budget (FD)</b> |
|--|-------------------------------|
| 1.1.1 Conduct a feasibility study on the use of irrigation systems at the subsistence farming system level | \$50,000.00                   |
| 1.1.2 Set up selected irrigation systems for field trials in appropriate areas and sites                   | \$500,000.00                  |

## **9.0 Programme 5 - Specific Priority Climate Change Projects**

### **9.1 Project 1: Fiji's Greenhouse Gas Emissions Inventory**

#### **Background**

The six major greenhouse gases identified in the Kyoto Protocol are

- carbon dioxide;
- methane;
- nitrous oxide;
- hydrofluorocarbons;
- perfluorocarbons; and
- sulphur hexafluoride.

The main sources of major greenhouse gases in Fiji are carbon dioxide from burning of fossil fuel and biomass, methane from emission from animal and human wastes and flooded



rice fields, and nitrous oxide from burning of biomass and incomplete combustion of fossil fuels. Fiji's energy sector is the major source of GHG emissions in Fiji, with emissions dominated by the transport and energy industries. Even so, Fiji's contribution to global net emissions is insignificant.

It has been clearly defined that the IPCC methodology used to inventory Fiji's GHGs is geared toward Annex 1 countries. Fiji's first Greenhouse Gas (**GHG**) Inventory was developed between 1995 and 1997. However, several constraints caused delays in developing this inventory, a major cause being the difficulty in obtaining information from Government and the private sector. In turn, this difficulty was caused by these organisations' lack of quantitative and qualitative data gathering. The Greenhouse Gas Inventory describes in detail which assumptions were made and which should facilitate the development of any future inventories.

Before Fiji can engage in Carbon Trading, it must know the amount of GHGs it produces. Therefore, one of the most important contributions to the establishment of Fiji's Clean Development Mechanism (**CDM**) Project is a complete inventory of Fiji's GHGs. The data available – although it is limited – was never utilised for the post Kyoto Protocol commitment when the CDM unit was established at the DOE.

Issues identified are:

- the lack of authentic information on emission of moisture from wet and dry areas, and wet and dry seasons, presently based on assumptions;
- the widespread application of caloric values for fuel-wood, copra and biogases, even though those values are only based on conditions in wet seasons;
- the need for mitigation measures to target the energy sector in Fiji: emission of carbon dioxide (particularly) is perceived to be high;
- reporting to the COP of the UNFCCC has been slow.

### **Objectives**

- Evaluate and if necessary revise the method of gathering GHG emissions information in Fiji
- Complete the gathering of authentic data on GHG emissions in Fiji
- Ensure reporting of Fiji's CC activities to the COP is current and accurate
- Develop mitigation measures to target Fiji's energy sector (including legislation and implementation)

### **Expected outcomes**

- A revised and current inventory of Fiji's GHGs
- Appropriate application of information from the inventory – e.g. seasonal calorific values
- A less polluting energy sector (transport, fuel and industrial)
- Significant reduction in the national emissions of GHGs
- Timely reporting on Fiji's UNFCCC activities

### **How this addresses capacity**

By completing the GHG inventory, government officers will become familiar and more competent in Climate Change issues. They will develop innovative ways of collecting the data, and engage in discussions with stakeholders (particularly high GHG emitters) on how to contain carbon emissions. There is potential to identify and develop appropriate mitigation measures for Fiji. Skills in report writing will also be enhanced.

## Project Strategy

| Table 9.1 FIJI'S GREENHOUSE GAS EMISSIONS INVENTORY<br>• Short term (2009-2010) |  |   |                    |  |
|---|--|---|--------------------|--|
| STRATEGY  | KEY ACTIONS  | EXPECTED RESULT   | RESPONSIBLE AGENCY | INDICATORS   |
| Evaluate and revise information gathering strategy                              | <p>Review strategy</p> <p>Confirm with COP what requirements are.</p> <p>Identify gaps in knowledge (especially with stakeholders) and determine how they can be addressed</p> | Knowledge gaps filled   | DOE                | <p>Significant reduction in Fiji's GHG emissions</p> <p>Because Fiji's GHG Inventory completed, carbon trading can be done.</p> <p>Better (cleaner) farming and industrial practices</p> |
| Complete gathering of information   | <p>Organise information-gathering depending on what information is available.</p> <p>Consult with stakeholders and secure resources to visit them</p>                          | <p>Information gathering conducted following agreed milestones.</p> <p>All available information gathered</p> | DOE                | <p>Better wider understating on the information of GHG.</p> <p>Compilation of the Current status of GHG in Fiji.</p>   |
| Ensure the reporting of Fiji's UNFCCC activities are current and accurate       | <p>Go back to suppliers of information to verify status, and gather more information</p> <p>Report written on best available information</p>                                   | Report completed  | DOE                | <p>Current Status of Climate change would be known across the nation.</p> <p>Better and proper action taken to combat climate change.</p>  |
| Develop mitigation measures to target the energy sector                         | <p>Consultation with stakeholders</p> <p>Setting up timelines and milestones to put mitigation measures in place</p> <p>Monitoring effectiveness of mitigations, and</p>       | Mitigation measures initiated 'Lessons learned' applied   | DOE                | <p>Reduction in GHG and use of fossils.</p> <p>Effective implementation of mitigation measures by 2010</p> <p>Continuous</p>   |

|                                     |                                 |  |     |   |
|-------------------------------------|---------------------------------|--|-----|---|
|                                     | altering as appropriate         |  |     | reduction of GHG and new techniques acquired to reduce GHG. |
| Complete the GHG Inventory for Fiji | Consultation with stakeholders. | Inventory completed<br>Knowledge gaps identified | DOE | Better industrial practices on GHG.                         |

### **Institutional Arrangement**

Executing Agency - DOE  
Implementing Agency DOE

### **Financial Resources**

Resource Mobilisation - Government of Fiji and External Donor  
Indicative Budget - FD 143,000

### **Indicative budget breakdown per activity**

| <b>Activity</b>  | <b>Indicative Budget (FD)</b> |
|--|-------------------------------|
| Evaluate and revise information gathering strategy; two officers                                       | \$30,000 p.a.                 |
| Complete gathering of information; two officers  | \$30,000 p.a.                 |
| In-country travel  | \$8,000                       |
| Ensure the reporting of Fiji's UNFCCC activities are current and accurate; one officer                 | \$20,000                      |
| Develop mitigation measures to target the energy sector, incl consultations and research; two officers | \$45,000 p.a.                 |
| Discussions and travel w.r.t mitigation measures   | \$10,000                      |
| <b>TOTAL</b>   | <b>\$143,000</b>              |

## **9.2 Project 2: Establish Carbon Trading Administration Unit**

### **Background**

In October 10, 2008 a cabinet paper was passed and the decisions are as follows:

- Noted the opportunities within the voluntary and compulsory carbon trading market
- Approved the proposed initiatives for the implementation of the carbon credit and trading opportunities that are available for Fiji from 2008-2012
- Approved the formation of a technical team to advise and work closely with the director of environment in putting together project for carbon credit trading both in the voluntary and compulsory carbon trading markets
- Endorsed the technical team to be chaired by the PS environment, independent consultants and representative of key agencies such as Departments of Energy/Fiji Electricity Authority, Fisheries, Forests and Agriculture

One of the decisions is the approval of the formation of a technical team on carbon trading administration unit. This team will advise and work closely with the Director of Environment to put together carbon credit project eligible for CDM compliance under the compulsory market. This team has been working on projects since their formation in October 2008.

