Environmental Assessment and Review Framework

September 2014

FIJ: Transport Infrastructure Investment Sector Project

Prepared by the Fiji Roads Authority for the Asian Development Bank.

CONTENTS

ABBREVIATIONS

ADB	Asian Development Bank
CEMP	construction environmental management plan
CPP	Consultation and Participation Plan (for the project)
CSS	Country safeguard system
DOE	Department of Environment (within Ministry of Local Government, Urban Development, Housing and Environment)
DSC	Design and supervision consultant
ESMF	Environmental and Social Management Framework
EIA	environmental impact assessment
EMP	Environmental Management Plan
ESMF	Environmental and Social Management Framework
ESS	Environment safeguards specialist (in DSC team)
FTIIP	Fiji Transport Infrastructure Investment Project
FRA	Fiji Roads Authority
GCDS	Gender and Community Development Specialist
IEE	initial environmental examination
LARF	Land Acquisition and Resettlement Framework
MIT	Ministry of Infrastructure and Transport
MOF	Ministry of Finance
MLGUDHE	Ministry of Local Government, Urban Development, Housing and Environment
MOU	memorandum of understanding
NSS	National safeguards specialist (in DSC team)
Qoliqoli	Traditional beach, lagoon and reef areas
SPS	Safeguards Policy Statement
SSS	Social safeguards/resettlement specialist (in DSC team)
WB	World Bank

I. INTRODUCTION

1. The purpose of the environmental and social management framework (ESMF)[1] is to provide a guide for safeguards application during the implementation of Fiji Transport Infrastructure Investment Sector Project (the project). The ESMF will be applied to the overall project and the environmental and social screening and assessment of subprojects that will be identified during the course of the project. The screening and assessment will comply with ADB and World Bank policies as well as the country safeguards system (CSS).

2. The Asian Development Bank (ADB) together with the World Bank (WB) will provide loans to the Government of Fiji (the government) for the project. The project comprises physical works including new infrastructure and/or the upgrading, renewal, rehabilitation, repair of public roads, bridges and/or rural maritime infrastructure in Fiji. The project also includes non-physical works such as institutional strengthening and capacity building within the transport sector.The project will deliver two outputs:

3. **Rehabilitated land and maritime transport infrastructure.** The project will finance civil works to repair, rehabilitate, reconstruct, or upgrade existing roads, bridges, and rural jetties. It will also finance safety improvements on selected roads and bridges, which may include road safety furniture and streetlights, and gender sensitive designs for improved pedestrian access. Subprojects will be selected in accordance with the approved subproject selection criteria framework. Where possible, subprojects will be grouped geographically into suitably sized and cost-effective contract packages that will maximize local impact.

4. **Efficient project management and institutional strengthening.** A project supervision team will be established consisting of four FRA staff to oversee the overall project implementation, selection of consulting services, procurement of civil works, accounting and financial management activities, safeguards monitoring and evaluation, and project reporting. Design and supervision consultants will be engaged to carry out subproject screening, feasibility studies, detailed design, procurement of civil works packages, construction supervision, and safeguards monitoring. The project will also support FRA update design and construction standards for roads and bridges to bring uniformity to road assets in Fiji, incorporate climate change adaptation considerations for more climate resilient road and maritime transport infrastructure, and reflect current international standards for road geometry, pavements, drainage, and associated structures.

5. The Ministry of Finance (MOF) will be the executing agency for the project and the Fiji Roads Authority (FRA) is the implementing agency responsible for overall implementation of the project.

6. Poor road conditions are a major concern in Fiji. While the government has implemented a policy of gradually upgrading national roads from gravel standard to two-lane sealed highway standard over the past 30 years, there has been insufficient investment in routine and periodic maintenance and rates of deterioration have been faster than otherwise would have been the case. Economic growth can be promoted by improved transport infrastructure, which will improve communities' accessibility to socio-economic opportunities, restore basic social services in rural areas, and build rural economies.

[1] The environmental and social management framework is equivalent to ADB's environmental assessment and review framework.

7. Rural maritime infrastructure such as jetties and wharves are often weather and tide constrained. All coastal routes and the access channels to ports are generally poorly equipped with navigational aids. Safety and infrastructure at most of the smaller ports is rudimentary, ship operators taking their own measures to maintain operational safety. A further complicating factor is the accuracy of maritime charts, with the position of many islands and hazards, in fact the very existence of some, still unclear.

8. The recently established Maritime Safety Authority of Fiji (MSAF) is taking steps to address these deficiencies. The network of rural maritime infrastructure and beach landing facilities is important in supporting the social fabric of Fiji, particularly in providing freight and passenger linkages to outer islands.

9. The nature of sector project lending is that the types of activities to be undertaken and types of subprojects to be implemented are known in general terms but only a small number of subprojects may be identified at the project approval stage. Subprojects can be included in the sector project provided they meet the selection criteria to be agreed with government and development partners, including environmental and social criteria. Two sample subprojects have been selected following the due diligence requirements and an overall environmental assessment prepared to serve as a guideline example. The subprojects are the repair/rehabilitation or replacement of two existing water crossings, a high level one lane bridge and a low level Irish crossing. From a safeguards perspective the sample subprojects demonstrate application of the ESMF and the land acquisition and resettlement framework (LARF).

10. This ESMF will apply to all subprojects implemented by the project in transport sub-sectors of: (i) rural maritime infrastructure (including wharves and jetties) and channels, but excluding the main port infrastructure (which is under Fiji Ports Corporation Ltd) (ii) roads (including national main roads, municipal and rural roads), and (iii) bridges. The objective of the ESMF is to ensure that the project follows the requirements as set out in national law[2] in order that environmental and social impacts within these transport sub-sectors are appropriately identified and mitigated to acceptable levels.

II. LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY

11. Environmental and social assessment and clearance of subprojects under the project will comply with the *Environment Act 2005*, the ADB Safeguard Policy Statement 2009 (SPS) and the World Bank Operation Policy 4.01 (OP 4.01).

A. Fiji Safeguard System

12. Environmental management in Fiji is provided through the *Environment Act, 2005* and the accompanying regulatory instrument the *Environment Regulations, 2007*. Both are administered by the Department of Environment (DOE) within Ministry of Local Government, Urban Development, Housing and Environment (MLGUDHE).

1. Environment Act 2005

13. The *Environment Act* (the *Act*) provides for an integrated system of development control, environmental assessment, and pollution control. Section 3 of the Act states the purpose of the

[2] The ESMF follows the requirements of Fiji laws (refer to Section II) supplemented as necessary to ensure that the objectives and principles of SPS and OP 4.01 are complied with.

Act which is to 1) apply the principles of sustainable use and development of natural resources and 2) identify matters of national importance for the Fiji Islands.

14. Matters of national importance are identified in Section 3(3) as:

a. The preservation of the coastal environment, margins of wetlands, lakes and rivers;

b. The protection of outstanding natural landscapes and natural features;

c. The protection of areas of significant indigenous vegetation and significant habitat of indigenous fauna;

d. The relationship of indigenous Fijians with their ancestral lands, waters, sites, sacred areas and other treasures;

e. The protection of human life and health.

15. Part 2 of the Act establishes a National Environmental Council and outlines the functions, duties and powers of the Council and the Department.

16. Section 4 of the Act requires that any proposed development activity that is likely to cause significant impact on the environment must undergo an environmental impact assessment (EIA) process which includes screening, scoping, preparation, reviewing and decision-making. EIA is a formal study used to predict the environmental consequences of the proposed development. In this context, "environment" is taken to include all aspects of the natural and human environment. Section 32 of the *Act* states that a condition of any approved EIA must be that proponents are required to prepare and implement an environmental management plan (EMP), monitoring program, protection plan or mitigation measure, which may be subject to inspection by the EIA administrator, or an approving authority.

17. The Act (Schedule 2) outlines the types of development proposals that require approval by either the EIA Administrator (Part 1) or approving authority (Part 2) or may not require and EIA process or an EIA report (Part 3). For jetties/wharves and channel developments then Part 1 is likely to be triggered as it includes proposals that may result in erosion of coast, beach or foreshore, alter tidal/wave/currents of the sea or the pollution of marine waters. For bridges then Part 1 may be triggered if gravel extraction or dredging of the river bed is required.

18. Part 5 of the *Act* establishes a waste and pollution permit system that aims to protect the environment by controlling the release of solid and liquid wastes, the emission of polluting gases, smoke and dust, and the handling, storage and disposal of waste and hazardous substances.

19. The Environment Management (Waste Disposal and Recycling) Regulations 2007 gives the Waste and Pollution Control Administrator power to issue permits for solid and liquid waste discharge and air discharges.

20. Section 8 (1) of the regulations states:

> "*8. – (1) A solid or liquid waste permit may relate to either construction or operation of a facility or any premises.*
> *(2) A construction waste permit –*
> *(a) relates to solid or liquid waste and pollutants generated during construction or demolition of premises of a facility; and*
> *(b) lapses upon completion of the construction or demolition work"*

21. Sub-sector projects, for example demolition of old bridges to replace with new bridges, may generate waste, and so a solid waste permit may be required to dispose of any reusable materials.

2. Environment Management (Waste Disposal and Recycling) Regulations

22. The Environment Management Act 2005 (Part 5) establishes a waste and pollution permit system that aims to protect the environment by controlling the release of solid and liquid wastes, the emission of polluting gases, smoke and dust, and the handling, storage and disposal of waste and hazardous substances.

23. The Environment Management (Waste Disposal and Recycling) Regulations 2007 gives the Waste and Pollution Control Administrator power to issue permits for solid and liquid waste discharge and air discharges.

24. The regulations include national air quality standards and criteria for the discharge of liquid and solid waste.

3. Code of Environmental Practice

25. The Fiji Code of Environmental Practice (COEP) is set out to ensure that minimum environmental standards are met and that appropriate procedures are undertaken to reduce the environmental impact of various activities related to road works and services. Each of the phases of a road project, i.e. planning, design, construction, operation and maintenance are interrelated and have differing potential to effect (either adversely or beneficially) the environment.

26. Below is a brief discussion on some of the aspects of the COEP that are relevant to the subprojects that involve road works.

27. **Planning, designing and construction.** The COEP provides a guideline for all those involved in planning, design, construction and maintenance of roads and crossings. All planners, designers and contractors are to be aware of the need for the COEP including the relevant procedures and to be able to implement systems for the prevention or mitigation of adverse environmental effects of road projects.

28. **Consultation.** It is essential that consultation with all stakeholders takes place at all stages of the project. Dialogue and meaningful participation with stakeholders should include a discussion of the potential effects of the project on the communities.

29. **Land acquisition and compensation.** The objective is to minimise land acquisition. When unavoidable, land acquisition shall be carried out in such a manner so as to minimise the adverse impacts on the affected people. It is essential that those affected understand the necessary mechanisms and procedures for systematic resolution of land acquisition, compensation or other land related issues. It will be necessary to facilitate better understanding of legal and land acquisition procedures between the various stakeholders involved in planning, design, construction and operation and maintenance of Fiji roads.

30. **Erosion control**. The objective of this section is to define measures for the prevention of erosion of exposed earth surfaces as a result of road construction. It describes measures that are to be taken to mitigate significant adverse effects of discharge of water containing suspended soil particles into natural water courses or onto land adjacent to road works.

31. **Quarry Development and Operation.** This prescribes the safety requirements for the development and operation of quarries as well as to define procedures and works that are to be used to mitigate against environmental effects. It includes considerations such as siting (away from public areas or villages), visual effects, the use of blasting and outlines the contents of a quarry management plan.

32. **River Gravel Extraction.** This section provides planning and construction guidelines for extraction of river gravels. It specifies that in each case the proposal to extract river gravel for a road project must be compared in terms of economic cost and environmental cost with the alternative of obtaining road construction materials from existing or new quarries.

33. **Drainage**. Implement and design infrastructure such that drainage systems are able to discharge their design flow without overtopping or surcharging.

34. **Traffic control during construction.** The objective of this section is to prescribe methods that are to be used for the safety and control of traffic during the upgrading, reconstruction or maintenance activities on any roads. This includes the following:

(i) Clothing should be reflectorized coloured jackets.

(ii) Traffic signs used for warning or direction of traffic at road work sites shall comply with the schedules and signage contained in the Fiji Traffic Regulations. Homemade signs shall not be used.

(iii) All roads should have at least one lane open for the passage of traffic at all times unless otherwise provided for in the form of temporary deviations.

35. As part of the project existing COEPs will be updated

4. Other Legislation and International Conventions

36. Other environmental and social legislation that could also apply to the project as follows:

37. The Town Planning Act 1978 establishes the tools and processes for the planning, restriction and approval of development across the Country. The different parts of the Town Planning Act establish the scope and key facets of the planning system. Any development in the coastal zone above the high water mark is subjected to town planning requirements.

38. Part I - establishes the role of the Director of Town & Country Planning, who is responsible for implementing the Town Planning Act and the Subdivision of Land Act. Part II - Town Planning Schemes, which provide planning tools and regulations for development within local areas. A scheme must include a map of the area and development provisions. Part III of the Town Planning Act states that local councils are responsible for the implementation of Town Planning Schemes, subdivision of land and building development in urban areas, whereas Rural Local Authorities manage subdivision of land and building developments within their districts.

