CUSTOM, TRADITION AND SCIENCE IN THE SOUTH PACIFIC: FIJI'S NEW ENVIRONMENTAL MANAGEMENT ACT AND *VANUA*[1]

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INTRODUCTION

Sustainable development in the South Pacific is critical to the world's environmental sustainability. The Pacific Ocean covers 40% of the earth's surface, and within that region, the concentration of biodiversity in proportion to each countries' total land area exceeds that of anywhere else on earth.[3]
The tropical forests are the most studied ecosystem, yet there are no global estimates for the status of coral reefs.[4] Coral reefs, arguably the most biologically diverse ecosystems in the world include 32 of the 33 animal phyla, compared with 9 of 32 found in tropical rain forests.[5] Some of the richest areas of biodiversity in the world exist in the South Pacific,[6] and its decline is a serious threat to the biological diversity of the region as well as the world. Fiji, faced with the greatest rate of growth of tourism[7] of any of the South Pacific island nations is especially vulnerable, the threat of environmental degradation and damage to the surrounding coral reef ecosystems.

Given the tremendous importance of the South Pacific and in particular, the Fiji Islands to the world's biodiversity resources, the enactment of the Fiji Environment Management Act stands as the single most important recent effort to protect the natural resources of Fiji. Because of its monumental importance, a careful analysis of the Fiji Environment Management Act and a consideration of its methods of implementation, particularly in its relation to the centuries old indigenous traditions and customs of environmental management, is warranted.[8]

FIJI HISTORY AND CULTURE

The Fijian Islands are among the Melanesian group in the South Pacific, the other island groups being Micronesian (i.e., Guam, Palau, Marshall Islands, etc.) and Polynesian (i.e., Hawaii, Tahiti, New Zealand, etc.). Because the Fijian Islands are located in the zone between the Polynesian islands and the Melanesian islands, it reflects elements of both cultures, for example, the Fijians have the political structure of the Polynesians in traditional villages,[9] but follow the Melanesian custom of "bigmen" or chiefs who may have overlapping powers or little power.[10]

Fiji was a British colony in 1874, and the land was granted to white settlers but land was also granted to the Fijians with a right to aboriginal title. Fijians hold the land in common with other Fijians, and it is managed by approximately 6,600 village groups (*matanggli*) through the Native Land Trust Board, established in 1940. Because of kinship groups 83% of the Fiji Islands land is held by the Native Land

Trust Board in 14,400 land holding units. Until 1940, individual kinship groups negotiated their own leases at very different rates and prices, often to their detriment. Ratu Sir Lala Sukuna, leader of Fiji, proposed the Native Land Trust Board to be administered by the British, holding lands in trust for the Fijians for their benefit. Land is considered to be an extension of oneself, including one's life, sustenance and culture for the Fijians, known as *vanua* in the Fijian language.[11] Given that land's importance to the Fijians, the approval of this change by the Great Council of Chiefs was regarded by the Governor at that time as the Agreatest acts of trust in colonial history.[12] The trust operates to lease lands for terms of 30-year terms to non-Fijians and 10% of the revenues from the leases are paid to the hereditary chiefs of the clans; 25% is retained for administration of the Board.

Fijian villages are given particular species of plants and animals by the Chiefs for which they have responsibility for their protection and sustainability. The village is known as responsible for that species among the other people and villages. A highly mobile species will be managed by a village that possesses the land or water where the species nests or breeds, for example. The *Roko* is the provincial chief, under which are other chiefs called *buli* for each of the districts of the province. The villages within the province are led by chiefs, the *Turaga-ni-Koro*., who are ultimately assigned the species responsibility.[13] When a Chief dies, for example, one custom is to prohibit the use of that area of water for a year or more. Any acts of fishing, swimming, washing cloths, bathing, or collecting bi-valves is considered, in a word originating in the Polynesia culture, *taboo*.

A TRADITIONAL AND CUSTOMARY SYSTEM OF LAND TENURE IN THE SOUTH PACIFIC

The effort to implement sustainable development in the South Pacific region has notable features of land ownership, government and indigenous custom and tradition which must be considered in the region. More than 90 % of the land is held in customary tenure in 22 countries who are members of the South Pacific Commission.[14] Traditional land tenure refers to those in existence at the time of contact with industrialized societies, whereas customary land tenure refers to the practices of today, which are forms of traditional land tenure which have adapted to change since the time of contact.[15] For that reason, codification of custom lacks the feature of flexibility to change and adapt to new situations, and should remain broadly defined as a process, rather than substantive law, to keep viable features in the approach to sustainable development.

Tradition and customary law concerning the environment cannot be forced into a stereotype of always being consistent with sustainability. Traditional and customary land tenure and sustainable development may not always be compatible. One of the worst destructions of the environment in the South Pacific was Rapa Nui (Easter Island) where Polynesian settlers used the agricultural techniques they brought from a tropical rainforest environment. Massive deforestation was not sustainable, and the island was left treeless and unsustainable, and the population disappeared from the island.[16] Similarly, settlers from the tropical lowlands to Papua New Guinea burned forests to make way for agriculture, but the high altitude and accompanying dryness resulted in useless agricultural land, which are the low-quality grasslands of Papua New Guinea, today.[17] Customary land tenure which suffered the Tragedy of the Commons[18] was the Maori system of New Zealand which had to adapt from a tropical agricultural tradition to a hunting lifestyle. Because no one had responsibility for the sustainability of bird species nor did they hold land in common smaller tracts of land based upon smaller political subunits, many bird species were extinguished.[19] The current destruction of tropical rainforests with timber harvesting by Asian entrepreneurs in Micronesia is an example of the failure of customary tenure to attain sustainable development.[20] Because individuals derive economic benefit immediately and directly, while the ecosystem suffers a loss with no benefits to the broader community, the forests will continue to degrade.