### **Objectives**

1. To reposition Fiji's commitment to expedite CDM projects to be included as Verified Emission Reduction Units (VERs) under the Compulsory Market before 2011
2. To engage a consultant to assist the team on a short-term basis (6 months) to roll out projects endorsed by the DNA as project Idea Notes (PIN)
- 3 To administer the implementation of CDM related projects under the Carob Trading Compulsory Market
4. To prepare Fiji's paper to include the Forestry Sector as a Compulsory Market component for the COP 16 meeting in Copenhagen.

#### How this addresses capacity

1. Enhances capacity for CDM related project under the Carbon Trading
2. CDM has a lot of potential to enhance capacity in terms of financial,
3. Strengthen Fiji's commitment to the Marrakech Accord and Kyoto Protocol

#### Project Strategy

| Table 9.2 Establishment of a CDM Administration Unit<br>• Medium to Long term (2009-2010) |   |  |                    |   |
|---|---|--|--------------------|---|
| STRATEGY  | KEY ACTIONS   | EXPECTED RESULT  | RESPONSIBLE AGENCY | INDICATORS  |
| Establishment of CDM Administration Unit at DOE   | The Administration Unit for CDM will be established through recruitment of the following:<br>-EO (CDM Administration) and EO (CDM Technical) under Institutional Strengthening of DOE (Phase 1 & 2). The recruited EO CDM is to work under the supervision of a SEO Climate Change and direction of the CDM Technical Team and DNA. | CDM Admin Unit established                               | DOE                | Establishment of EO CDM                                   |
| Preparation of a Policy Paper on Carbon Trading   | TOR<br><br>Recruitment of Consultant<br>Consultant to ensure that projects are listed under carbon trading compulsory market (ASAP), define a set of regulation, rules for acquisition of data, define the international implication or trade paradigm for CDM  | Availability of funds<br><br>TOR drawn up for consultant | DOE                | TOR and policy paper endorsed<br><br>Consultant recruited |

|  |   |  |  |   |
|--|---|--|--|---|
| Roll out of CDM related projects to be VER compliant           | Recruitment of a Consultant to roll out projects before 2012 (deadline for CDM related projects) – to assess, define CDM related projects and prepare to help the team prepare PIN  | Projects related to CDM clearly recognized   | DOE, Energy, Forestry                    | Carbon trading potential market identified  |
| Capacity building of the Administration Team                   | <p>Short Term Overseas Attachment or training to ensure proper updates on the global CDM related forum</p> <p>Engagement of expert to undertake training and disseminate necessary information for capacity building of local officers.</p> <p>Utilize related stakeholders who co-fund capacity building training for staff.</p> | <p>PSC to give approval and sponsor officers doing attachment or training</p> <p>Officers suitable for the training identified</p> <p>Capacity building on CDM conducted on all line ministries and department</p> | DOE, Energy, Forestry, Local Authorities | <p>CDM projects implementation</p> <p>Knowledge gained and information gathered from short term overseas attachment or training disseminated to other relevant officers</p> <p>Capacity building achieved</p> |
| Implement National Renewable Energy Project under CDM          | Administration Office is to establish baseline information on renewable energy project capability study in Fiji such as in the area of hydro, biofuel, biodiesel, bio-digester, fossil fuel switch, geothermal.   | DOE together with the Department of Energy to look into areas in which renewable energy projects can be implemented  | DOE, Department of Energy                | National Renewable Energy projects under CDM implementation   |
| Implement carbon sequestration projects under Voluntary market | <p>Update Forest Inventory</p> <p>To assist administration define forestry programme that are compliant to the voluntary market.</p> <p>To assist in defining carbon sequestration capacity of endemic flora of Fiji (classification of different flora and define its capacity to sequestration carbon dioxide</p>               | <p>Forest officers or other relevant stakeholders gather information on forest boundaries</p> <p>Availability of resources (vehicle, staff, IT equipment)</p>  | DOE, Department of Forestry.             | <p>Forest inventory completed</p> <p>Carbon trade initiation</p> <p>Carbon sequestration projects implementation</p>  |

**Institutional Arrangement**

Executing Agency - DOE  
 Implementing Agency - Department of Forestry, DOE, Department of Energy, Local Authorities

**Financial Resources**

Resource Mobilization - Government of Fiji and External Donor  
 Indicative Budget - \$50,000.00 (FD)

**Indicative budget breakdown per activity**

| Activity   | Indicative Budget (FD)   |
|--|--|
| Establishment of CDM Administration Unit at DOE  | With reference to Institutional Strengthening of Focal Point (Phase 1 and 2) |
| Policy   | 30,000.00  |
| 2. Roll out of CDM related projects to be VER compliant and National Renewable Energy Projects | With reference to part 5.5.2   |
| 2. Capacity building of the Administration Team  | \$8,000.00   |
| Implement carbon sequestration projects under Voluntary market                                 | \$12,000.00  |

### ***9.3 Project 3: Identify and Implement National Renewable Energy Projects under Fiji's Clean Development Mechanism (CDM) Project***

**Background**

Benefits for a client to acquire Carbon Credits are several. They can (a) provide an additional source of revenue; (b) improve the return on investments; (c) boost the economic feasibility of projects; and (d) accelerate project implementation. Accordingly, the Fiji Government is keen to become engaged in Carbon Trading.

On October 10, 2008, results of the presentation of a Cabinet Paper were:

1. opportunities within the voluntary and compulsory carbon trading market were noted;
2. Cabinet approved the proposed initiatives to implement the carbon credit and trading opportunities available for Fiji from 2008 to 2012;
3. Cabinet approved the formation of a technical team – or a Carbon Trading Unit (**CTU**) – to advise and work closely with the director of the DOE in identifying projects eligible for carbon credit trading, both in the voluntary and compulsory carbon trading markets: those projects must be CDM compliant; and
4. Cabinet endorsed the composition of the technical team to be chaired by the Permanent Secretary if the DOE, independent consultants and representatives of key agencies such as departments of Energy, Fisheries, Forests and Agriculture and the Fiji Electricity Authority.

The CTU has been created and comprises officials from related government bodies, sectors and communities who are resource owners, and corporate bodies who are proponents of various projects. The CTU (technical team) has been working on projects since their formation in October 2008. The team has already identified projects under the compulsory market, that fall in the renewable energy (**RE**) portfolio.

- geothermal;

- natural gas;
- gas flaring;
- hydro and mini-hydro;
- transport (reduced emissions) and
- sewerage treatment – methane capture

A possible project area that was not identified is forestry: the forest industry in Fiji still lies outside of the compulsory market under post-Kyoto commitments. However, because of the importance of the forestry sector to Fiji's environment, projects that can be tailor-made for it include:

- **REDD**, or Reduction of Emission in Deforestation and Degradation. For example, bundling all native and public forest potential together as Removable Units (**RMUs**) and trade them under the carbon voluntary market;
- Reforestation (replanting of logged areas) and planting on presently unforested areas);
- Afforestation (planting of forest on degraded and/or unforested land); and
- **PES** or Payment of Ecosystem Services. For example, the valuation of ecosystem services performed (voluntarily) by trees – such as clean water, provision of habitat for other organisms, and soil stabilisation.