39. Under the Town Planning Act, each city/town has a Town Planning Scheme that sets out development provisions specific to land within the municipal boundary. For any development, the landowners or the lease holders must apply to their local authority for development permission, and proposals for development must comply (as appropriate) with the requirements of the relevant Scheme, or with the General Provisions. Although Town Planning Schemes are tailored for particular areas, and General Provisions apply to a wide range of circumstances, the aspects of development that they control are similar. Land is designated within a zone and the town planning requirements set out what types of development are appropriate in each zone, and the standards and guidelines that apply. It is likely that subproject sites will be in rural areas and not subject to any town planning schemes. In areas without an approved Town Planning Scheme, the local authority is the receiving agent for Applications for Development Permission, but does not have the capacity to grant approval. All applications are forwarded to the Department of Town and Country Planning for consideration and a decision.

40. A Development Application is required where earthworks, building, removing large trees or changing the use of a site or building is proposed. The construction of infrastructure under the project is likely to involve vegetation clearance and earthworks as well as new structures and therefore a Development Application is likely to be a necessary approval.

41. Development in the coastal zone[3] above the high water mark is subject to town planning requirements (Department of Town and Country Planning); development seaward of the high water mark requires a foreshore lease or wet lease subject to regulation by the Department of Lands. This will be relevant for any subprojects involving new jetties or wharves.

42. The Rivers and Stream Act 1985 defines public rights in the rivers and streams of Fiji. It includes regulations on pollution and use of water. Where any planned wharf, pier, landing place or building will interfere with the public right to access a river or stream, an application for a licence must be submitted to the director. As structures in subprojects will already exist it is unlikely a license will be required under the Rivers and Stream Act.

43. The State (Crown) Lands Act 1978 (Amended1997) controls the administration and oversight of all development on State Land in Fiji.

44. Development seaward of the HWM requires a foreshore lease or wet lease subject to regulation by the Department of Lands. The marine infrastructure (access jetty and shipping berth) will be subject to a wet lease and the Department of Lands should be consulted. The aspects considered by the Department of Lands include:

i) That the lease does not create a substantial infringement of public rights;

ii) The development of foreshore land for agricultural purposes;

iii) Development for higher usage such as industrial and tourism development is considered after having considered environmental implications;

45. **International agreements**. Fiji is a signatory to a number of international and regional agreements with environmental and conservation implications. These are listed in Annex 1.

B. Safeguard Policies of ADB and World Bank

1. ADB Safeguard Policies

46. The objectives of ADB's safeguards are to: (i) avoid adverse impacts of projects on the environment and affected people, where possible; (ii) minimize, mitigate, and/or compensate for adverse project impacts on the environment and affected people when avoidance is not possible; and (iii) help borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks. Through its SPS ADB establishes policy objectives, scope and triggers, and principles for three key safeguard areas of environment, involuntary resettlement, and Indigenous People. The SPS sets out the process to be applied from screening, through due diligence and assessment to monitoring and reporting.

47. **Screening and Categorization**. SPS requires project screening and categorization at the earliest stage of project preparation. Screening and categorization is undertaken to (i) reflect the significance of potential impacts or risks that a project might present; (ii) identify the level of assessment and institutional resources required for the safeguard measures; and (iii) determine disclosure requirements.

[3] The coastal zone is defined as the area within 30 metres inland of the mean high water mark and seaward up to the fringing reef.

48. ADB uses a classification system to reflect the significance of a project's potential environmental impacts. A project's category is determined by the category of its most environmentally sensitive component. Each proposed project is scrutinized as to its type, location, scale, and sensitivity and the magnitude of its potential environmental impacts. Projects are assigned to one of four categories.[4] The category determines the level of assessment required.

49. **Due diligence**. ADB's safeguard due diligence emphasizes planning, environmental and social impact assessments and safeguard documentation. Through such due diligence and review, ADB will confirm (i) that all key potential social and environmental impacts and risks of a project are identified; (ii) that effective measures to avoid, minimize, mitigate, or compensate for the adverse impacts are incorporated into the safeguard plans and project design; (iii) that the borrower/client understands ADB's safeguard policy principles and requirements and has the necessary commitment and capacity to manage the risks adequately; (iv) that, as required, the role of third parties is appropriately defined in the safeguard plans; and (v) that consultations with affected people are conducted in accordance with ADB's requirements.

50. **Monitoring and Reporting.** Both government and ADB have separate monitoring responsibilities. The extent of monitoring activities, including their scope and periodicity, will be commensurate with the project's risks and impacts. Governments, through the implementing agency, are required to implement safeguard measures and relevant safeguard plans, as provided in the legal agreements, and to submit periodic monitoring reports on their implementation performance. Monitoring and supervising of social and environmental safeguards is integrated into the project performance management system. ADB will monitor projects on an ongoing basis until a project completion report is issued.

51. **Safeguard frameworks**. Frameworks are required for sector projects, where the types of activities to be undertaken and types of subprojects to be implemented are known in general terms but only a small number of subprojects might be identified during project appraisal. The frameworks set out the processes to be followed for the sector project as a whole and for individual subprojects as and when they are identified. The frameworks will cover the types of subprojects to be implemented (in terms of identifying generic impacts and mitigations) and clearly identify the process to be followed (from screening through to monitoring) and the implementation arrangements (procedures, roles, responsibilities, and budget).

52. For this project, this ESMF and land acquisition and resettlement framework (LARF) have been prepared. Subproject selection, screening and categorization, impact assessments, and safeguard monitoring plans prepared during project implementation will comply with the safeguard frameworks for the project agreed between ADB, WB and the government.

[4] Category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented, and impacts may affect an area larger than the sites or facilities subject to physical works. Category B if its potential adverse environmental impacts are less adverse than those of category A projects, impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed readily. A project is Category C if it is likely to have minimal or no adverse environmental impacts.

2. World Bank Safeguard Policies

2. The WB has operational policies relating to environmental and social safeguards. Table 1 summarizes the World Bank's environmental and social safeguards policies that are applicable to the project. The third column provides guidance on specific measures and actions required by each party to comply with the policy, and lists the range of safeguard instruments that may be adopted and the manner in which to integrate and verify environmental and social due diligence requirements.

Table 1 - Detailed Description of WB Environmental and Social Safeguards Policies

Policy	Objectives	Procedures
Environment Safeguards		
WB Environmental Assessment (OP 4.01)	The Bank requires screening of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making.	Step 1. Screening for environment category of sub-projects. • Project staff will screen subprojects early in the identification stage and determine project boundaries and classify projects into appropriate safeguards categories using a checklist. Step 2. Determining safeguards instruments to be used. • The requirements by the Government of Fiji are then determined. An EA may be required depending on the scale and nature of the subproject. An EMP is included as part of the EA process. • If a sub-project does not require an Environmental Assessment under the Fiji government legislation, but is a Category B, an EA will be required. An EMP is included as part of the EA process. • The EMP will form part of the bidding documents and be included as contractual obligations of the winning contractors that will carry out works. The EMP may require site specific mitigation and as such, the EMP will form part of the contractual obligations of the winning bidders. • The Bank and ADB will review and clear the safeguards instruments prepared by the FRA for impact identification and appropriateness of proposed mitigation measures.
Involuntary Resettlement		
WB Involuntary Resettlement (OP 4.12)	To assist displaced persons in their efforts to improve, or at least restore, their incomes and standards of living after displacement. .	•
Indigenous Peoples		

WB Indigenous Peoples (OP 4.10)	This policy contributes to the Bank's mission of poverty reduction and sustainable development by ensuring that the development process fully respects the dignity, human rights, economies, and cultures of Indigenous Peoples.	•

53. The LARF covers involuntary resettlement in more detail and is not considered further here.

54. OP 4.01 states that the Bank requires environmental assessment of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable. Like ADB SPS, OP4.01 sets out the process to be applied and commences with environmental screening.

55. **Screening and categorization** is undertaken to determine the appropriate extent and type of environmental assessment. WB uses the same classification system for projects as the ADB with Category A projects having the greatest potential for significant environmental impacts (i.e. that are sensitive, diverse or unprecedented) and an environmental assessment report must be prepared by the borrower. Category B projects having potential impacts that are minor (i.e. site-specific with few, if any, irreversible impacts) and mitigation can be provided readily. The scope of environmental assessment for Category B projects is less than Category A (but the level of detail will vary from project to project based on what is potentially at risk). Category C projects are unlikely to have any adverse environmental impact and no further environmental assessment is required.

56. For projects where there are sub-projects identified and developed over the course of a project period, the implementing agency carries out appropriate environmental assessment according to country requirements and the requirements of OP 4.01.

57. **Appraisal.** WB appraises and, if necessary, includes components to strengthen the capabilities of the implementing agency to a) screen subprojects, b) obtain the necessary expertise to carry out EA, c) review all findings and results of EA for individual sub-projects, d) ensure implementation of mitigation measures and e) monitor environmental conditions during project implementation.

58. **Public consultation.** For all category A and B projects the borrower consults affected groups and local non-governmental organisations (NGOs) during the EA process about the project's environmental aspects and takes into account their views. Consultation is initiated as early as possible.

59. **Disclosure.** In order to facilitate meaningful consultation, the borrower provides relevant materials in a timely manner and in a form and language that are understandable and accessible to groups being consulted.

60. **Implementation.** During project implementation the borrower reports on a) compliance with measures agreed with the Bank on the basis of the findings and results of the EA, including implementation of any EMP; b) the status of mitigation measures; and c) the findings of monitoring programs. Sub-project selection, impact assessments, and safeguard monitoring plans prepared during project implementation will conform with the safeguard frameworks agreed to by ADB, WB and the government.

61. **Common safeguards approach**. For this project, the ADB and WB have developed a common approach to safeguards and social dimensions to be applied. It is based on the country system of Fiji (as set out in A) supplemented by additional elements as required to also comply with SPS and WB's operational policies. The approach, as set out in the ESMF and the LARF, provides direction on the preparation of documents including environmental assessment, poverty and social assessment, land acquisition and resettlement plan and indigenous peoples plan.

C. Institutional Framework and Capacity

1. Ministry of Local Government, Urban Development, Housing & Environment

62. The work of the MLGUDHE is focused on legislative reviews, urban planning and managing the impacts of rapid urbanisation, municipal reforms, fire protection and disaster management, and control and regulation of land use. The main focus of the activities is to develop and implement the government's local government and town and country planning and environment legislations, policies and programmes.

63. The DOE derives its legal mandate from the Environment Act 2005 - Part 2 Administration. DOE promotes the sustainable use and development of Fiji's environment and implements the EIA process. Section 11(1) of the Act outlines the functions of the DOE as follows:

a) to coordinate the formulation and review of National 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 an reduction;
e) to formulate, monitor and enforce environmental standards;
f) to coordinate 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 measures;
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.

64. The Environment Act requires the establishment of four units: 1) The Environmental impact Assessment Unit; 2) The Resource Management Unit; 3) The Waste Management and Pollution Control Unit; and, 4) Environmental Management Unit.

65. The role of the EIA unit is to examine and process every development proposal which is referred to it by an approving authority, which may come to the attention of the unit as having a significant environment or resource management impact.

66. Duties of the EIA Unit:

- Carry out site investigations to assess private and public sector development projects

- Review EIA reports and management plans
- Develop EIA procedures with other government stakeholders
- Advise on environment implications of projects
- Raise awareness on EIA
- Develop and maintain EIA reporting system
- Develop a registration system for EIA consultants to uplift the standard of EIA's in Fiji
- Undertake research and provide secretariat support to committees

67. The unit is also responsible for the implementation of three International Conventions namely: Convention on Biological Diversity; Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES); and The Ramsar Convention or the Convention on Wetlands. Each Convention has its own committee and working groups to administer the different requirements under the Convention.

68. DoE has a small staff resource. Only two technical officers and one technical assistant are available in the Suva Head Office for review of EIAs. Divisional offices in Labasa and Lautoka can provide some additional support (although this is limited as well). Most staff have been with DOE for more than three years, and all DOE staff are graduates with bachelor degrees.

69. Department of Town and Country Planning (DTCP) control and regulate the appropriate use of land in Fiji through the Town Planning Act 1978 and Subdivision of Land Act 1978. The DTCP is accountable for the planning of municipal land use and development. For developments outside of town and municipal areas the local authority is the Rural Local Authority.

70. Rural Local Authorities work with the DOE in the implementation of the Environment Act. They are provided copies of EIA studies in their area and asked to review and provide comment on any issues. This may result in the Rural Local Authorities requesting conditions be imposed. Rural Local Authorities also monitor the conditions of EIA in consultation with DOE, such as the implementation of environmental management plans, within their area.

71. However, Rural Local Authorities are extremely under resourced both in terms of staff numbers and equipment such as vehicles. For example, the Nadroga/Navosa Rural Local Authority only has six full time staff who undertake a variety of roles within their separate geographic areas. The roles include a public health service role, receiving and responding to complaints, review and monitoring of EIAs, etc. The lack of resources and high workload of individual staff is resulting in many EIA conditions not being monitored in rural areas and also is limiting the ability for Rural Local Authorities to be part of an EIA process (i.e. reviewing and suggesting conditions of approval).