### Objectives

- Get baseline information on identified projects
- Perform feasibility studies to identify viability of potential projects for CDM compliance

### How this addresses capacity

It strengthens financial capacity through generation of revenue from renewable energy projects. It strengthens capacity for conservation of biodiversity and resources, encourages clean and healthy environment through sustainable use of renewable resources

### Project Strategy

| <b>Table 9.3 IDENTIFY AND IMPLEMENT NATIONAL RENEWABLE ENERGY PROJECTS UNDER FIJI'S DEVELOPMENT MECHANISM (CDM) PROJECT</b><br>• Short to Long term (2009-2010) |   |  |  |   |
|---|---|--|--|---|
| STRATEGY  | KEY ACTIONS   | EXPECTED RESULT  | RESPONSIBLE AGENCY                                   | INDICATORS  |
| Project Preparation and Planning  | Recruitment of Consultant to establish baseline information on renewable energy project capability study in Fiji such as in the area of hydro, biofuel, biodiesel, biodigester, fossil fuel switch, geothermal. | Availability of funds for consultant recruitment.  | DOE, Relevant Govt. Agencies, Regional Organisations | Project initiation  |
|   |   | Renewable energy past projects inventory database reviewed   |  | Potential projects to be implemented added to database          |
|   | The CDM Administration Unit is to do pre-screening of CDM applicability and develop   | Consultant do a thorough survey of past renewable energy projects and explore new areas where this projects be |  | Budget allocated from Government for CDM project implementation |

|   |  |   |   |  |
|---|--|---|---|--|
|   | feasibility study in consultation with CDM Technical Team and Designated National Authority (DNA)  | established<br><br>Set a criteria to be met before approval of CDM potentials   |   | Criteria met for all CDM project development   |
| Roll out CDM related projects to be VER compliant | Recruitment of Consultant to roll out projects before 2012 (deadline for CDM related Projects), to help the DNA and CDM Administration Unit prepare Project Idea Note (PIN).<br><br>The recruited consultant is also to help DNA and CDM Administration Unit Develop Project Design Document (PDD) | TOR for consultant prepared<br><br>Consultant carry out survey of all possible areas where CDM related projects will initiate<br><br>Consultant work closely with administration unit | DOE, Relevant Govt. Agencies and Regional Government. | TOR endorsed<br><br>Project Design Document developed<br><br>CDM related projects identified |
| Securing Funding for CDM Projects                 | Recruitment of Consultant to prepare Funding Proposal<br><br>CDM Administration Unit to conduct Resource Mobilization Meeting with Donors.   | Funding approval from Government and donors<br><br>Justify the need for support to donors   | DOE, Regional Government.                             | Donor funding available  |

### **Institutional Arrangement**

Executing Agency - DOE  
Implementing Agency - All Relevant Government Agencies, NGO, Regional Organisation

### **Financial Resources**

Resource Mobilization - Government of Fiji and External Donor



**Indicative budget breakdown per activity**

| Activity  | Indicative Budget (FD) |
|---|------------------------|
| Project Preparation and Planning                  | \$30,000.00            |
| Roll out CDM related projects to be VER compliant | \$35,000.00            |
| Securing Funding for CDM Projects                 | \$15,000.00            |

**9.4 Project 4: Replicate Best Practice Community Based Adaptation Project****Background**

There are already existing works carried out by interested parties in government and stakeholders on best adaptation practices. These projects incorporate both soft and hard option in the area of foods security, poverty alleviation and welfare of resource owners who are confronted by the negative impact of the changing climate. In this NSAP We would like to assess how effective this has been and utilize success from this project so it be adapted and duplicated in other vulnerable areas (capitalization of resources). Problem of this practice in the past have been duplication of work, communication of work, conflict of interest, inconsistency. With the above it leads to a waste of financial and human resources where it can be capitalised in other areas.

**Objectives**

1. Utilization of NCSA Report to update executing agency on the baseline information on what is done in Fiji to address adaptation
2. To document best practices in adaptation project from the existing initiative
3. To eliminate duplication of work, inconsistency and conflict of interest.
4. To define a set of strategic approach as a Guideline for all the related stakeholders to adhere in regards to implementation of projects, develop communication strategy and networking , institutional arrangement, resource sharing.
5. To clearly define a coordinated approach whereby all stakeholders through a consultative process agree to a Master Plan and national strategy for implementation of Community Based Adaptation Project so issues of duplication, consistency, conflict of interest are minimized.

**How this addresses capacity**

4. Enhances capacity for CDM related project under the Carbon Trading
5. CDM has a lot of potential to enhance capacity in terms of financial,
6. Strengthen Fiji's commitment to the Marrakech Accord and Kyoto Protocol

## Project Strategy

| <b>Table 9.4 REPLICATE BEST PRACTICE COMMUNITY BASED ADAPTATION PROJECT</b><br>• Medium to Long term (2009-2010)   |   |  |  |   |
|--|---|--|--|---|
| STRATEGY   | KEY ACTIONS   | EXPECTED RESULT  | RESPONSIBLE AGENCY                           | INDICATORS  |
| Update and conduct in depth vulnerability analysis particularly in vulnerable areas affected with water resources, coastal zone, agriculture and the health sector | Country study undertaken on degree of vulnerability and adaptation capacity in Fiji to Climate Change. The country study to include an update on progress to date in adaptation projects, good practice in adaptation and traditional and local knowledge of adaptation of local communities that makes them resilient to climate change.   | Officers availability to undertake the study.<br><br>Resources such as vehicle available<br><br>Inventory database for country study compiled  | DOE, Forestry, Energy and Local Authorities. | In- depth vulnerability analysis completed.<br><br>Country study on degree of vulnerability and adaptation capacity in Fiji analyzed.   |
|  | Strengthen capacity for storage and analysis of historical quantitative and qualitative scientific data to be achieved through institutional strengthening of Fiji Meteorology Services.  | Donor and Government funding availability<br><br>Existing capacity re-looked at and improved upon  | DOE, Forestry, Energy and Local Authorities  | Proper storage equipment purchased.<br><br>Institutional strengthening achieved.  |
| Promote an Integrated and Holistic Adaptation Approach.  | The Focal Point through consultative process develop an Integrated Adaptation Strategy to be adopted as a guideline that accounts for the following:<br>a.) Integrated top down and bottom up approach to adapting to flood prone areas, areas of water shortage, coastal eroded areas etc.<br><br>b.) Define environment parameters and institutional linkages of related government department such as Min of Fisheries, Forestry, Environment, Lands | Conduct workshop and invite all line Ministries, Department and organizations to give views and ideas.<br><br>Proper guidelines set out on top down and bottom up approach.<br><br>Government Ministries and Departments involved in the partnership agree with the environment parameters set | DOE<br><br>DOE<br><br>DOE                    | Integrated and holistic approach adopted.<br><br>Institutional linkages reviewed<br><br>Endorsement of guideline by stakeholders.<br><br>Environment parameters clearly identified. |