2. Fiji Roads Authority

72. Until recently the Fiji national road network was managed by the Department of National Roads (DNR), a department of the Ministry of Infrastructure and Transport and the municipal roads by local authorities. In January 2012 the Government passed a decree constituting, the Fiji Roads Authority (FRA). The FRA is responsible for all of the roads and bridges that were formerly managed by both the former DNR and the municipal councils.

73. As a statutory corporate entity, legislation provides that FRA be accountable to the responsible minister, currently the Prime Minister, via an appointed Board. As a transitional arrangement FRA is currently governed by a Fiji Roads Advisory Committee and a key activity for 2015 is to complete the process of appointing a Board of Directors to the Authority.

74. FRA manages the road assets and executes road works under contract to private sector service providers. The exception to this is certain maintenance work carried out by municipal councils and outer island roads which are administered by the Ministry of Rural and Maritime Development under a memorandum of understanding with FRA.

75. FRA has an organisational structure which has 32 full time staff positions, of which five are currently vacant. FRA's current staffing does not have a dedicated individual for environmental safeguards implementation and monitoring but does have provision in its staffing structure for an environmental officer. To support the project, FRA will establish a project supervision team consisting of a project manager/engineer, accountant, environment manager, and social impact manager.

76. FRA will be responsible for overseeing and managing Project execution including compliance with project requirements (financial management, procurement, safeguards, and monitoring and evaluation).

77. FRA's environment manager will be responsible for implementing environmental and social safeguards at a subproject level. This will include capacity building as well as working with the design and supervision consultant (DSC) in monitoring in accordance with EMP and resettlement. Further environmental and social safeguards specialists both at an international and national level will be part of the DSC to provide the capacity for screening, environmental assessment and monitoring of each subproject in accordance with this ESMF.

3. Ministry of Infrastructure and Transport

78. The Ministry of Infrastructure and Transport (MIT) oversees policy, administration and regulation of land and maritime transport. The goal of the Ministry is to "provide an integrated transport system that is safe, efficient, affordable, accessible to all and environmentally sustainable". The Ministry of Transport amalgamates the portfolios as described below.

79. **Transport Planning Unit (TPU)**. This unit was established as a means of strengthening the capability of Government to better co-ordinate transport planning, develop policy and provide ministerial advice on transport matters. TPU interfaces with key stakeholders in the transport sector through the National Transport Coordinating Committee and National Transport Consultative Forum).

80. **Maritime Safety Authority of Fiji**. The MSAF was previously a department of the MWTPU. MSAF administers the regulation of maritime safety, marine environment protection, port security, search and rescue and hydrographical services. Responsibilities include: (i) maritime safety, which covers flag state control functions - registration of ships, ship survey and certification of seafarers, and port state control functions - port and ship security; marine environment protection; (ii) provision of aids to navigation; (iii) coordination of search and rescue; (iv) hydrographic services regulation; and (v) discharge of Fiji's international maritime obligations – accession to and compliance with international maritime conventions (mainly International Maritime Organization) and representation on regional and international maritime bodies.

81. **Government Shipping Services**. The Department's overall function is to promote and facilitate, in accordance with government policies and priorities, the national need of sea transportation. This is through the provision of shipping and marine navigational aids services,

meeting Fiji's obligation to international maritime conventions and the maritime community. In recognition of the inter-relationships between sea transportation and the wider economy, these services play an important role in the development of the urban, islands and coastal economies on a sustainable basis aimed at maximizing the contribution of the respective sectors to the national economy, thereby improving the standards of living of all people throughout Fiji.

82. **Fiji Meteorological Services**. The Department of Meteorological Services is responsible for providing weather forecasting service for Fiji and most other Pacific Island States, marine and cyclone warning services on a wider regional scale, and aviation forecasting for the Nadi Flight Information Region. It also monitors Fiji's climate, and provides information and advice on weather and climate of the nation, being a leading Meteorological Services among the Pacific Islands States, it has an increasing role to play in regional weather and climate matters, It hosts the Regional Specialised Meteorological Centre for Tropic Cyclones under the World Weather Watch programmes of the World Meteorological organisation.

4. Ministry of Lands and Mineral Resources

83. The Ministry of Lands and Mineral Resources is responsible for policy formulation, monitoring and implementation of programs in the areas governing state land administration, mineral sector and Fiji's groundwater resource. As the principal survey authority in Fiji, it is responsible for the regulation of all land surveys undertaken in Fiji by registered surveyors. It also develops, provides and maintains the network of survey controls nationwide. A major and growing role is that of land information, and the Department of Lands (DOL) produces and updates all national maps of Fiji. The Valuation Division of the DOL undertakes all negotiations and acquisitions of land for public purposes including assessments of rentals.

84. The Ministry's activities are directly aligned to the People's Charter for Change, Peace and Progress; the Strategic Framework for and the Roadmap for Democracy and Sustainable Socio-Economic Development 2009-2014.

85. The DOL has five divisions including the State Land Administration Division, Corporate Services Division, Survey Division, Valuation Division and Geospatial Division. The DOL has offices based in Suva, Lautoka and Labasa.

86. Subprojects involving development and use of State Land, such as the construction of bridges over rivers or jetties in the foreshore area, will be subject to a lease, approved by the DOL under the State Lands Act 1978.

III. ANTICIPATED ENVIRONMENTAL AND SOCIAL IMPACTS

87. The project will finance civil works to repair, rehabilitate, reconstruct, or upgrade existing roads, bridges, and rural jetties. Subprojects will be selected from the 20 year Fiji Transport Infrastructure Investment Plan (due for completion in late 2014), which will take into account the Fiji Roads Authority's draft 10 year Asset Management Plan.

88. Based on experience with other similar projects, it can be anticipated that most of the impacts will be site-specific and can be readily mitigated, as the roads, bridges and jetties are already present and most works will be repair and/or reconstruction at their existing location, i.e., within existing transport corridors and structural footprints. Where replacement will provide a better, or is the only feasible, option, the new infrastructure may be sited alongside or at a nearby location better suited to its design and function and will be screened and assessed using this process set out in this ESMF.

89. Land acquisition and associated issues, disturbance of cultural sites, and destruction of significant vegetation and habitats will not be significant issues in the majority of the subprojects due to the rehabilitation type activities and of minor significance in the remainder, particularly as no environmental category A subproject will be eligible for financing under the project. .

A. Roads/Bridges

1. Design and Location Impacts

90. **Climate change.** The design of roads at either inland or coastal locations will consider potential impacts of climate change including: sea level rise, extreme high tides, storm surges, coastal flooding, cyclones, heavy rainfall events and more temperature extremes. Much of the damage that has occurred to structures within Fiji is due to prolonged and/or intense heavy rainfall and subsequent river flooding and debris loads, sometimes coupled with deforestation in river catchments.

91. ADB has developed guidelines for climate proofing investment in the transport sector specific for road infrastructure projects. The process for integrating suitable measures in the designs will be a requirement of the project. Measures may be engineering or non-engineering options. For example engineering options for climate proofing roads includes a consideration of the subsurface conditions, material specifications and drainage and erosion. Non-engineered options may include the use of environmental buffers such as mangroves or increased vegetative land cover to minimize the impact of floods and assist with drainage. The project includes input by a climate change adaptation specialist (as part of the DSC) who will guide this process.

92. **Runoff management design.** Based on mitigations identified in environmental assessments and integrated into EMPs and successfully implemented in previous projects, roadside storm water drainage will include specific recommendations that may include but are not limited to the following mitigation measures:

- Cross drainage using culverts will be carefully evaluated to ensure that systems do not fail from excessive discharge.
- Where the road traverses ridges, side drains (off-takes) are required to direct storm water flows away from the road. These are to be established at 2 m vertical intervals (VI) where bare earth channels will be maintained. If a 2 m VI cannot be achieved then consideration will need to be given to vegetated

channels with a VI of 4 m or otherwise armored with concrete or half round steel pipes.

- Where cross drains are required stable outlets will be provided that can carry the runoff safely to the disposal area. Culverts and drains must not be allowed to terminate above a disposal area without considering the possible effects on the stability of the discharge area.
- All pipe and box culverts must have flared level outlets and be provided with a vertical cut-off wall at the end of the apron that extends at least 0.35m below the apron to avoid the apron being undercut.
- All culverts are to discharge to safe (non-eroding) areas.
- Regular maintenance of roadside drainage systems is required.

93. **Flora, fauna and protected areas**. Flora and fauna will be identified in the environmental assessments. Measures to mitigate any impacts on flora and fauna will be integrated into the EMP. As noted previously, the roads will be rehabilitated within existing corridors and bridges will be replaced either in the existing footprint or adjacent to the existing structure to minimise vegetation clearance and fauna and flora impacts. Water crossings will be designed to allow fish passage through the structure. As the environments will already be modified, no critical or natural habitats are likely to be disturbed and works will not be in, or adjacent to, protected areas or conservation areas.

94. **Land acquisition.** A LARF has been prepared for the project. This will guide the process for any work that necessitates access to land beyond the existing road corridor, including temporary access arrangements required while new bridges are being constructed. The procedures set out in the resettlement framework will be followed by FRA. Any resettlement plans or due diligence reports, as required, will be submitted to ADB and WB for review and clearance.

2. Construction Impacts

95. **Air quality.** During the construction phase, the activities that could produce impacts on air quality are emissions from vehicles or machines and dust raised from the construction activities. Fiji has emission and air quality standards (Annex 2). Air quality standards from emissions are provided in Schedule 5 (Part B), Part 4 of the Environmental Management Regulations 2007, summarized for solids and gases in Table 14.1-6 and Table 14.1-7, respectively. This regulation indicates that “a point source of an air polluting substance should not, in isolation or combination with any other source of that substance, cause a concentration of that substance in the ambient air to exceed the emission standards set out.“ Since the impact on air quality is likely to be minimal and the standards not exceeded, no rigorous air quality monitoring is expected to be required for subprojects.

96. **Dust** may become a nuisance to surrounding communities from construction activities. Where dust will be an issue, the contractor will limit the area opened and reduce vehicle movements. Water will be sprayed on affected areas as required to keep dust down both at the worksite and on haul routes that pass through village areas or cropping susceptible to dust. Stockpiles may also release dust into the surrounding area and should be sited away from residences.

97. **Noise**. There are villages and noise sensitive receptors (school, health center, church) within the road corridors. In such locations noise will be controlled, with no construction activities taking place between 1900 hrs and 0700 hrs. Ideally, noise should not exceed 45 dBA measured at the outside of any house or noise sensitive receptor.

98. **Vibration.** For compaction of the road base and materials/aggregate or other activities such as pile driving for bridges, the contractor will establish the following:

- Type and size of vibration impact of equipment
- Zone of influence for the equipment
- The contractor will be the responsible for assessing the condition of buildings that may be susceptible to vibration within the zone of influence before commencing any work.
- The contractor will be responsible for any damage caused to buildings as a result of operating this equipment.
- Prior to commencing work with any vibrating machine, the contractor will arrange to advise people in nearby houses that this work is due to commence.

99. **Sources of materials**. Materials such as aggregates or river gravels should ideally be sourced from existing quarries/gravel pits on land. However, it is likely that given the remote location of many of the subprojects that materials may need to be sourced locally. Should materials for the subproject be sourced from a river or stream, the contractor will be required to prepare an aggregate extraction plan and ensure that a gravel extraction permit is obtained, issued by the Ministry of Lands and Mineral Resources either to a supplier or directly to the contractor for the extraction of materials. Any such gravel extraction site that is opened by the contractor will comply with relevant laws and requirements including a plan for access to the river gravel site and re-instatement after completion of work.

100. There is an existing Code of Environmental Practice for the operation of quarries and this, and other COEPs will be updated as part of the project. The gravel extraction plan should include measures outlined in the COEP and be included as part of the EMP.

101. **Solid Waste**. During replacement of bridges, old bridges may require demolition (if they cannot be used as foot bridges). Material from existing bridges to be demolished will be recycled or reused in new construction where possible. Where materials cannot be recycled or reused they will be offered to the community (if they have a useful purpose and are non-toxic) or appropriately disposed of to an approved facility. A solid waste permit may be required and this requirement should be discussed with the DOE at the assessment stage of subprojects.

102. **Soils and erosion**. During construction, excavated areas will need to be assessed for potential soil erosion damage and protection arranged as necessary to avoid the movement of eroded soil from the site into watercourses and onto adjoining areas including the worksite. Arrange to limit the area that is being excavated and use temporary stormwater control devices and associated cut off drains/bunds to minimize sediment transport into watercourses. If sediment transport into watercourses may be a significant issue and it is impracticable to pass discharge over a grassed area prior to discharge to a watercourse then silt ponds/traps should be used. Stockpiles are to be located away from watercourses where possible and where toe drains can be constructed around the stockpile to minimise runoff of sediment to watercourses or surrounding land. At the completion of work, all disturbed areas will be stabilized by re-vegetation techniques as soon as practicable.

103. **Water quality**. Water quality can be affected during construction activities when soils, wastewater, oils and lubricants, sewage and other materials are allowed to move into the environment. Construction activities that may exacerbate the movement of these materials into the fresh or marine water environments will be examined and mitigation measures developed. No refueling of construction machinery will occur within 20 m of a watercourse.

104. **Flora, fauna and protected areas.** During the construction phase, flora and fauna can be affected, but any potential impacts are considered to be minimal as the construction work will be performed at previously developed/modified sites and the previous operation of the road or presence of the bridge will have already disturbed fauna in these areas. The works will focus on reconstruction within existing corridors and within or adjacent to the existing footprint of structures. In addition, construction works will be temporary and fauna and flora will reestablish. Subprojects will not be selected in road corridors that traverse critical or natural habitats or are in, or adjacent to, protected or conservation areas, as these would be classified as category A subprojects and therefore not eligible for financing under the project. If significant vegetation such as large trees require removal then replanting in nearby locations with suitable species will be considered in the EMP.

105. **Physical cultural resources**. Existing roads and bridges are unlikely to be located in areas where there are any known physical cultural resources (sites, areas) that could be damaged during excavation or other construction activities. The national museum shall be consulted during the screening of subprojects to identify any known areas of cultural or historic significance. Any significant vegetation removal or road realignment may result in sites being uncovered. The EMP contained in the environmental assessment will include chance find procedures, in the event of any accidental discovery during construction activities. The contractor will consult with local leaders and authorities if new sites for sourcing materials are identified to allow for areas of cultural importance to be avoided.

106. Potential material or quarry sites are anticipated to be existing sites, but where new sites are brought into operation for the project, the contractor will be required to seek a permit from Ministry of Lands and Mineral Resources.

107. **Community health and safety**. The EMP will include measures to protect the health and safety of communities including; (i) work sites and camp being properly fenced and guarded; (ii) unauthorized people will not being permitted into the work sites or camp; implementation of the project's consultation and participation plan which will set out the protocols to be implemented by the contractor and which will guide interaction between community and construction workers; and (iv) contractor will engage an approved service provider to deliver communicable disease awareness and prevention training and presentations with local communities and the workforce.

108. Depending on the different infrastructure needing repair or reinstatement there will be a mix of international and national workers. For example, high level bridge construction will require a larger proportion of skilled labor, culvert and scour protection works can utilize a greater proportion of unskilled and local labor. Local people can also be hired as security guards, cooks, cleaners and providers of local produce at works sites and camps. This will reduce possible conflicts between outside labor and local communities. The location of the site and any campsite will be carefully assessed by the contractor, DSC, and local community leaders to avoid the development of concerns, grievances, or conflicts.

109. Although not a specific impact of this project, human trafficking has been a problem in Fiji in the past. The project is not expected to increase the potential for human trafficking but it is a risk that needs to be considered.

110. The main potential for trafficking issues would arise out of a large out of town workforce being required for construction or if new major roads were created to previously inaccessible rural areas, making transport easier to the areas where trafficking is more prevalent (i.e. city centres). As the subprojects will be existing roads and most subprojects will utilise local labour resources then it is not expected to be a significant impact of the project. The Fijian government enacted a comprehensive anti-trafficking law, the Crimes Decree, which defines trafficking as a crime of compelled service which does not necessarily involve crossing a border or otherwise moving a victim, and includes several innovative provisions to protect both adult and child trafficking victims. Ongoing training and awareness programmes are in place to address the problem.

111. **Worker health and safety:** A number of activities, plant and products can give rise to health and safety impacts during the construction phase. Most of these impacts can be managed and/or mitigated. The potential impacts are (i) contamination of local water supplies by potential contaminants such as sediments, fuel products and lubricants (ii) air pollution from exhaust fumes and dust giving rise to respiratory conditions; (iii) risk of accidents at work sites; and (iv) spread of communicable diseases. Contractors will observe general health and safety requirements and as a minimum must be compliant with the Labour Act of 1978 and the Safety at Work Act of 1996. The contractor will be required to provide personal protective equipment to workers. The WB's Environmental Health and Safety Guidelines will apply to the project.

3. Operation Impacts

112. **Soils and erosion.** Any excavation sites will be either filled in or stabilized during construction. Soil erosion from the road itself is not expected. Roadside drainage systems and waterway crossings will need to be maintained and this will require the removal of accumulated sediments and vegetation (particularly after flood events).

113. **Flora and fauna**. Impacts on flora and fauna are generally expected to be the same as previously as roads, bridges and jetties existed in these locations and indirect impacts from traffic and vessels (noise, vibration, dust, water quality) is already occurring. There may be a slight increase in traffic volumes (include marine vessels in the case of jetties) once infrastructure is improved but generally impacts on fauna and flora are all expected to be minor. As the reconstruction works will take place in existing road corridors there will be no potential for adverse impacts that could arise from access to previously inaccessible forests or sensitive habitat areas. However, improved roads may lead to remote areas being more accessible.

114. **Health and safety.** While there is not expected to be any significant changes in road locations, the improved surface will increase traffic speed and coupled with greater traffic volumes increases the potential for accident numbers and severity. Should safety issues be determined, arrange the installation of traffic calming devices and footpaths through village areas, install signage and increase community awareness of traffic hazards through education programs.

115. **Socio-economic impacts.** The rehabilitation works are expected to have positive impacts on the social and economic prosperity of adjacent communities as transport will be more reliable and accessibility improved as a result of the project. Local populations will still be able to continue to use the area as they did prior to the works but with greater safety.

116. **Risk of spread of communicable diseases and trafficking**. Following the improvement of infrastructure such as road corridors and water crossings, there is a potential risk of spread of communicable diseases resulting from the enhanced accessibility of areas and of cases of human trafficking. However, the overall risk is considered to be negligible because the road corridors already exist.

B. Wharves/Jetties

117. The subprojects will involve repair, rehabilitation or replacement of rural jetties, wharves and associated approach channels, harbor protection works and navigation aids. Existing arrangements for ship to shore transfer may be upgraded to improve passenger safety, reduce cargo damage, and match changing shipping demand and vessel types. This could include constructing small boat jetties in place of beach landings, or jetties capable of berthing inter-island vessels in place of small boats.

118. Thus, land acquisition and associated issues, disturbance of cultural sites, and destruction of significant coastal vegetation and significant habitats is unlikely to appear as an issue in the majority of these subprojects. The sensitivity of the coastal/foreshore sites will be assessed during the screening to ensure that category A subprojects are not included in the project.

1. Design and Location Impacts

119. **Climate change.** The design of maritime infrastructure will consider potential impacts of climate change including: sea level rise, extreme high tides, storm surges, coastal flooding, cyclones, and increased wave attack/scouring. Much of the damage that has occurred to rural maritime infrastructure within Fiji is due to a combination of inadequate original design, lack of maintenance, vessel impact and damage from wave attack, particularly in major cyclone events.

120. Integration of an appropriate level of climate resilience into the structural design will be a requirement of the Project. Measures may include engineering or non-engineering options. For example engineering options for climate resilience of marine infrastructure includes raising the deck height of structures, additional reinforcing and scour protection and the ability for structures to be overtopped. Non-engineered options may include the use of environmental buffers such as mangroves or increased vegetative land cover to minimize the impact of coastal flooding and assist with drainage. The project administration manual includes input by a climate change adaptation specialist who will guide this process.

121. **Coastal processes**. Solid structures have the potential to interrupt sediment movement along the coast (longshore sediment movement) or create accretion. In addition, structures with vertical walls located within the wave zone can cause wave reflection and scouring of the sediments in front of the structure. To avoid interruption to coastal processes solid structures are not to be designed and constructed. Where possible, structures are to be designed to mitigate wave impacts on the structure and reinforcing should be provided to mitigate against scouring.

122. **Flora, fauna and protected areas**. Foreshore and coastal flora and fauna will be identified in the environmental assessments. Measure to mitigate any impacts on flora and fauna will be integrated into the EMP. As noted previously, the structures will be rehabilitated within their existing footprint or directly adjacent to the existing structure. As the environments will already be modified, no critical or natural habitats are likely to be disturbed and works will not be in, or adjacent to, marine protected areas or conservation areas.

123. **Land acquisition.** A LARF has been prepared for the project. This will guide the process for any work that necessitates access to land beyond the existing road corridor, including temporary access arrangements required while new jetties are being constructed. The procedures set out in the resettlement framework will be followed by the FRA and DSC. Any resettlement plans or due diligence reports, as required, will be submitted to ADB and World Bank for review and clearance.

2. Construction Impacts

124. **Water quality**. Water quality can be affected during construction activities when sediment, oils, wastewater, oils and lubricants, sewage and other materials are allowed to move into the environment. Construction activities that may exacerbate the movement of these materials into the fresh or marine water environments will be examined and mitigation measures developed. No refueling of construction machinery will occur within 20 m of a watercourse or the coast. Machinery should work at low tide to minimize water quality impacts during construction.

125. **Flora, fauna and protected areas**. During the construction phase, flora and fauna can be affected, but any potential impacts are considered to be minimal as the construction work will be performed at previously developed sites. The main potential construction impact on fauna and flora will be the driving of any piles on the benthic ecology or any removal of existing sensitive marine habitats such as corals or sea grass that may be required by construction machinery accessing the site. Construction machinery will take existing tracks to the coastal area where they exist to minimize damage to coastal habitat.

126. Vibration from pile driving will impact fauna and flora in the vicinity. Most species that are sensitive to vibration such as turtles and fish can move away from the source. However, pile driving will not occur during the turtle nesting season.

127. Marine ecosystems such as corals are particularly sensitive to sediments (sedimentation) and turbidity (which can block the light necessary for growth). Construction works will occur at low tide to minimize potential sedimentation and where works within water cannot be avoided, turbidity curtains will be used to minimize impacts.

128. Lights can cause glare and disorient fauna, particularly turtles, making it difficult for them to move away from the construction area. Care will be taken to use suitable lighting that does not cause excessive glare and works at night will be minimized to avoid the use of lighting.

129. If significant vegetation such as mangroves require removal then replanting in nearby locations should be considered in the EMP.

130. **Physical cultural resources**. Sacred places and places of cultural importance such as burial sites can often be located at the coastal edge. As works will mainly involve the repair or reconstruction of structures it is not considered likely that any sites of cultural significance will be directly impacted by the construction works. However, care will be taken to utilize existing access route to structures by construction machinery to avoid disturbing unmarked sites.

131. Any significant vegetation removal for access to the site may result in sites being uncovered. The EMP contained in the environmental assessment will include chance find procedures, in the event of any accidental discovery during construction activities. The contractor will consult with local leaders and authorities if new sites for sourcing materials are identified to allow for areas of cultural importance to be avoided.

132. **Protected Areas and Sensitive Ecosystems**: The presence of any marine protected area is to be determined and measures taken to minimize disturbance of any of these areas. Should any construction be required within a protected area, a rigorous environmental categorization will be undertaken to ensure proper environmental classification and the level of environmental assessment needed according to ADB and WB guidelines. Aside from that, any construction activities adjacent to or alongside a marine protected area will be carefully examined. Impacts on natural habitat will be covered in the environmental assessment. No solid or liquid wastes are to be disposed of in the marine environment and all waste will be collected and removed from these sites.

133. **Community**. The siting of any work area with regard to its location relevant to local communities will need to be carefully appraised by the contractor, the developer and local community leaders to avoid the development of possible conflict situations.

134. The EMP will include measures to protect the health and safety of communities including; (i) work sites and camp being properly fenced and guarded; (ii) unauthorized people will not being permitted into the work sites or camp; implementation of the project's consultation and participation plan which will set out the protocols to be implemented by the contractor and which will guide interaction between community and construction workers; and (iv) contractor will engage an approved service provider to deliver communicable disease/HIV and trafficking awareness and prevention training and presentations with local communities and the workforce.

135. **Worker Health and Safety**: A number of activities and products can give rise to health and safety impacts during the construction phase. Most of these impacts are, however, considered minimal. The potential impacts are (i) contamination of local water supplies by potential contaminants such as sediments, fuel products and lubricants, and sewage giving rise to gastro-intestinal problems; (ii) air pollution from exhaust fumes and dust giving rise to respiratory conditions; (iii) risk of accidents at work sites; and (iv) spread of communicable diseases. Contractors will observe general health and safety requirements and as a minimum must be compliant with the Fiji health and safety and labour legislation.

136. Construction work areas are potential sources of contaminants and there will be a need to ensure that any work areas are sited away from water sources used by the local communities. Contract documents will take into account the proper siting of the work areas and contractors will observe general health and safety requirements, including provision of safety and protective gear and equipment for workers to avoid risks of accidents at the work site. The contractor will ensure that workers have good access to a health facility and shall ensure that first-aid and medical supplies are well stocked at the construction site. Access to work areas by members of the local community will be prohibited to reduce safety and social risks. A suitable boat will be made available in case of need for emergency or medical evacuation.