|   |   |  |  |  |
|---|---|--|--|--|
|   | <p>with the involvement in partnership arrangement with other civil societies when formulating adaptation projects.</p> <p>c.) With reference to good practice in adaptation. Empower community through an integrated approach to better adapt to climate change and its impact through better agricultural techniques on crops resistant to climate change, provision of water tanks for water problem areas, promote integrated watershed management for flood prone areas etc.</p> | <p>up.</p> <p>Raise awareness to the communities on ways to adapt to climate change.</p> <p>Relevant Government Ministries and Department guide communities on better agricultural techniques, ways to seek Government assistance etc.</p> | DOE  | <p>Communities adapt to / learn to live with climate change</p> <p>Government meet the needs of communities</p>  |
|   | Secure additional finance resources to implement the appropriate adaptation options in coastal zones, water resources, agriculture and the health sector  | Government and donors properly informed of the need for assistance.  |  | Financial resources for implementation secured.  |
| Replicate good practice and low cost adaptation projects to relevant affected areas | <p>To engage statutory body, Culture Heritage and the Fijian Affairs to establish and identify vulnerable areas in which adaptation project be replicated on</p> <p>Encourage establishment of environment committees within the community.</p> <p>To source funds through partnership for replication of adaptation projects.</p>  | <p>Statutory bodies and Culture and Heritage willing to assist</p> <p>Communities in need of support for adaptation project to highlight the need in provincial council meetings</p> <p>Availability of funds</p>                          | DOE, Forestry, Energy, Fijian Affairs Board, Local Authority | <p>Vulnerable areas identified</p> <p>Community supportive of the initiative</p> <p>Low cost adaptation projects practiced in affected areas implemented and replicated.</p> |
| Strengthen linkages from national to provincial/ Tikina                             | Assess the current linkages under Fijian Affairs Board  | Have reps from Tikina / provinces to communicate regularly with  | DOE, Forestry, Energy, FAB, Local Authorities                | Institutional arrangement achieved   |

|   |   |  |   |  |
|---|---|--|---|--|
| / community level w.r.t to adaptation program implementation. | Propose the streamlining of adaptation and mitigation option in strategic plan  | FAB  |   | Linkages between from national to provincial / Tikina / community level strengthened |
|   | To strengthen institutional arrangement and clearly define the standard channel of communication on implementation of Adaptation Programme so that future projects is communicated through the similar institutional arrangement. | Government aware of the adaptation project undertaken<br><br>Each individual aware of the proper channel of communication to be followed | DOE, Forestry, Energy, FAB, Local Authorities | Proper channel of communication followed   |
|   | To strengthen participation of the provincial offices in the monitoring of adaptation projects.   | A dedicated officer within the provincial office appointed to monitor the project progress in communities                                | FAB, Local Authorities                        | Provincial offices participation in project monitoring strengthened.                 |

### **Institutional Arrangement**

Executing Agency - DOE  
Implementing Agency - Department of Forestry, DOE, Department of Energy, Fijian Affairs Board Local Authorities

### **Financial Resources**

Resource Mobilisation - Government of Fiji and External Donor  
Indicative Budget - \$100,000.00 (FD)

### **Indicative budget breakdown per activity**

| <b>Activity</b>  | <b>Indicative Budget (FD)</b> |
|--|-------------------------------|
| Update and conduct in depth vulnerability analysis particularly in vulnerable areas affected with water resources, coastal zone, agriculture and the health sector | \$35,000.00                   |
| Promote an Integrated and Holistic Adaptation Approach.  | \$40,000.00                   |
| Strengthen linkages from national to provincial/ Tikina / community level w.r.t to adaptation program implementation.  | \$25,000.00                   |
| <b>Total</b>   | <b>\$100,000.00</b>           |

## **9.5 Project 5: Strengthening of Capacity for Data Storage and Network for Fiji Meteorology Services**

### **Background**

The Fiji Meteorological Service (FMS) functions as a Department under the Government of Fiji Islands and has the responsibility to provide an essential service to the country. It

also serves on a regional scale providing weather forecasting and tropical cyclone warning services to many other countries and a vast area of the tropical South-

The Department has the following major objectives:

- To satisfy Fiji's need for the supply of weather and climate data, archive and analyze this data, and based on this, issue forecasts, warnings and other information as required;
- To monitor the climate of Fiji and advise on any changes due to global warming and other factors;
- To provide weather forecast and warning services for other South Pacific Island Nations, as agreed;
- To function as a Regional Specialized Meteorological Centre (RSMC) for tropical cyclones, under the World Weather Watch Programme of the World Meteorological Organization (WMO);
- To serve as the aviation Meteorological Watch Authority (MWA) for the Nadi Flight Information Region (FIR) as per ICAO designation; and
- To provide marine forecast and warning services for international waters of the tropical South-west Pacific as per WMO and International Oceanic Commission.

The Department has two main output divisions, namely, the Forecast Services and Climate Services Divisions. There are six support divisions: Computing and Information Systems, Technical Systems, Reporting and Facilities, Services Development, Finance and Administration Division.

### Objectives

To strengthen the capacity of Fiji Meteorology Service for Data Network and Storage

### Expected Outcomes

Proper storage facility for archive data

An establishment and refurbishment of substantiated network for data reading

### Project Strategy

| Table 9.5 STRENGTHENING OF CAPACITY FOR DATA STORAGE AND NETWORK FOR FIJI METEOROLOGY SERVICES |   |  |   |   |
|--|---|--|---|---|
| • Short to Medium Term (2009-2010)   |   |  |   |   |
| STRATEGY   | KEY ACTIONS   | EXPECTED RESULT  | RESPONSIBLE AGENCY                          | INDICATORS  |
| Data Analysis Constraint   | Only one computer has the software for Windows 98 useful for data analysis thus there is a capacity need for 2 more of the Windows 98 computer. | Availability of funds from the Government or donors to provide more IT equipment | DOE,FM, Fiji Government and External Donors | Purchase of more computers with Windows 98 software |
| High technical staff turnover  | It is proposed that Government put in place some suggested  | Availability of funds from the Government or                                     | DOE,FM, Fiji Government                     | More qualified staff retained                       |

|   |   |   |  |  |
|---|---|---|--|--|
|   | <p>measures to address high staff turnover that includes incentives</p> <p>Reconsideration of salary range in line with qualification and demand for the role.</p> <p>Introduce a tighter contract that commits staff for specific timeline.</p> <p>Fiji Met to be allocated proper funding for additional staff be trained to IPCC standard and on specific field such as climatologist ect.</p>   | <p>donors to assist in the provision of incentives for staff, proper training and applicable salary</p> <p>Proper training services offered overseas to be identified</p> |  | <p>Salary range re-looked at.</p> <p>Capacity building in the areas of IPCC and other specific fields achieved</p> |
| Lack of Proper Data Storage Archives with proper condition to store data's dating back 100 years. | <p>Fiji MET have to resort to storing of datas in Empty Containers with temperature non inductive for storage of data. A Proper Storage Archive Facility with conducive environment Is recommended</p> <p>Have additional staff on contract basis specifically for entering and digitizing data's that dates back 100 years from its hard e-copy that can be usable for further analysis and future climate prediction.</p> <p>To have backup copies of both the digitised version and hardcopies of data</p> | <p>Proper data storage space recommended through Government assistance</p> <p>Have funds allocated for staff on contractual basis</p>                                     | FM, Fiji Government, External Donors   | <p>Data storage facility</p> <p>Funding available</p>  |
| Addressing the decrease / shrunk in monitoring network that affects the availability of data      | <p>Monitoring Network have shrunk considerably and is smaller then it used to be due to withdrawal of Post and Telecom stations in the remote interiors of Viti Levu and Vanua Levu. Two approaches is recommended</p>  | <p>Set up more monitoring network stations around the country to produce updated weather reporting</p>  | Fiji Government, FMS, External donors. | <p>Staff contracted to enter hardcopy data into e-copy</p> <p>Weather updates more accurate</p>                    |

|  |  |   |                                       |  |
|--|--|---|---------------------------------------|--|
|  | First, Work in partnership with local communication companies such as Digicel and Vodafone to assist with communication network.   |   |                                       |  |
| Addressing the decrease / shrunk in monitoring network that affects the availability of data | Second, Purchase of equipment such as Automated Weather Stations and Rain gauges. Government and donors support to revamp its monitoring network. And look at engagement of voluntary observers however with proper allowance allocated. | Government and donor support needed in terms of funding | Fiji Government, FMS, External Donors | Monitoring network improved once addressed |