137. **Noise and Vibration**: Pile driving has the greatest potential to develop noise and vibration from the impact of the driving action. Both noise and vibration is expected to be temporary and may last up to one month. This is not expected to cause adverse impacts to residents or the workers themselves. Pile driving will not occur between the hours of 1900 and 0700 and the contractor will be required to alert communities when noise and vibration activities will occur. The contractor will be required to monitor community reaction to these activities and manage work to minimize disruptions to communities.

3. Operation Impacts

138. **Water Quality**. Water quality may be impacted through the spillage of oil or other wastes from vehicles or berthed vessels. This includes sewage from vessels or any shore-based facilities. Although the discharge of waste from vessels using the structures is possible, it will be no different to the risk presented prior to the works as the structures already exist. However, to avoid impacts on water quality the facility should be provided with a suitable waste receptor and signage installed advising people not to discharge wastes to water and the law regarding disposal of wastes.

139. **Risk of Spread of Communicable Disease:** There is an increased risk of spreading communicable diseases resulting from greater mobility of people, particularly when ships stay overnight alongside the wharf/jetty, where both from the crew and the passengers may sleep ashore often inadequate and unhealthy surroundings.

140. This can be assisted by the provision of basic water and sanitation facilities at the wharves/jetties to avoid unsanitary conditions developing. The overall risk is considered to be insignificant and will be addressed by implementing a communicable disease awareness and prevention program within the surrounding communities during the construction phase.

IV. SAFEGUARDS PROCEDURES FOR SUBPROJECTS AND/OR COMPONENTS

141. The following provides the steps in the assessment of subprojects. The process complies with Fiji legislation and has additional requirements to meet the common safeguards approach developed by ADB and WB.

A. Screening and Categorization

142. The first stage in the assessment is screening of project impacts to determine the potential risks and required level of assessment as well as the type of safeguards documents required (e.g. EIA, EMP, poverty and social analysis). The significance of the project's environmental impacts determines the environmental categorization of the project.

143. In general these are the criteria for categorization of the project activities.

- Category A. The activity is likely to have significant adverse environmental impacts that are sensitive diverse, or unprecedented. In addition the potential social and environmental impacts may be mostly adverse, the scope of impacts large in terms of area and/or the impacts difficult to mitigate.
- Category B. The activity has potential adverse environmental impacts on human populations or environmentally important areas--including wetlands, forests, grasslands, and other natural habitats—that are less adverse than those of category A projects. These impacts are site-specific; few if any of them are irreversible; one or two site sensitivity ratings are medium or high and in most cases mitigation measures can be designed more readily than for category A projects. Most bridge and road construction activities will fall under this category.
- Category C. The activity is likely to have minimal or no adverse environmental impacts. Beyond screening, no further environmental assessment is required for a category C project, although DOE may require an EMP. Minor repairs to existing structures are likely to fall in this category.

144. The proper categorization is left to the judgement of FRA considering the guidelines above. The final objective of the categorization is to ensure that all social and environmental impacts are avoided, minimized or properly mitigated.

145. The following criteria will be used for initial screening:

(i) subprojects in or adjacent to protected areas (whether legally designated or informal) including any community managed areas or reserves and priority protected areas proposed in the Fiji National Biodiversity Strategy and Action Plan;
(ii) any significant loss to mangroves or sensitive wetland;
(iii) any permanent negative effect on a known rare, threatened or endangered species; and
(iv) any permanent damage to physical cultural resources .

146. Subprojects that trigger any of the above during initial screening will require approval from the ADB/WB which will advise whether the subproject may proceed and need for any additional measures or approaches. Category A projects will not be eligible for financing under the project. As most subprojects relate to existing structures, it is not likely that any of the above will be triggered. The overall project classification undertaken by ADB on a preliminary basis has confirmed it as category B. It is likely that each subproject will be category B or C. This will be confirmed through the screening process, undertaken by the FRA, when sites and specific works required are known. Screening forms are included in Annex 2.

147. The next level of screening is to determine what type and extent of assessment may be required. This stage is done in consultation with DOE as approving authority. The screening and project descriptions prepared will be submitted by the FRA as part of the screening application to DOE (as approving authority).

148. Upon receiving the screening application the approving authority will undertake a scoping stage to determine the Terms of Reference (TOR) for the EIA study. The TOR will outline the level of detail required for the EIA and the EMP. At this stage the DOE may decide an EMP rather than a full EIA study is appropriate (for example for repairs of existing structures).

149. During the scoping stage DOE will inspect the proposed site, may take samples from the site and consult with the proponent or any agency or person with relevant knowledge and expertise. The DOE may determine that it is appropriate to require the proponent to hold public scoping meetings at this stage to discuss the TOR. Public notice of the meeting must be given by the proponent at least seven days before the meeting on radio, television and newspaper.

150. The TOR must be approved by DOE and the EIA study based on the TOR.

B. Preparation of Environmental Assessments and Environmental Management Plan

1. Environmental Impact Assessment

151. Environmental assessment in Fiji is regulated by the Environment Act 2005 and the Environment Regulations 2007. The Environment Regulations establish the procedures for undertaking environmental assessment. The environmental assessment process in Fiji is similar to the requirements of the WB and ADB. However, additional requirements of WB and ADB include sections on information disclosure, assessment of alternatives and a grievance redress mechanism.

152. EIA study in Fiji must be undertaken by a registered consultant and be based on the TOR. The outline contents of an EIA are included in Annex 3. The EIA consists of eleven sections:

A Executive Summary
B Introduction
C. Policy, Legal and Administrative Framework
D Description of the subproject
E Description of the Environment
E Anticipated Environmental Impacts and Mitigation Measures
F Analysis of Alternatives
G Information Disclosure, Consultation, and Participation
H Grievance Redress Mechanism
I Environmental Management Plan
J Conclusions and Recommendations

153. At least two public consultation stages must be held during the EIA study. The first stage of consultation is held with the community at the start of an EIA study to discuss the proposal, identify any issues or concerns and obtain any relevant local information on the site is essential to avoid issues at a later stage.

154. Five hard copies and one CD copy of the EIA is required to be submitted to DOE. This is so that they can circulate a copy of the EIA to relevant Government agencies (e.g. town and country planning, maritime safety, rural local authorities, etc).

155. Once the EIA report is submitted, DOE must appoint an EIA review consultant or review committee (s30 Environment Act 2005). The proponent must then conduct a second stage of public consultation on the EIA report, including at least one public review meeting held in the vicinity of the proposed works.

156. The DOE must produce a written report outlining its decision in relation to the development proposal within 35 days of the submission of the EIA report. The DOE may approval the proposal with or without conditions, not approve the proposal or recommend additional studies.

157. The EIA approval does not constitute approval of the proposal under any other law (for example the State Lands Act. Once EIA approval is received, the proponent must then apply for approval under any other law(s) relating to the proposal.

158. For the project, FRA (supported by registered consultants) will screen each of the subprojects and submit the screening information and project descriptions to DOE, and prepare the EIA in accordance with the TOR.

2. Environmental Management Plan

159. Each environmental assessment will include an EMP, prepared by FRA (with support from registered consultants) which sets out the mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental or social impacts (in that order of priority). For some subprojects where only repair to existing structures is proposed then it may be that only an EMP is required to be submitted to DOE. This will be confirmed with DOE during the screening phase (see above). The following is to be included in an EMP:

160. **Mitigation**. The EMP will summarize the anticipated adverse environmental and social impacts and risks, describe each mitigation measure with technical details, and provide links to other mitigation plans (for example, for resettlement plans or reports) required for the project.

161. **Monitoring.** This part of the EMP will describe monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions. The reporting and disclosure procedures will also be identified. Annex 4 establishes monitoring parameters.

162. A monitoring committee would be set up with FRA, Consultants, DOE for monitoring of large projects. Large projects will require monthly reporting. Smaller projects do not warrant a monitoring committee and can have reporting at lesser frequency.

163. **Implementation arrangements.** The EMP will include an implementation schedule showing phasing and coordination with overall project implementation and describe the institutional organizational arrangements for responsibility for carrying out the mitigation and monitoring measures.

164. This section of the EMP will also identify practical measures to strengthen environmental and social management capability that can be implemented during the project. The section will estimate capital and recurrent costs and describes sources of funds for implementing the EMP.

165. **Performance indicators.** Where possible and practical, the EMP will describe the desired outcomes as measurable events, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods. Environmental standards for air quality and discharge are provided in schedules to the Environment Management (Waste Disposal and Recycling) Regulations 2007. Where standards are not provided in the Regulations the World Health Organization standards should be used.

V. CONSULTATION AND INFORMATION DISCLOSURE

166. For any subproject requiring an environmental assessment, formal and documented public consultation and information disclosure will be required in accordance with the ADB SPS and Public Communications Policy 2011 and government's consultation and information disclosure requirements identified in the Environment Act. This will be done at an early stage during preparation of the assessment and is to inform stakeholders of the project components and to encourage input to help identify environmental and community issues and concerns.

167. The information disclosed and feedback provided at the consultation sessions will be summarized, attendance recorded, and the document attached as an annex to the EIA report. Invited participants and attendees at consultation events will include government agencies (including provincial government), village and community representatives, as well as NGOs and civil society organizations.

168. This ESMF will be disclosed locally. It will be disclosed in English and be made available at the World Bank's InfoShop and on ADB website.

169. All consultations will follow the procedures set out in the consultation and participation plan (CPP) to be prepared for the project.

170. Consultation during the preparation of the ESMF was undertaken with a number of government agencies, including DOE, Nadroga/Navosa Rural Local Authority, iTaukei, Department of Lands. Minutes of meetings undertaken during the project preparation are included in Annex 5.

VI. INSTITUTIONAL ARRANGEMENTS AND RESPONSIBILITIES

A. Fiji Roads Authority

171. FRA will be the implementing agency for the project. FRA will be responsible for overseeing and managing project execution including compliance with project requirements (financial management, procurement, safeguards, and monitoring and evaluation). FRA will provide a full-time environment manager. The environment manager will be consulted to ensure that the procedures and processes established in this ESMF are followed for the project. However, documentation of how the ESMF will be applied for the project will be the responsibility of the safeguards specialists within the DSC.

172. The role of FRA will be overall project management and decision making. Feasibility studies (including screening and analysis required for the prioritization and ranking of subprojects, safeguards assessments and consultation), detailed designs, and supervision of construction and civil works contractor will be the responsibility of the DSC.

B. Design and Supervision Consultant

173. The DSC will include international and national specialists to implement the safeguard tasks as required by this ESMF and the LARF. Amongst a number of others, the DSC will include: (i) environmental safeguard specialist (international) (ESS); (ii) social safeguard/resettlement specialist (international) (SSS); (iii) safeguards specialist (national) (NSS); and (iv) gender and community development specialist (national) (GCDS). The DSC will be headed by a team leader.

174. General environmental management responsibilities of the DSC include:

- Updating of the COEP to reflect current FRA institutional arrangements and requirements of Environmental Management Act 2005.
- Through the team leader, ensuring that the environmental safeguards are implemented as set out in this ESMF so as to meet intended requirements. This includes undertaking safeguards assessments during the feasibility study, ensuring that the EMPs from approved environmental assessments are included as part of construction section and tendering conditions of the bid and contract documents, and monitoring is undertaken.
- Supervising the implementation of the EMP during construction.

175. Within the DSC team, the ESS, SSS and NSS will have specific responsibilities for implementation of this ESMF. Their duties include:

(i) During the project inception, brief the DSC team on the ESMF and safeguard and CPP requirements that need to be implemented during the project.
(ii) Undertaking the screening of each subproject (including individual components such as water crossings at different locations) and identify main environmental impacts and prepare project descriptions.
(iii) Prepare the development consent applications including subproject descriptions and the screening forms, and after approval by FRA submit to DOE for assessment determination.
(iv) Prepare the assessments (EIA or just EMP as determined by DOE) for the selected or prioritized subprojects as required to meet the requirements of this ESMF.
(v) Undertake adequate consultations with affected people and studies of the subproject area/catchment to identify baseline conditions and impacts;
(vi) Ensure that disclosure of the draft assessments is done in accordance with the project's CPP in compliance with ADB's Public Communications Policy (2011), WB and government requirements.
(vii) Submit the environmental assessment to DOE. Arrange for a copy and the conditions of the EIA issued by DOE to be sent to the ADB/WB.
(viii) During pre-construction, ensure that issues that need to be addressed by the design engineers are considered. Prepare a design brief containing main requirements for action by the technical design team.
(ix) Based on detailed designs, update the EMP from the approved environmental assessment. Integrate the revised/updated EMP and DOE's EIA conditions into the construction section of the bid and contract documents.
(x) With the GCDS arrange public consultation to advise affected communities of the scope and scheduling of the subproject and to raise awareness within the communities of the likely phasing of events that will occur within their boundaries.

(xi) If required by the team leader, provide a review of environmental management aspects during bid evaluation.

(xii) Following the award of the contract and prior to submission of the construction EMP (CEMP), provide EMP and safeguards induction for the contractor (if required).

(xiii) Ensure that contractor has access to the environmental assessments of the subprojects and the EIA conditions issued by DOE.

(xiv) Evaluate, and when satisfactory, advise team leader and/or FRA that the CEMP may be approved.

(xv) Advise the contractor of their responsibilities to mitigate environmental impacts and issues associated with construction activities.

(xvi) With the project engineer, supervise and monitor the contractor's compliance with the approved CEMP. As required, issue defect notices concerning non-compliant work which will be channeled to the contractor via the project engineer. Any instructions or requirements for corrective actions will be issued through the project engineer.

(xvii) Prepare reports of site visits and compliance checks at least every two months, contribute to the quarterly progress reports (summary of compliance reports and contractor's monthly reports and any other safeguards activities including training seminars or workshops and the like), and prepare safeguards monitoring reports twice per year.

C. The Contractor

176. The contractor will be responsible for complying with the environmental management requirements included in the contract as follows:

(i) Prior to construction commencing, the contractor will address the construction section of the EMP which will be developed into the detailed CEMP that addresses the EIA conditions and details working statements and methodologies as required by the EMP. It will include a monitoring plan and a reporting program. Submit the CEMP to the DSC for clearance.

(ii) Designate an environmental and safety officer and deputy environmental and safety officer who will take lead responsibility for implementation of the CEMP.

(iii) Provide briefings and training seminars for all workers (and sub-contractors as relevant) on the CEMP and safeguards requirements governing the project.

(iv) Following approval of the CEMP, the contractor is required to attend a site meeting where the CEMP is further discussed to ensure that all compliance conditions are clearly understood.

(v) The contractor's site engineer and environmental and safety officer will be responsible for daily supervision of the CEMP. The contractor is required to undertake work as directed by the project engineer (who will be assisted by the ESS and NSS). If the work is non-compliant with the CEMP or conditions, the contractor must respond to the defect notice issued and rectify the issue or work.

(vi) The contractor will cover CEMP implementation, including grievance redress, in the monthly reports that will be submitted to the DSC. The report will also contain the monthly accident/incident report.

D. Department of Environment

177. The DOE will be responsible for: (i) respond to the initial screening application and determine what assessment is required for each subproject and review the assessment reports when submitted; (ii) issue EIA approval with or without conditions or advise on why it has not been approved; (iii) participate in a monitoring committee and review monthly monitoring reports (for larger projects), iv) undertake periodic monitoring of the subprojects and implementation of EIA conditions as required; and (v) undertake to review the environmental grievances or complaints that cannot be resolved through the GRM.

E. Asian Development Bank/World Bank

178. During the project, the ADB and WB will provide support to FRA as required during review missions and at other times as required. ADB/WB will review and clear environmental assessments prepared for subprojects and safeguards monitoring reports and disclose these documents as per Public Communication Policy 2011. Review missions will review the procedures being implemented by DSC, FRA, and the contractor, and will include review of screening, assessment, consultations, EMP updating, bid documents, and monitoring.

VII. GRIEVANCE REDRESS MECHANISM

179. The grievance redress mechanism (GRM) will be based on traditional systems for conflict and dispute resolution and will be used to resolve, as far as possible, problems, concerns or grievances created by the project. The GRM is also integrated into the LARF and will be an important element of any land acquisition and resettlement plans prepared for the project.

180. The following process is to be used and is based on the principle of dealing with concerns as far as possible directly at subproject level as a first stage. If this cannot be resolved then the grievance will be referred to the environment manager in FRA.

A. During construction

181. The contractor's responsibility in respect of consultation and communication will be set out in the CPP and the relevant section of the CPP will be integrated into the EMP and bid and tender documents. The contractor will engage with communities primarily through the community advisory committees and specific grievance redress committees established in each subproject area and recorded in the EIA. The protocols for behavior of workers and conduct in and around villages will be set out in the CPP and will be an element of the EMP to help mitigate any impacts resulting from construction workforce and camp.

182. Affected people are in the first place to discuss their complaint directly with the Turanga-ni-Koro (elected administrative head) in their village. If the Turanga-ni-Koro supports the complaint both persons take the complaint to the contractors site office. For those who wish to remain anonymous, a register of their complaint or issue can be made on a register held with the village head. This register will be provided to the Turanga-ni-Koro as per the above.

183. Any complaints arriving at the contractor's site office will be recorded in a register that is kept at the site and which will be subject to monitoring. The register will record complaints by date, name, contact address and/or phone number if available, and reason for the complaint. If the complainant desires, their identity may be kept anonymous but the nature of their concern

should still be recorded. A duplicate copy of the entry is given to the person making the complaint for their record at the time of registering the complaint. The duplicate copy given to the complainant will also show the procedure that will be followed in assessing the concern or complaint, together with a statement affirming the rights of the person to make a complaint. For straightforward grievances, the project engineer can make an on-the-spot determination to resolve the issue.

184. The register will show:

- who has been directed to deal with the concern/complaint
- the date when the complaint was made
- the date when the complainant was informed of the decision, and
- how the decision was conveyed to the complainant.

185. The register is then signed off by the person who is responsible for the decision and dated. The register is to be kept at the front desk of the contractors site office and will be a public document. For anybody making a complaint no costs will be charged.

186. For more complicated complaints the project engineer will forward the complaint to FRA's environment manager. The environment manager has a maximum of five days to resolve the complaint and convey a decision to the affected person. The affected person and the Turanga-ni-Koro may, if so desired, discuss the complaint directly with the project engineer/environment manager. If the complaint of the affected person is dismissed the affected person will be informed of their rights in taking it to the next step. A copy of the decision is to be sent to DOE.

187. Should the person who made the complaint or raised the issue not be satisfied, the affected person may take the complaint to DOE to review the complaint. The DOE will have 10 days to make a determination.

188. If the affected person is dissatisfied with the determination they may appeal to the National Court. This will be at the affected persons cost but if the court shows that the project engineer, or the environment manager have been negligent in making their determination, the affected person will be able to seek costs.

B. During Operation

189. The same procedure is followed except that the complaint is now directed to the FRA rather than the contractor's site office. During operation, the same conditions apply; i.e., there are no fees attached to the affected person for making a complaint, the complainant is free to make the complaint which will be treated in a transparent manner and the affected person will not be subject to retribution for making the complaint.

VIII. MONITORING AND REPORTING

190. Each EMP will contain a monitoring and reporting program suitable for the subproject. The DSC will be responsible for reviewing and updating the monitoring program to ensure that it meets the intention of the EMP and the ESS, NSS and contractor will be responsible for carrying it out. The DSC will undertake safeguards supervision and monitoring at least every two months (monthly for larger projects – as determined by DOE during screening phase), in addition to CEMP compliance checking being undertaken on a daily basis by the project engineer. Following the supervision and monitoring checks, reports will be prepared and submitted to DOE and FRA.

191. The DSC will prepare quarterly progress reports that will summarize the CEMP compliance monitoring undertaken by ESS and NSS and the contractor's monthly reports. These reports will be submitted to FRA, DOE, WB and ADB.

192. The DSC will prepare semi-annual safeguards monitoring reports, and submit to FRA, DOE, WB and ADB. These reports will be disclosed to the public.

193. ADB/WB will prepare a project completion report after the project has finished. This report will summarize safeguards implementation (including any requirements for capacity building) and monitoring and comment on compliance with the ESMF).

ANNEX 1 – INTERNATIONAL AGREEMENTS AND CONVENTIONS

Regional Agreements

(i) Natural Resources & Environment of South Pacific Region (SPREP Convention). Ratified 1989.

(ii) Waigani Convention on Hazardous & Radioactive Wastes 1996. Bans the importation and the trans-boundary movement and management of hazardous wastes within the South Pacific region.

Chemicals, Wastes and Pollution

(i) Convention on Oil Spill Preparedness, Response, and Cooperation (OPRC Convention). 1990. International cooperation in combating major incidents or threats of marine pollution.

(ii) POPs Convention (Stockholm). 2001. Bans use of persistent organic pollutants.

Biodiversity

(i) CITES, ratified 1997. Regulates trade in wild animals and plants

(ii) World Heritage Convention. Ratified 1990. Protection of sites of Outstanding Universal Values.

(iii) Convention on Biological Diversity (UNCBD). Ratified 1995.

(iv) Desertification (UNCCD). Acceded 1999. Agreement to combat desertification and drought.

(v) Convention on wetlands of international importance (RAMSAR Convention). 1971. Provides framework for conservation of wetlands of importance to migrating birds.

(vi) Convention on the conservation of nature in the South Pacific (Apia Convention). 1989. Parties to protect areas to safeguard representative samples of ecosystems and protect indigenous species.

(vii) UN Convention of the Law of the Sea. 1994. Equitable and efficient use of ocean resources, conservation of living resources and protection of the marine environment.

(viii) Rio declaration (Agenda 21). 1992. Promote the sustainable use of resources.

Climate

(i) Montreal Protocol. 1989. Phase out of substances that deplete the ozone layer.

(ii) Ozone Layer Convention (Vienna). 1989. Protection of the ozone layer.

(iii) Climate Change (UNFCC). Ratified 1992.

(iv) Kyoto Protocol. Ratified 1998. Reduce greenhouse gases especially CO2 by an average of 5.2% by 2012.

ANNEX 2 – SCREENING DOCUMENTS

I. Social and Environmental Impacts

Type of Impact	Yes	No	Comment
1. Land – Does the Subproject require land?			
1.1 If "Yes", state how much land		Ha	
1.2 Was an alternative design explored to decrease/avoid land take			
1.3 If yes, how much land was required in the alternative design?		Ha	
1.4 How is this land provided:			
Donation			
Long-term lease			
Willing-seller-willing-buyer			
Available government land			
Involuntary acquisition			
1.5 Is documentation attached in case of donation, purchase, or use of Government land			
2. Involuntary Resettlement			
2.1 Are there losses of shelter?			
2.2 Are there losses of income sources and other assets? How many households are affected?			List no. of households affected:
2.3 Are there available resources to compensate them at replacement value? Source of funds?			If yes, describe source:
2.4 What other resettlement benefits are committed to the affected families?			If yes, describe other benefits:
2.5 Have the affected household agreed to the relocation?			
3. Indigenous People			
2.1 Are there indigenous peoples in the study area?			
2.2 If "Yes", are they among the beneficiaries?			
2.3 Will they be negatively impacted?			Describe mitigation measures:
1. Cultural Property			
Any negative impacts on cultural property such as sites, historical buildings etc.			
2. Environmental Impacts			
Attach subproject specific check-list with - Possible negative impacts and - Proposed mitigation measures (***See Annex Safeguard Forms S3 and S6 for specific checklists to complete***)			
Comments:			

Environmental and Social Safeguard Form S.3

Name of the Subproject: _____

ROADS or BRIDGES

Potential Impacts	Assessment {Put only one tick (√) in each row}		Mitigation Plans
	NO Negative Impact or NOT Significant	Significant Impact requires Mitigation Measures	
Need for land acquired through (i) donation, (ii) purchase, (iii) govt.?			
Loss of homes, other assets or land			
Damage to cultural/archaeological sites/properties			
Removal of vegetation			
Increased landslides during and after construction			
Dust pollution during construction activities			
Risk of accidents involving construction materials, pollution of water courses and agricultural lands			
Pollution from ancillary activities like preparation of asphalt, crushing of aggregate, concrete mixing, etc.			
Increased erosion downstream of waterways being crossed			
Disruption of aquatic ecosystem during construction due to excessive sediment, discharge of waste concrete or accidental spillage of oil & grease to nearby water bodies			
Increased noise due to construction and increased traffic			
Increased risk of accidents due to increased and faster traffic			
Generation of solid waste during construction			
Loss of wildlife habitat which may have established			
Entry of migrants			
Impact to Indigenous people; effect on access, food gathering, etc during construction and operation.			
Negative reaction to public due to poor information.			

Environmental and Social Safeguard Form S.6

Name of the Subproject: _____

PIER/PORT DEVELOPMENT

Potential Impacts	Assessment {Put only one tick (√) in each row}		Mitigation Plans
	NO Negative Impact or NOT Significant	Significant Impact requires Mitigation Measures	
Need for land acquired through (I) donation, (ii) purchase, and (iii) govt.?			
Loss of homes, other assets or land			
Impacts on qoliqoil and customary fishing practices			
Damage to cultural/archaeological sites/properties			
Safety hazards during construction			
Visual blight and dirt due to improper disposal of material			
Water quality impacts during construction			
Localized clearing of vegetation (including mangroves) and disturbance of marine life.			
Increased solid waste			
Oil and grease contamination during construction			
Obstruction of natural flow of water or sediments			
Uncontrolled increase of micro economic activities			
Design is gender sensitive			
Entry of migrants			
Increased traffic			
Peace and order problems			

ANNEX 3 - CONTENTS OF ENVIRONMENTAL ASSESSMENT

A. Executive Summary

This section describes concisely the critical facts, significant findings, and recommended actions.

B. Introduction

This section explains why, for whom and by whom the EIA has been prepared. Include sub-sections on the following:

- Statement of need (the objective of the project)
- Justification for the necessity of the project
- Tabulation of personnel involved in the preparation of the EIA, their expertise and their roles

C. Policy, Legal, and Administrative Framework

This section discusses the national and local legal and institutional framework within which the environmental and social assessment is carried out. It also identifies project-relevant international agreements to which the country is a party.