### **Institutional Arrangement**

Executing Agency - Fiji Meteorology  
 Implementing Agency - DOE, Fiji Meteorology

### **Financial Resources**

Resource Mobilization - Government of Fiji and External Donor  
 Indicative Budget - \$230,000.00

### **Indicative budget breakdown per activity**

| <b>Activity</b>   | <b>Indicative Budget (FD)</b> |
|---|-------------------------------|
| Data Analysis Constraint  | \$20,000.00                   |
| High technical staff turnover   | \$50,000.00                   |
| Lack of Proper Data Storage Archives with proper condition to store data's dating back 100 years. | \$100,000.00                  |
| Addressing the decrease in monitoring network   | \$60,000.00                   |

## **10.0 Programme 6 - Specific Priority Biodiversity projects**

### **10.1 Project 1: National inventory of invasive species**

#### **Background**

Article 8 (vii) of the Convention on Biological Diversity states that signatory nations will prevent the introduction of, control, or eradicate alien species

Meeting this obligation has not been high on the agenda of the Fiji Government which remains an active importer of exotic biota for agricultural, livestock, horticultural and aquacultural purposes – despite the apparent damage being inflicted by widespread and well-established exotic species.

Island ecosystems – and their plants and animals – are particularly susceptible to displacement and/or extinction from the introduction of more competitive alien species. Alien species of plants and animals already threaten the biodiversity of Fiji's natural ecosystems, as well as its agricultural and silvicultural systems: African tulip trees, elephant grass, various ground covers (for example) already threaten the biodiversity of Fiji's land, and tilapia and mosquito fish have negatively affected Fiji's fresh and brackish water systems. Foreign organisms introduced through ballast water exchange are likely to be influential in affecting Fiji's coastal environment.

Fiji has one of the highest rates of invasive species in the Pacific largely because of Government emphasis exotic pests and diseases that affect agriculture products. For example, (i) the Plant Quarantine Act that only applies to pests of plants, not plant pests – although subsidiary legislation (not sourced) relates to eradication of noxious weeds, quarantine areas, and prohibited weeds; (ii) the Animal Importation Act Cap 159 (in October 2008 incorporated into the Bio-security Promulgation) is designed to protect the animal husbandry industry from exotic diseases and pests but not intervention to remove problem, invasive species; (iii) the Endangered and Protected Species Act 2002 only applies to species under threat of international trade and is not relevant to protecting species in a purely domestic context. The Environment Management Act 2005 however, does impose obligations on decision makers designed to protect Fiji's environment and sustain the use of natural resources, and the National Trust for Fiji Act Cap 265 is expected to 'promote the permanent preservation for the benefit of the nation of lands (including reefs), ... [having] ... natural interest or beauty; ... and to preserve their natural aspect and features; to protect animal and plant life ...'.

Two of the eight project briefs described and costed in the NBSAP pertain to invasive species: number 6 ('Study of Fiji's invasive species and the development of a draft Fiji 'Alien species action plan') and number 7 ('Impact of invasive species on native terrestrial ecosystems'). Some (uncoordinated) work has been carried out on those projects objectives, and that is all.

In general, attempts to reduce populations of invasive biota have been expensive and unsustainable. What stands out, when reviewing the attempts in Fiji, is how 'piecemeal' they are, and how attempts at control are isolated. In other words, there has been no attempt to reveal the whole menagerie of invasive species in Fiji; the 'big picture'. Management of invasive species relies on having information about them.

### **Objectives**

- Undertake a desk study to obtain baseline information on invasive species in Fiji
- Prepare a national invasive species register
- Gather information on the effects alien species now present in Fiji have in other tropical countries and tried eradication, control and management measures.

### **Expected Outcomes**

- A record of what alien species are present in Fiji including their origin, geographic extent, length of time in Fiji, effects on Fiji's native biodiversity, attempted control measures, how they got here, and attempted control measures (and their cost)
- Information on effective (if any) control measures for particular alien species in other tropical countries
- Information on assessment procedures undertaken before the alien species were brought into Fiji; and why were they introduced
- Information that can form the basis for management (control) measures in Fiji



### How this addresses capacity

Government, academic, regional and NGO researchers will be surprised at the quantity and quality of alien invasive species in Fiji. The inventory will form a baseline for evaluating future imports, and also act as an impetus for more careful evaluation of proposed imports. It should also encourage and support research on how to control the spread of alien species in Fiji, and arouse a fresh interest in retention of Fiji's own biodiversity.

### Project Strategy

| <b>Table 10.1 NATIONAL INVENTORY OF INVASIVE SPECIES</b><br>• <b>Short to Medium Term (2009-2010)</b> |  |  |   |  |
|---|--|--|---|--|
| STRATEGY  | KEY ACTIONS  | EXPECTED RESULT  | IMPLEMENTING AGENCY   | INDICATORS   |
| Register of all alien invasive species in Fiji  | Literature and web-based surveys undertaken<br><br>Farmers, landowners, foresters and local scientists interviewed<br><br>Information held by local and regional NGOs and academic institutions accessed<br><br>Field surveys carried out to observe the status and ecology of invasive organisms. | Information gathering<br><br>All stakeholders engage in providing information<br><br>Field surveys comprehensive   | DOE, SPC, Dept of Agriculture, Dept of Forestry;<br><br>Possibly also the SPRH, SPC, other NGOs | Register completed<br><br>Register of all information relevant to control or management of alien invasive species prepared and regularly updated |
| Alien invasive species register to be kept current  | Local scientist to be in charge of keeping register current<br><br>Relevant Government Department in charge of project management  | Register will act also as an education tool to explain to all stakeholders (notably Government) the huge cost alien invasive species incur on native biodiversity and sustainable development<br><br>Report will encourage DOE to speed up its obligations in invasive species management. | DOE, SPC, Dept of Agriculture, Dept of Forestry;<br><br>Possibly also the SPRH, SPC, other NGOs | Keeping the register current is a task included in the TOR of one DOE officer; it should be monitored  |

**Institutional Arrangement**

Executing Agency - DOE, SPC, Dept of Agriculture, Dept of Forestry  
 Implementing Agency - Yet to be nominated (possible is SPRH; SPC, some NGOs)

**Financial Resources**

Resource Mobilisation - DOE and donors  
 Indicative Budget - 115,000 FD

**Indicative budget breakdown per activity**

| Activity  | Indicative Budget (FD) |
|---|------------------------|
| Literature and web-based survey   | \$2,000                |
| Interviews with farmers, foresters, landowners throughout Fiji, also with local scientists (one officer; travel)      | \$35,000 p.a.          |
| Accessing information from regional organisations and local NGOs, Government and academic institutions                | \$2,000                |
| Field surveys to gauge the effect of alien species on native biodiversity (two officers, travel, T/A, equipment)      | \$60,000               |
| Preparation of register (preferably on a database, but hard copies to be made) (one officer, one IT person part-time) | \$8,000                |
| Regular updating of register, which would involve staff and funding allocation  | \$8,000 p.a.           |
| TOTAL   | \$115,000              |

**10.2 Project 2: Development of a Fiji Invasive Species Management Strategy for planned and present alien invasive species****Background**

Alien invasive species are the second greatest cause of biodiversity loss behind human population growth and its related activities. Invasive species pose an economic as well as an ecological threat and the economic implications of invasive species range from negative effects on food species (plant and animal agriculture), to human health pathogens, changes in landscape, increased stress on endangered species to loss of biological diversity, and tourism. Invasive species are also a threat to sustainable development. In other words, any management or control of invasive species will increase the chances of development being sustainable.

As identified in Project 5.6.1, invasive species have a negative effect on biodiversity. Flora and fauna of island systems like Fiji are particularly susceptible to such invaders because of island's biodiversity having a high level of endemism, and it having evolved in the absence of co-evolutionary pressures. In such environments, invading species often undergo population explosions and 'take over' habitats and out-compete native and endemic species.

Although effects of invasive species in Fiji are acknowledged by all stakeholders, the approach to tackling the matter has been soft, and even in the face of those attempts potentially invasive species continue to be purposefully introduced to Fiji for forestry and agriculture (animal husbandry): recent examples are elephant grass, teak and Casuarina trees.

Workshops in 'awareness raising' are conducted (e.g. by PII and PILN), plans are made (e.g. Focus 5 of the NBSAP), surveys and analyses are carried out (e.g. by the Department of Geography, USP and the SPRH), and eradications are attempted (e.g. by the Birdlife

International NGO). SPREP also has drafted a broad-based Regional Invasive Species Strategy (RISS) to be 'tied to the Action Strategy on Nature Conservation, 2008-2011', and that will engage Fiji. The SPC also provides an identification service (for species) and is developing digital keys (PACINET). Yet after all the money, time, and other resources expended, any checks on the expansion of these exotic species is locally temporary.

The major identified constraints negatively affecting controls on invasive species are (a) largely uncoordinated and disorganised attempts at control by stakeholders, due primarily to the absence of a lead agency; and (b) the dated legislation is very weak, narrow and old and largely supports 'national development'.

### **Objectives**

- Nominate a lead agency to develop an alien invasive species management strategy for Fiji. This agency should be in government – not an NGO or academic institution.
- Using information gathered in Project 5.6.1, assess the threats and benefits (if any) offered by alien invasive species to Fiji, balancing the precautionary principle against 'development' objectives.
- Review and strengthen existing legislation pertaining to the control of alien invasive species and/or develop legislation specifically for that purpose.
- Based on information gathered in Project 5.6.1, determine suitable (if any) control methods for alien invasive species present in Fiji, and trial their implementation
- Recommend methods to improve monitoring and control procedures where necessary.
- With support of regional agencies, regional and local NGOs, and academic institutions, prepare an awareness campaign that should also include top Government levels in its outreach.

### **Expected Outcomes**

- A lead (Government) agency nominated and resourced
- Alien invasive species control and management strategy developed and activated
- Legislation pertaining to alien invasive species reviewed and improved and new legislation developed
- Awareness campaign concentrating on the affects of alien invasive species developed to target Government and private primary industry organisations; also landowners.
- Enhanced training opportunities (including attachments) on management of alien invasive species

### **How this addresses capacity**

Heightened awareness of the effects of alien invasive species in Fiji, and enhanced capacity to balance 'needs' (of Government for 'development') against practicalities and the principles and obligations of the UNCBD. Government and all other stakeholders develop a working strategy to control / manage alien invasive species in Fiji, and be firmer advocates of revised legislation targeting such species, and implementers of existing legislation.

## Project Strategy

| <b>Table 10.2 DEVELOPMENT OF A FIJI INVASIVE SPECIES MANAGEMENT STRATEGY FOR PLANNED AND PRESENT ALIEN INVASIVE SPECIES</b><br><b>• Short to Medium Term (2009-2010)</b> |   |   |  |  |
|--|---|---|--|--|
| <b>STRATEGY</b>  | <b>KEY ACTIONS</b>  | <b>EXPECTED RESULT</b>  | <b>RESPONSIBLE AGENCY</b>  | <b>INDICATORS</b>  |
| Lead agency to develop an alien invasive species management strategy for Fiji (manage and coordinate development)  | <p>Assess the threats and benefits (if any) offered by alien invasive species to Fiji</p> <p>Based on information gathered in Project 5.6.1, determine suitable (if any) control methods for alien invasive species present in Fiji, and trial their implementation</p> <p>Recommend methods to improve monitoring and control procedures where necessary</p> | <p>Threats and benefits assessed</p> <p>Suitable method of controlling alien invasive species identified and implemented.</p> <p>Improved method for monitoring identifies.</p> | <p>Lead agency with other relevant government, academic, and regional organisations.</p> <p>Also Quarantine Section of Dept of Agriculture</p> <p>Quarantine Section</p> | <p>Report submitted to stakeholders and Government; also to regional organisations and Quarantine sections of neighbouring countries</p> <p>Report submitted to the NEC (or a subcommittee it identifies) for endorsement</p> <p>Management strategy developed</p> |
| Review and strengthen existing legislation pertaining to the control of alien invasive species and/or develop legislation specifically for that purpose                  | <p>Review existing legislation</p> <p>Develop new legislation</p>   | <p>Existing Legislation Reviewed</p> <p>New legislation developed</p>   | <p>Lead Agencies and other relevant government department.</p>   | <p>Draft legislation developed, then finalized</p> <p>Amendments to existing legislation prepared and accepted</p>   |
| Develop an awareness campaign on alien invasive species  | <p>Gather information for awareness campaign – particularly from Invasive Species Register</p>  | <p>Funds for awareness campaign available</p> <p>Staff and other resources available</p>  | <p>Lead Agencies With other relevant government agencies</p>   | <p>Awareness campaign active; taken up by schools, provincial and district governments, and NGOs</p>   |
| Enhanced training in management of alien invasive species  | <p>Training and attachments available (e.g. in New Zealand and Australia)</p>   | <p>Resources for attachments available</p>  | <p>Lead agencies, relevant government departments, and academic organisations</p>  | <p>Attachments secured</p> <p>Fiji's native biodiversity benefits from better trained and aware Quarantine and other technical officers</p>  |

**Institutional Arrangement**

Executing Agency - DOE (or some other) or Quarantine Section of Department of Agriculture

Implementing Agency - Lead agency

**Financial Resources**

Resource Mobilisation - Regional NGO and donor organizations + the Fiji Government; also Australian and/or New Zealand government quarantine environment agencies

Indicative Budget - FD 758,000

**Indicative budget breakdown per activity**

| Activity   | Indicative Budget (FD) |
|--|------------------------|
| A national alien invasive species management strategy (one staff; consultation)  | \$50,000               |
| Identification of a lead agency from Government  | \$3,000                |
| Effective assessment of the risks and/or benefits offered by the importation of known invasive alien species (includes literature review, international and domestic consultation) | \$30,000               |
| Effective prevention and control procedures implemented  | \$300,000              |
| Development and implementation of appropriate legislation  | \$25,000               |
| Development of an effective awareness campaign   | \$150,000              |
| Training in alien invasive species management (e.g. by attachments to overseas Quarantine operations)  | \$250,000              |
| TOTAL  | \$758,000              |

**10.3 Project 3: Register of traditional knowledge on biodiversity conservation and sustainable use****Background**

Article 8 (viii) of the Convention on Biological Diversity states that indigenous and local community knowledge, innovations and practices embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity should be respected, preserved and maintained. Their wider application should be promoted also.