D. Description of the Project

Describe the project; this can be brief, but should include drawings and maps at a conceptual level illustrating the layout and components, the project site and the projects area of influence. The following should be provided:

- Scope of Work and Development Concept plan
- Location criteria, including constraints
- Area for development and the current types of uses
- The proposed materials to be used (including brief description on quantities, sources and nature of materials for fill, aggregate for construction etc) and the transport methods and routes;
- Excavation (including earthworks), clearing to be undertaken.
- Methods of storm water drainage, including details of the expected volumes and velocity of discharge and the proposed point/s of discharge into receiving water ways
- Infrastructure and utilities to be applied on site
- Waste Management Plan and practices during construction

E. Description of the Environment (Baseline Data)

This section describes relevant physical, biological, and socioeconomic (including cultural characteristics) conditions within the study area. It also looks at current and proposed development activities within the project's area of influence, including those not directly connected to the project. It indicates the accuracy, reliability, and sources of the data.

F. Anticipated Environmental Impacts and Mitigation Measures

This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socio-economic (including worker and community health and safety in the project's area of influence), in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated; explores opportunities for enhancement; identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specifies topics that do not

require further attention; and examines global, trans-boundary, and cumulative impacts as appropriate.

G. Analysis of Alternatives

This section examines alternatives to the proposed project site, technology, design, and operation—including the no project alternative—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. It also states the basis for selecting the particular project design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement.

H. Information Disclosure, Consultation, and Participation

This section: (i) describes the process undertaken during project design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders; (ii) summarizes comments and concerns received from affected people and other stakeholders and how these comments have been addressed in project design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and (iii) describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during project implementation.

I. Grievance Redress Mechanism

This section describes the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental and social performance. This should be based on traditional conflict resolution or custom processes as much as possible and form part of the GRM for the overall program as set out in the PSA and LARP.

J. Environmental Management Plan

This section deals with the set of mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental (in that order of priority). It may include multiple management plans and actions. It includes the following key components (with the level of detail commensurate with the project's impacts and risks):

(i) Mitigation: (a) identifies and summarizes anticipated significant adverse environmental and social impacts and risks; (b) describes each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required (for instance, continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; and (c) provides links to any other mitigation plans (for example, for involuntary resettlement, Indigenous Peoples, or emergency response) required for the project.

(ii) Monitoring: (a) describes monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and (b) describes monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.

(iii) Implementation arrangements: (a) specifies the implementation schedule showing phasing and coordination with overall project implementation; (b) describes institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures; (c) identification of measures to strengthen environmental and social management

capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and (d) estimates capital and recurrent costs and describes sources of funds for implementing the environmental and social management plan.
(iv) Performance indicators: describes the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

K. Conclusion and Recommendation
This section provides the conclusions drawn from the assessment, including whether any further and more detailed assessment is required, and provides recommendations.

L. References

M. Appendices

ANNEX 4 – ENVIRONMENTAL STANDARDS

The Environmental Management Regulations under the Fiji Environmental Management Act 2005 provide emission standards for discharges to air or liquid waste effluent discharges. Ambient air quality standards are provided in Schedule 5 (Part A), Part 4 of the Environmental Management Regulations 2007 (see below).

NATIONAL AIR QUALITY STANDARDS

PART A - AMBIENT AIR QUALITY STANDARDS

THRESHOLD CONCENTRATION TABLE

Pollutant	Threshold concentration	Permissible excess
Carbon monoxide	10 milligrams per cubic metre	One 8-hour period in a 12-month period expressed as a running 8-hour mean
Nitrogen dioxide	200 micrograms per cubic metre	9 hours in a 12-month 94 period expressed as a 1-hour mean
Ozone	150 micrograms per cubic metre	Not to be exceeded at any time
Sulphur dioxide	350 micrograms per cubic metre	9 hours in a 12-month period expressed as a 1-hour mean
	OR 570 micrograms per cubic metre	Not to be exceeded at any time
PM10	50 micrograms per cubic metre	One 24-hour period in a 12-month period expressed asa 24-hour mean

Notes

1. The ambient air quality standard for a pollutant listed in column 1 of the Table is that the concentration of the pollutant must not exceed its threshold concentration except to the extent and in the circumstances (if any) listed in column 3.

2. The threshold concentration in relation to a pollutant is the concentration of the pollutant shown in column 2 of the Table, calculated over the time interval specified in column 3.

3. In the Table –

"1-hour mean"
- (a) means a mean calculated every hour on the hour for the preceding hour; and
- (b) in relation to a pollutant at a particular location for a particular hour, means the mean of not more than 10-minute means, collected not less than once every 10 seconds, for the pollutant at that location during that hour;

"24-hour mean"
- (a) means a mean calculated every 24 hours at midnight for the preceding 24 hours; and
- (b) in relation to a pollutant at a particular location for a particular 24-hour period, means -

(i) the mean level at which the pollutant is recorded in the air, by continuous sampling of the air at that location, throughout that 24-hour period; or

(ii) the mean of the 1-hour means for that pollutant at that location for the preceding 24 hours;

"running 8-hour mean"

(a) means a mean calculated every hour on the hour for that hour and the preceding 7 hours to give 1 running 8-hour mean per hour; and

(b) in relation to a pollutant at a particular location for a particular hour, means the mean of the 1-hour means for that pollutant at that location for that hour and the preceding 7 hours.

MONITORING METHODS FOR AMBIENT AIR QUALITY STANDARDS

Contaminant	Monitoring method
Carbon monoxide	Australian Standard AS 3580.7.1:1992, Methods for sampling and analysis of ambient air---Determination of carbon monoxide---Direct-reading instrumental method
Nitrogen dioxide	Australian Standard AS 3580.5.1:1993, Methods for sampling and analysis of ambient air---Determination of oxides of nitrogen---Chemiluminescence method
Ozone	Australian Standard AS 3580.6.1:1990, Methods for sampling and analysis of ambient air---Determination of ozone---Direct-reading instrumental method
PM10	United States Code of Federal Regulations, Title 40---Protection of Environment, Volume 2, Part 50, Appendix J---Reference method for the determination of particulate matter as PM10 in the atmosphere; OR Australian/New Zealand Standard AS/NZS 3580.9.6:2003, Methods for sampling and analysis of ambient air---Determination of suspended particulate matter---PM10 high volume sampler with size-selective inlet---Gravimetric method
Sulphur dioxide	Australian Standard AS 3580.4.1:1990, Methods for sampling and analysis of ambient air---Determination of sulphur dioxide---Direct-reading instrumental method.

PART B – EMISSIONS STANDARDS

Section 1 - General

1. A point source of an air polluting substance should not, in isolation or combination with any other source of that substance, cause a concentration of that substance in the ambient air to exceed the emission standards set out in section 3 below.

2. The concentration of a point source of a substance may be calculated by using any of the following methods - the relevant modelling protocol contained in *Industrial Source Complex (ISC3) Dispersion Models* (United States Environmental Protection Agency, Office of Air Quality Planning and Standards, Emissions, Monitoring, and Analysis Division, USEPA-454/B-95-003a), or other

(a) equivalent model approved by the Department of Environment;

(b) surface meteorological data from an appropriate source;

(c) mixing height data from an appropriate source;

(d) emission temperature and volume data;

(e) the height of emission;

(f) any other relevant data or criteria as specified in the models listed in paragraph (a)

Section 2 - Classification of substances

Substances are classified in Tables 1 and 2 in the following categories according to toxic, persistent and carcinogenic qualities:

Category 1 - Environmentally Toxic and Persistent or Carcinogenic Substances
The concentration of solid substances must not exceed 2.5 mg/Nm^3 at the point of the exhaust. The concentration of a gas, vapour or haze of a substance must not exceed the MAC-value specified in Table 2 at the point of the exhaust.

Category 2 - Environmentally Toxic and Non-Persistent Substances
The concentration of solid substances must not exceed 25 mg/Nm^3 at the point of the exhaust. The concentration of a gas, vapour or haze of a substance, if exhausted at roof level, must not exceed 10 X the MACvalue specified in Table 2 at the point of the exhaust.

Category 3 - Mildly Toxic but Environmentally Persistent Substances
The concentration of solid substances in this category must not exceed 75 mg/Nm^3 at the point of the exhaust. The concentration a gas, vapour or haze of a substance, if exhausted at roof level, must not exceed 10 X the MAC-value specified in Table 2 at the point of the exhaust.

Category 4 - Non-Toxic and Non-Persistent Substances
The concentration of solid substances must not exceed 100 mg/Nm^3 at the point of the exhaust. The concentration of gas, vapour or haze of a substance, if exhausted at roof level, must not exceed 10 X the MAC value specified in Table 2 at the point of the exhaust.

Section 3 - Emission Standards (Dioxins and Furans and other Substances)

1. The sum concentrations of:

   (a) 2,3,7,8-Tetrachlorodibenzo-P-Dioxin,
   (b) 1,2,3,7,8-Pentachlorodibenzo-P-Dioxin,
   (c) 1,2,3,6,7,8-Hexachlorodibenzo-P-Dioxin,
   (d) 1,2,3,7,8,9-Hexachlorodibenzo-P-Dioxin,
   (e) 1,2,3,4,7,8-Hexachlorodibenzo-P-Dioxin,
   (f) 2,3,7,8-Tetrachlorodibenzofuran,
   (g) 2,3,4,7,8-Pentachlorodibenzofuran,
   (h) and 1,2,3,6,7,8-Hexachlorodibenzofuran

   should not exceed, at the point of the exhaust, 0.5 nanograms/Nm^3 in any emission .

2. The concentration of any Category 1 solid substances listed in Table 1 should not exceed 2.5 mg/Nm^3 at the point of the exhaust.

Table 1 - Solid substances

Substance	Category	Air quality guideline mg/m^3
Ammonium compounds	3	0.03
Antimony compounds	2	0.01
Arsenic compounds	1	0.001
Asbestos	1	0.001
Bariumsulfate	3	0.03
(Other) Barium compounds	2	0.01
Bitumen	3	0.03
Bone-meal	2	0.01
Cadmium	1	0.001
Calcium hydroxide	3	0.03
Calcium oxide	3	0.03
Chromium and Chromium compounds	1	0.001
Copper and Copper compounds	2	0.01
Corn or flour dust	4	0.03
Cyanides (Sodium and Calcium compounds)	1	0.001
DDT and related compounds	1	0.001
Fertiliser (phosphates)	3	0.03
Lead and Lead compounds	1	0.001
Magnesium compounds	3	0.03
Nickel compounds	1	0.001
Soot	2	0.01
Tar	2	0.01
Tobacco	3	0.03
Wood dust	2	0.01
Zinc and Zinc compounds	2	0.01

Table 2 - Gas, vapour or haze substances

Substance	Category	MAC-value mg/m3	Scent limit mg/m3	Air quality guideline mg/m^3
Acetic acid	2	25	0.25	0.25
Acetic anhydride	2	20	-	0.2
Acetone	4	2400	1	70
Acetylene	4	-	-	-
Acrolein	2	0.25	0.05	0.003
Acrylonitrile	1	9	-	0.001
Ammonia	2	18	0.1	0.18
Benzene	1	30	3	0.005
Butane	4	1430	-	40
normal-Butanol	2	150	0.2	1.5
normal-Butyl acetate	2	710	0.03	0.2
Carbon monoxide	4	29	-	1
Carbon disulphide	2	60	0.05	0.05
Chlorine	2	3	0.06	0.03
Chloroform	1	120	30	0.12
Cyclohexane	2	1050	2	10
Cyclohexanone	2	200	0.02	0.03
1,2 Dichloroethane	1	200	17	0.2
Dichloromethane	1	350	4	0.35
Diethyl ether	2	1200	-	0.3
Epichlorohydrin	1	4	-	0.004
Ethane	4	-	-	-
Ethanol	4	1900	7	30
Ethyl acetate	2	1400	0.6	3
Ethylene oxide	2	90	-	0.9
Formaldehyde	2	1.5	0.07	0.015
Furfuryl alcohol	2	20	-	0.02
normal-Heptane	2	1600	-	16
normal-Hexane	2	360	-	3.6
Hydrazine	1 0	13	-	0.001
Hydrochloric acid	2	7	0.2	0.07
Hydrogen	4	-	-	-
Hydrogen fluoride	1	2	-	0.006
Hydrogen phosphide	2	0.4	0.1	0.004
Hydrogen sulphide	2	15	0.0001	0.001
Isobutyl acetate	2	700	0.6	0.3
Isopropyl alcohol	2	980	2	10
Methane	4	-	-	-
Methanol	2	260	4 2	6
Methyl acetate	2	610	0.002	0.005