Within the Ministry of Education, the Department of Culture and Heritage supports the Institute of Fijian Language and Culture. This Institute carries out mapping, collects information on dances, songs and the like, and records traditional uses of plants and animals. Generally, it is concerned with how native resources enhance the livelihoods of indigenous communities.

The components of the Ministry of Indigenous Affairs also include the Fiji Museum, the National Trust and the Fiji Arts Council. Although being moderately successful in attracting donor funding for many of their activities, resources are inadequate for gathering and maintaining all aspects of indigenous and local community cultures. Some of the activities carried out are a Fijian language dictionary (completed), development of a model of traditional/cultural inventory, research involving society and culture, and identification of historical and archaeological sites of national importance. Generic legislation for protection of

traditional knowledge and culture is in process of development with assistance from regional organisations.

Unfortunately, given the sparse resources available to meet many needs, collecting information on knowledge, innovations and practices embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity has not been carried out by the Fiji Government – except (as noted above) on the application of native flora and fauna to maintain livelihoods. The NBSAP (Focus 2.1) encourages implementation of a program of ethnobiological and traditional conservation practices enquiry. Some regional NGOs and the USP Geography Department have gathered information on wetland ecosystems and some resource use activities.

Most information of this nature is gathered by non-Government researchers (e.g. expatriate post-graduate students) and NGOs in tandem with target activities carried out in an area, and that information generally is not made available to the Government

### **Objectives**

- Conduct desktop research into traditional Fijian knowledge and practices pertaining to native biodiversity
- Carry out field work to gather information on same
- Collate all (permitted) information into an accessible report (and database)
- Develop an awareness campaign to encourage indigenous communities to retain and value their traditional knowledge and to submit it to long-term memory (i.e. writing)
- Include such (permitted) knowledge into school curricula

### **Expected Outcomes**

- A register of traditional indigenous biodiversity conservation practices and knowledge
- Encouragement of retention and long-term recording of such knowledge among indigenous communities
- School children learn about their and others' traditions. This outcome will also encourage nation-building.
- Enhanced pride and understanding of indigenous traditions and values in Fiji

### **How this addresses capacity**

Skills in negotiating, communication, time and project management will be enhanced by this project. Ability to research will also be strengthened. Communicating the results of the research is required also, as will be writing skills. Fiji citizens will also benefit from having greater access to information on the traditional knowledge of the country's diverse flora and fauna.

## Project Strategy

| <b>Table 10.3 REGISTER OF TRADITIONAL KNOWLEDGE ON BIODIVERSITY CONSERVATION AND SUSTAINABLE USE</b><br><b>• Short to Long Term (2009-2010)</b> |  |   |  |  |
|---|--|---|--|--|
| <b>STRATEGY</b>   | <b>KEY ACTIONS</b>   | <b>EXPECTED RESULT</b>  | <b>RESPONSIBLE AGENCY</b>  | <b>INDICATORS</b>  |
| Register of traditional indigenous biodiversity conservation practices and knowledge  | Carry out research<br><br>Carry out field surveys<br><br>Access information held by NGOs and academic institutions (current MOUs should facilitate this) | Funds and staff available for research and surveys<br><br>MOUs with conservation stakeholders permit access to information acquired by them | Institute of Fijian Language and Culture, Ministry of Education (or Ministry of Environment, Heritage and Climate Change), some NGOs, Fiji Museum, Fiji National Trust and the DOE | Draft and completed register<br><br>Feedback to communities enables corrections and additions to register<br><br>Communities actively record their traditional information and make it available |
| Interest among indigenous communities to retain and record (long-term) their knowledge  | Field surveys<br><br>Feedback to communities   | Funds and staff available for research and surveys  | DOE, Ministry of Education, Institute of Fijian & Culture and some NGOs  | Traditional knowledge and practices in biodiversity conservation taught in schools   |
| Information on traditional biodiversity practices taught in schools   | Review of curricula<br><br>Revision opportunities for teachers   | Curricula developed and taught  | DOE, Ministry of Education, Institute of Fijian & Culture  | Enhanced appreciation of indigenous values.  |

### Institutional Arrangement

Executing Agency - Institute of Fijian Language & Culture; Ministry of Education; also DOE, some NGOs

Implementing Agency - Ministry of Education

### Financial Resources

Resource Mobilisation - Government of Fiji with donor support  
 Indicative Budget - FD 207,000

### Indicative budget breakdown per activity

| Activity   | Indicative Budget (FD) |
|--|------------------------|
| Desktop research into traditional knowledge and practices pertaining to biodiversity conservation (one officer; materials)   | \$35,000 p.a.          |
| Field work to obtain additional information  | \$200,000              |
| Preparation of report and data entry   | \$12,000               |
| Development of an awareness campaign, and its implementation   | \$200,000              |
| Design a database for information; central clearing house mechanism  | \$10,000               |
| Revise school curricula so that information on traditional management of biodiversity is taught at primary and secondary levels (collaboration of several officers, several departments; distribution and familiarization of new subject material) | \$100,000              |
| Ongoing research on traditional practices with an eye to nation-building and long-term information management – included in the TOR of two officers  | \$50,000               |
| <b>TOTAL</b>   | <b>\$207,000</b>       |

### 10.4 Project 4: Enhanced propagation and production of *Yasi* (sandalwood)

#### Background

Sandalwood has been used for thousands of years and is of great social, religious and economic importance in several countries. Presently the oil from the heartwood of several sandalwood taxa including *Santalum yasi*, *S. album* and *Santalum* hybrid (*S. yasi* x *S. album*) is extracted for use in cosmetics, scenting of soaps, aromatherapy, perfumery and medicines, while the wood is powdered for incense sticks or used for carving ornamental or ceremonial objects, for which it is greatly prized.

The availability of sandalwood on the world market is in decline due to a greatly diminished natural resource base. Sandalwood resources have declined as a result of over-exploitation associated with high prices and demand, and other human activities such as forest clearing for agricultural purposes and pests and diseases. Sandalwood growing and harvesting is one of the world's oldest, and still one of its most valuable, forestry enterprises. Sandalwood has always been a prime natural resource for remote communities in developing countries. The multitude of functions and services provided by sandalwood over the years has met most of the subsistence and semi-subsistence commercial needs of rural communities. It is economically and culturally important to many countries including Pacific countries.

The economic value of sandalwood reveals that it makes a major contribution to the economies of countries in these areas, and there is continuous demand for sandalwood.

In Fiji, *S. yasi* and the *Santalum* hybrid (*S. album* x *S. yasi*) are available for planting. Presently there are Dept of Forestry plots at Vunimaqo, Lano Reserve (Viti Levu) and some landowners in Viti Levu, Kadavu and Vanua Levu have plantations. Landowners generally are unsupported (because of manpower constraints within the Forestry Department).

An extensive study conducted by a USP post-graduate student several years ago found that induction of root suckering offers much potential for the large-scale production of clonal shoots for cutting material of *Santalum* taxa. Root sucker induction potentially enables phenotypically superior sandalwood trees to be cloned (e.g. producing disease-resistant clones, rapid growth, early formation of heartwood and increased oil and santalol contents). Vegetative propagation of *Santalum* taxa by stem cuttings is feasible also, for juvenile material. Successful



field and transplanting survival of *Santalum* taxa can be achieved with apical cuttings as long as cuttings have well-developed root systems.

### Objectives

- Encourage the vegetative propagation of sandalwood by means of cuttings, using the results of studies performed at Colo-i-Suva Forestry and USP Biology Department (Mr Maloni Havea) several years ago. This vegetative propagation could bring about considerable gains in terms of volume production, uniformity in wood quality and growth, and rapid return to investment, as well as being the foundation for a secure future resource.
- Demonstrate to landowner communities the manner of propagating sandalwood from cuttings and mentor them in raising their plantations (crops).
- Raise awareness in landowner communities of the value of not harvesting their sandalwood crops while trees are immature, and encourage sustainable management of sandalwood plantations.
- Identify suitable markets for sandalwood
- Encourage value-adding (processing) of sandalwood to ensure better returns to landowners.

### Expected Outcomes

- More sandalwood plantations in Fiji through application of proven vegetative propagation techniques
- Eventual good returns to landowners (and Fiji) from sustainable sandalwood management
- Increased awareness by landowners of value of sandalwood, its propagation and management, and marketing
- Sandalwood products made in Fiji (i.e. not just raw material export)

### How this addresses capacity

Significant increase in skills capacity, utilisation of native forest resources, income for landowners, and income for the nation. It will also work within the boundaries of Fiji's commitment to the UNCBD.

### Project Strategy

| Table 10.4 ENHANCED PROPAGATION AND PRODUCTION OF 'YASI' (SANDALWOOD) |  |  |   |   |
|---|--|--|---|---|
| • Short to Long Term (2009-2010)                                      |  |  |   |   |
| STRATEGY  | KEY ACTIONS  | EXPECTED RESULT  | RESPONSIBLE AGENCY  | INDICATORS  |
| Vegetative propagation of sandalwood                                  | Follow results of studies done at Colo-i-Suva and USP<br><br>Experimenter (Maloni Havea) brought to Fiji to demonstrate method and train landowners and forestry workers | Feasibility of propagation demonstrated<br><br>Landowners encouraged to perform propagation methods and planting | Dept of Forestry, GTZ Forestry Section, other international donors; Dept of Indigenous Affairs, NLTB, district and provincial offices, National Trust | More plantations of sandalwood established in Fiji, and trees allowed to grow to maturity<br><br>Ongoing propagation and planting |
| Raised awareness of the value of                                      | Awareness material prepared  | Landowners interested  | Department of Forestry, GTZ Forestry  | Dept of Forestry becomes more active in   |

|  |  |  |   |   |
|--|--|--|---|---|
| sustainable management of sandalwood plantations | Maloni Havea (experimenter) and Dept of Forestry staff engaged in awareness-raising activities   | Dept of Forestry provides staff to assist in awareness raising                                 | sections,   | sandalwood industry<br>More landowners engaged in sandalwood planting     |
| Markets available for Fiji sandalwood products   | Identify markets   | Markets identified   | Department of Forestry, GTZ Forestry Section                                    | Sandalwood trees allowed to stay unharvested for longer periods           |
| Value added sandalwood products made in Fiji     | Demonstration material developed, perhaps in conjunction with short term recruitment of Asian or Indian trader<br><br>Dept of Forestry identifies suitable markets | Landowners interested<br><br>Dept of Forestry interested<br><br>Traders (exporters) interested | Department of Forestry, GTZ Forestry Sections, Provincial and district officers | Good returns realized for Fiji landowners for quality sandalwood products |

### **Institutional Arrangement**

|                     |  |
|---------------------|--|
| Executing Agency    | - Dept of Forestry, GTZ Forestry Section   |
| Implementing Agency | - Dept of Forestry with international donors (e.g. GTZ), Dept of Indigenous Affairs, NLTB, district and provincial offices |

### **Financial Resources**

|                       |                                      |
|-----------------------|--------------------------------------|
| Resource Mobilisation | - Government of Fiji + donor funding |
| Indicative Budget     | - FD 425,000                         |

### **Indicative budget breakdown per activity**

| <b>Activity</b>   | <b>Indicative Budget (FD)</b> |
|---|-------------------------------|
| Demonstrate vegetative propagation of sandalwood to landowners (incl contracting services of Mr Havea – fees, T/A, travel)  | \$150,000                     |
| Train Dept of Forestry extension officers in sandalwood vegetative propagation and better sandalwood management   | \$50,000                      |
| Raise awareness among landowners of value of maintaining sandalwood plantations and keeping industry sustainable (awareness campaign – two officers; travel; T/A) | \$75,000                      |
| Planting of sandalwood using vegetative cuttings  | \$15,000                      |
| Grow-out of cuttings to marketable size; plantation management  | \$30,000 p.a.                 |
| Identify suitable markets for Fiji sandalwood to ensure best returns  | \$5,000                       |
| Value-adding to raw sandalwood before export / sale – awareness raising; skills development   | \$100,000                     |
| <b>TOTAL</b>  | <b>\$425,000</b>              |

## **11.0 POTENTIAL CONTRIBUTION OF NSAP TO FIJI'S NATIONAL ENVIRONMENTAL STRATEGY AND FIJI'S SUSTAINABLE DEVELOPMENT STRATEGY**

In 1992 the first NES document was completed. For the last sixteen years this document has been the guiding principle for technical and policy development in the area of environmental and natural resources management in Fiji.

In as far as Fiji is concerned major developments have taken place over this period. This development have negatively impact the natural environment and the natural resource bases such as soil, water and vegetation. Added to these are the global induced environmental stress impacting on the above natural resource base.

The findings of the NCSA points to inefficiencies in program executions against the NES initial goals. Therefore this national action plan proposes very practical, though challenging initiative that would effectively address capacity needs at all levels, namely individual, organisational and systemic.

The proposed strategy and action plan are geared towards filling the gaps and needs that have been identified in the NCSA assessment. Most of the identified deficiencies are impediments to the overall sustainable initiatives proposed by previous and current governments. Therefore it is imperative that the proposed strategy and action plan be supported at the highest level of government, ensuring that Fiji progresses and achieve its sustainable development goals, including the Millennium Development Goal (MDGs).

## **12.0 CONCLUSION**

The National Capacity Self Assessment Project for Fiji concludes with the formulation of this final report the National Strategic and Action Plan (NSAP). The NSAP attempts to recommend strategies that would build the capacity in Fiji to implement its three Rio Convention specifically focusing on the three thematic areas namely, Climate Change, Conservation and Biodiversity, Land Degradation and Desertification in Fiji.

The NSAP recommends a total of 6 programmes with 30 projects under these programmes. The recommended programmes is an effort by the NCSA Unit at the Department of Environment with the three NCSA Consultants recruited under the NCSA Project to determine national capacity requirements, needs and priorities under the three Rio Conventions. The NSAP has benefited from the contribution from all relevant major key stakeholders in Fiji who were consulted throughout all the 5 processes of the NCSA that includes Inception Phase, Stocktake Exercise, In-depth Assessment Phase and the Identification of Crosscutting Issues that cut across the three Rio Convention.

The recommended programmes and projects addresses capacity in all aspects including mobilization of support both financially and technically that is clearly detailed as key actions in each projects. One of the major focuses of the NSAP is the strengthening and enhancing of local capacity in addressing a number of capacity gaps and needs that were identified in earlier assessment report compiled under the NCSA Project for Fiji.

The NSAP won't serve much purpose for capacity development if it's not properly implemented with both financial and technical support not secured. Thus the recommended strategy under

Programmes 1 that promotes the initiation of Enabling Activity to secure both support of key decision makers and political leaders together with financial support of both government and donor agencies is vital for successful implementation of the NSAP. The NCSA Unit with the three local consultants tasked to look into the formulation and preparation of the NSAP trust that the Department of Environment would be able to coordinate implementation of the above recommended program 1 as a principal strategy.