Substance	Category	MAC-value mg/m3	Scent limit mg/m3	Air quality guideline mg/m^3
Methyl bromide	1	20	-	0.02
Methylene bis phenyl isocyanate (MDI)	2	0.2	-	0.002
Methyl ethyl ketone	2	590	0.7	5
Methyl formate	2	250	-	2.5
Methyl isobutyl ketone	2	410	0.4	0.5
Methyl methacrylate	2	410	0.2	0.1
alpha-Methylstyrene	2	480	0.04	0.03
Monochloroben zene	1	350	-	0.35
Naphthalene	2	50	0.004	0.01
Nitric oxide (NO)	2	30	-	0.05
nitrous oxide (N2O)	2	4	0.1	
Ozone	2	0.2	0.015	0.002
normal-Pentane	2	360	-	3.6
Perchloroethyle	2	240	12	2.4
Ne Phenol	2	19	0.02	0.1
Phosgene	2	0.4	0.5	0.004
normal-Propyl acetate	2	840	-	8.4
Propylene oxide	2	240	-	2.4
Prussic acid	2	11	-	0.11
Pyridine	2	15	0.04	0.05
Styrene monomer	2	420	0.02	0.03
Sulphur dioxide	2	5	0.9	0.08
Sulphuric acid	2	1	-	0.01
Toluene	2	375	0.08	1
Toluene diisocyanate (TDI)	2	0.14	-	0.001
1,1,1-Trichloroethane	1	1080	-	1
1,1,2-Trichloroethane	2	45	-	0.045
Trichloroethylene	2	190	-	1.9
Vinyl chloride	1	8	-	0.008
Xylene	2	435	0.6	1

ANNEX 5 – MINUTES OF MEETINGS

Department of Environment

Held 10 July 2014 at 12:00

at Department of Environment

Present:	ADB	Jean Williams, Snr Environment Specialist
		David Ling, Transport Specialist
	DoE	Eleni Tokadruadrua, Principal Environmental Officer
		Aminiasi Qareqare, Senior Environment Officer
	BICL	Ian Bone, TL
	ECL	Manisha Nandan

Item
1. Apologies for lack of notice from ADB. Meeting was for ADB to inform DoE about the Project and to gain an initial appreciation of how the environmental management administration in Fiji works. ADB gave a general introduction to the Project and the preparation phase.
2. JW has been through the legislation and advised that ADB's systems are similar in requirements to those of the DoE but there may be need for some additional safeguards, such as a grievance mechanism; also ADB's consultation requirements cover areas other than the environment and are likely to be more extensive.
3. Screening environmental assessments are required for all proposals presented to DoE. However, this can be a desktop exercise and does not need to involve community consultation. DoE must respond to the screening EA within 14 days and a fee of F$128.50 is payable. ADB hoped that DoE might be able to turn the screening stage around more rapidly for the sample subproject in view of ADB's constrained project processing schedule.
4. ADB (JW) hoped to meet DoE on Monday next to discuss the subproject proposals further. IB advised that the TOR and Screening Assessment should be ready for presentation to DoE at that meeting.
5. All DoE consultants have to be approved. ECL is approved and BICL advised that Cushla Loomb is approved. DoE appeared happy that ECL was involved.
6. DoE works with FRA's technical team on the EA requirements of their projects – up to now these are handled by MWH on behalf of FRA, including provision of monthly monitoring reports.
7. For the sector project, DoE will need to understand the implementation of the project on an annual and quarterly basis for monitoring purposes. There are no charges for DoE monitoring other than the payment for lodgement of the EIA, which is up to F$500 for a project > $10 million. However, developers do sometimes assist with incidental expenses such as travel cost.
8. DoE has a small staff resource – only 2 technical officers and 1 technical assistant are available in Head Office for review of EIAs. Divisional offices in Labasa and Lautoka can

provide some additional support.
9. All EIAs must be submitted in 5 hard copies for circulation to Government agencies and 1 CD copy
10. EIAs must be either approved by DoE or rejected within 35 days after lodgement. Approvals will be issued with conditions. The EIA is regarded as the trigger for developments to proceed. Public disclosure of major developments is at the discretion of the Director DoE.
11. Sector agencies are beginning to depend on the EIA as a gateway for approval of projects, but this should not be the case as each has its own approval requirements as well.
12. A committee would be set up with FRA, Consultants, DoE for monitoring of large projects. Provided the monthly reports are coming through on time and are fulfilling their requirements, DoE will not see a need to intervene; reserve their intervention for when things go wrong. Smaller projects do not warrant a monitoring committee.
13. When landowners raise concerns with DoE about conditions not being met, then DoE will if necessary issue a prohibition notice after verification. *[this is the grievance mechanism]*
14. Consultation – should DoE be present at consultation with landowners ? e.g. at any public meeting that may be called ? DoE advised that attendance at public meetings can be disappointing and proponents sometimes turn to DoE to call such meetings in the expectation that this will give a better turnout
15. ADB again stressed the amount of consultation that the full project would produce with a large number of subprojects – DoE said volume was not a problem to them as they decide what meetings to attend or not, depending on importance. DoE role is generally to step in as the regulator if things seem to be going off course, not attending each and every meeting

Minuted by: Ian Bone

Ministry of Lands and Mineral Resources

Held 9 July 2014 at 15:00

at Ministry of Lands & Mineral Resources

Present:	ADB	Jean Williams, Snr Environment Specialist
		David Ling, Transport Specialist
	World Bank	Ross Butler, Snr Social Development Specialist
		Julie Babinard, Snr Transport Specialist
	William Singh	Acting Asst Director Lands
	BICL	Ian Bone, TL

Item
1. Apologies for lack of notice from ADB/WB. Meeting was for ADB/World Bank to inform ILTB about the Project and to gain an initial appreciation of how the Land tenure system in Fiji works. ADB gave a general introduction to the Project and the preparation phase.
2. Lands Dept is responsible for the registration of titles and transfers for freehold land, for land acquisition by the Government from iTaukei and for leases of iTaukei land. Land under public works is held by the State.
3. For iTaukei land it can be difficult to track down the owners as 60% do not live in the village.
4. All iTaukei land is mapped with defined boundaries of the ownership groups, with the exceptions of the areas of Namosi and Serua (inland NW of Suva)
5. FRA has the power to acquire land under its decree; Lands also has powers to acquire for infrastructure projects. There is a “grey area” of legal inconsistency.
6. When acquiring land for a road, a maximum 20m corridor will be taken. Fair market value is paid; the process is similar to that in Australian/NZ law. FRA has its own land valuers, two of which are embedded in Lands Dept; the Lands and FRA valuers work closely together.
7. FRA as the construction agency is responsible for arranging the cadastral survey work. The road corridor is surveyed before acquisition and 75% of the market value is paid at the time of acquisition, with the residual 25% paid either when an “as-built” survey is completed, or 2 years following acquisition whichever is the earlier. This 75%/25% split was introduced some 10-15 years ago. There is a backlog of the “as built” surveys stretching back to the 1970s, and there are some roads for which there has not been a “before” survey. A caveat noting the acquisition is placed on the land title once the 75% is paid.
8. The amount paid is based on the land actually used for the works (roads, bridges, jetties etc). If the “after” survey shows the land area used to be less than originally estimated, then the difference in market value is taken up by an adjustment in the 25% payment. If more land is used, then the 25% is increased by the additional market value. In some cases these are pockets of land that are not of use to either the landowner or FRA, and

this is acquired by the State and used for whatever purpose is available (bus bays, landscaping, etc)

9. Leases of land are left to the line ministry to arrange, while land acquisition is done by Lands. So, for example, if some land needs to be leased for temporary use by FRA (such as a temporary waterway crossing during construction), then FRA would organise this with the landowner.

10. Lands normally requires 6 months to 1 year notice of land to be acquired. FRA will provide a schedule of upcoming land acquisitions, so these are available at the start of the calendar year. On January 2nd, Lands issues Notices of Intention to Acquire. The Act requires a minimum of 30 days' notice but in practice much longer notice is given. The boundaries of the land to be acquired are staked out on the ground, and a record is made of the buildings, uses, crops and trees on the land at the time of staking. Normally, the time between notice and acquisition is sufficient for annual crops to be harvested in which case no compensation for crops is paid. There are schedules of compensation for crops and for trees (fruit bearing and otherwise); these schedules are the responsibility of the Department of Agriculture *[and Forestry ?]* but are very out-of-date (10 years old). For leases, the ITLB will determine a market rental. Government is not supposed to pay above the scheduled compensation rates.

11. Lands is proud of its record that only in a handful of cases in 40 years has land been acquired without the agreement of the owners. Lands' aim is to negotiate an acceptable settlement with landowners taking their interests into account and if there is a good reason why the owner will be disadvantaged, Lands will try and get a change made to the project to resolve the matter amicably. This could involve moving the road alignment for example.

12. The iTaukei system was explained further: the basic unit is the Tokatoka, which is a family group, 2 or 3 tokatoka make up a Mataqali (which is a kinship group) and a number of mataqali make up a Yavusa. Often the Yavusa is one village in size, but can extend to 3 or 4 villages.

13. To gain approval to an acquisition or lease, there must be signatures from a clear majority (51%) of the registered owners. Lands aims to get 60% to avoid later disputes. It can be challenging to track down registered owners who may be living elsewhere in Fiji or overseas.

14. For coastal structures, such as jetties, compensation is for loss of fishing grounds (not for water area as all land below the high water mark is State owned). For reclamation, such as causeways, there is permanent loss and compensation is paid. For open structures, there is no compensation paid as it is assumed that the fish will temporarily move out of the area of construction but will move back under the jetty once construction is complete. Fishing rights are registered with the Fisheries Commission.

15. Gravel in river beds is the property of the State. Lands and Mineral Resources issue licences for gravel extraction. However access to win the gravel is across owned land so there is a case for lease payments for this access to the landowner. The State charges a royalty to the agency using the river/beach sand/gravel at 50 cents/m3 to the State and 50 cents/m3 to the fishing rights owner, $1/m3 in total

16. Loss in water quality in a river due to gravel extraction is not compensated for because it is assumed that the environmental conditions will be sufficient to mitigate adverse effects

(e.g. by screening). If the effects cannot be mitigated, then it is assumed DoE will not give permission.
17. There is Land and Water Resources Management Department. However there is no system of water rights in Fiji and no payment is required for water extraction – water is still regarded as a free resource for all.
18. Lands does not become involved directly in the consultation process. Consultation will involve the provincial council and one of the four district commissioners 9 several provinces make up a district
19. Certificates of Title to land are obtainable at the Titles Office, as are Instruments of Tenancies for leases which are registered as deeds. The acquisition process leads to a dedication document, a “certificate of transfer of native land”.

Minuted by: Ian Bone

iTaukei Land Trust Board

Held 8 July 2014 at 1700

at ILTB Office, 431 Victoria Parade, Suva

Present:	ADB	Jean Williams, Snr Environment Specialist
		David Ling, Transport Specialist
	World Bank	Ross Butler, Snr Social Development Specialist
		Julie Babinard, Snr Transport Specialist
	iTuakei LTB	Alipate Qetaki, General Manager
	BICL	Ian Bone
	ECL	Manisha Nandan

Item
1. Apologies for lack of notice from ADB/WB. Meeting was for ADB/World Bank to inform ILTB about the Project and to gain an initial appreciation of how the iTaukei land holding system in Fiji works. ADB gave a general introduction to the Project and the preparation phase.
2. AQ explained the operations of ILTB: ILTB acts as trustee for indigenous land. Customary land can only be sold to the State. Land is classified as reserve (for iTaukei use) or outside-of-reserve land (which can be leased). Land can be moved between the two classifications. If Government wants to use iTaukei land, it has to be de-reserved.
3. Rural housing in villages is reserve land; Housing Authority land is outside-of-reserve land.
4. ILTB negotiates leases on behalf of the owners. Leases require majority consent (51%) under the Act, but ILTB policy (for 5 years) is to obtain 60% of the registered landowners as signatories before approving any lease. ILTB maintains a register of owners; all new born are added to the register, and deaths are removed (but can be delays in recording these).
5. State has powers of compulsory acquisition of land, with fair compensation paid using international market valuation principles. Disputes about land value are resolved through commercial arbitration. Government must acquire the land if it is required for a public purpose. Maximum lengths of leases is 99 years. The leasing system was introduced to (i) provide opportunities for growth and development (ii) protect land ownership and (iii) provide land for indentured Indian labour brought to Fiji to work the cane plantations in colonial times.
6. Receipts from leases are distributed in equal shares to all registered owners of a piece of land.
7. Other related legislation is the Taukei (Fijian Affairs) Act, the Taukei Affairs Act, the Taukei Land Act. The Ministry of iTaukei Affairs deals with policy under the Commissioner for iTaukei Land
8. Customary land boundaries are agreed by common knowledge and are not surveyed. It takes about 1 day to identify the owning group for a particular piece of land.
9. Land below the high water mark and in the beds of rivers is Government land, from British Common Law.
10. ILTB is funded from 10% of the proceeds from leases and sales to the state (down from 15%

called *poundage*).
11. ILTB should be the first to be approached when there is a need to consult landowners on customary land. Do not go directly to the land occupiers as it will be difficult to tell who is/is not a registered owner and who can speak for the land owning group. Many agencies do not do this and it causes problems later.

Minuted by: Ian Bone