While traditional and cultural approaches to environmental management in the South Pacific, pre-date

western environmental management methods by centuries,[21] scientific monitoring techniques should add, rather than substitute for, traditional and customary approaches. The most effective approach to environmental management is a combination of traditional and customary practices and knowledge with scientific methods of assessment and monitoring of environmental sustainability. This has proven to yield successful results, for example in the village of Ucunivanua in Venata, Fiji.[22] After implementing scientific monitoring of fish and bivalves in the coastal area of the village, and adjusting harvesting when counts were low, the women who are the gatherers of the bivalves are able to collect twice as many oysters in the same amount of time, as they were before the monitoring began. This demonstrable benefit has ensured that the environmental monitoring program continues.[23]

Tradition and customary management of the land, however, after centuries of development has shaped practices which will shape the practice of sustainable development in the South Pacific. Since 90% of land is held in some form of customary tenure, indigenous people of the South Pacific will shape the future of sustainability. There appear to be several factors which make customary land tenure problematic for sustainable development: (1) tenure systems are related to population, and the population in the South Pacific is five times higher than at the time of contact with industrialised society;[24] (2) individual villages may be more interested in the rewards of a better quality of life than in sustainable development; and (3) some forms of customary tenure which may be appropriate for a hunting or fishing tradition, may not be appropriate for an agrarian one.[25] Given these significant land use factors, it confirms the need to adapt together traditional and customary methods of environmental management with scientific monitoring and assessment methods as apart of an environmental management plan.

POLITICAL COALITION BUILDING TO PROTECT THE ENVIRONMENT IN THE SOUTH PACIFIC

Because of the growing recognition of the need to preserve and sustain the biological resources and ecosystems in this region of the world, several international bodies began to organise a regional approach to environmental sustainability. Out of that effort, the South Pacific Regional Environment Programme (SPREP) was formed, which includes the 22 developing island nations as well as New Zealand and Australia. Outside of the South Pacific, the United States and France, who have interests in the South Pacific, are also members.[26] The mission of SPREP is "*to promote co-operation in the South Pacific region and to provide assistance in order to protect and improve its environment and to ensure sustainable development for present and future generations*."[27] SPREP was established in 1982 through representatives of regional environmental organisations, including UNEP and the South Pacific Commission. In 1995, SPREP became an independent organisation with the Agreement Establishing SPREP. SPREP is developing a Pacific Plan which involves strategies for sustainable development, as well as the development of a model law for the protection of traditional knowledge. However no model law for assessing environmental impact has been developed for the South Pacific island nations because some island nations have pursued their own NEPA-like laws and others in various stages of development have not yet addressed this type of legislation.

Traditional and Cultural Knowledge is Recognised in International Law

Traditional and cultural environmental knowledge has gained international acceptance as part of a process of developing environmental plans for sustainable development, evidenced by Article 8(j) of the Convention on Biological Diversity, which requires that:

> Each contracting Party shall, as far as possible and as appropriate: Subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of

> indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilisation of such knowledge, innovations and practices

Article 15 of the Convention on Biological Diversity also addresses management and control of natural resources by the sovereign nation where they are located.[28] Access and benefit sharing is the guiding framework for bio-prospecting by pharmaceutical companies and other institutions in their search to isolate chemical compounds from genetic resources to develop and commercialise new pharmaceuticals. The difficulty in implementing this section of the CBD has been the lack of an international framework for recognition of traditional knowledge and genetic resources as intellectual property which would be required to provide protection for indigenous communities and developing nations. One step toward identifying ownership is to create an inventory of biodiversity and identify which villages have responsibility for their stewardship. The Fiji Environment Management Act provides for the establishment of such an inventory, called the Natural Resource Inventory[29] which will move toward developing an equitable system of access benefit sharing.

Article 14(A) provides that each Party to the Convention on Biological Diversity will adopt a NEPA-like process to assess environmental impacts and to minimise adverse impacts.

The need to assess how to incorporate tradition and custom into formal environment management laws and plans merited a specific Conference of the Parties working group on specifically how to implement Article 8(j) within the Directorate of the Convention on Biological Diversity. Although the COP continues its work, Fiji's new Environmental Management Act[30] implements a process of integrating indigenous knowledge of environmental management incorporating a context of indigenous worldviews of place and land.

Article 14(a) of the Convention on Biological Diversity provides that each Party to the CBD will adopt a NEPA-like process to assess environmental impacts and to minimise adverse impacts. The passage of the Fiji Environment Management Act in March 2005, meets this requirement, by adopting definitions from the U.S. National Environmental Policy Act (NEPA) which define "significance" of an environmental impact, thoughtfully incorporating custom and tradition, and providing for a mechanism to manage genetic resources and a flexible process which allows for change in custom and tradition.

The new Fiji Environment Management Act is more comprehensive than the U.S. NEPA in that it also incorporates environmental proscriptions and penalties for pollution whereas the U.S. addresses this through two other statutes: The Resources Conservation and Recovery Act (RCRA) and the Comprehensive Environment Recovery and Compensation Act (CERCLA or Superfund). The Fiji Environment Management Act represents a comprehensive approach to environmental management, which is superior to a piece meal approach. The tools of a regulation should match what is being regulated, and in an ecosystem where every change affects other parts of the ecosystem, a comprehensive statute is a superior match, over the piecemeal approach, for regulation.

Within this political and indigenous control of land and natural resources, the new Environmental Act was passed in 2005, after more than eight years of development.[31] The Act includes three important features for sustainable development: (1) a process for assessing the environmental impact of development projects; (2) the creation of an inventory of natural resources, and; (3) the prevention of the introduction of genetically modified organisms into the Fiji Islands. In this context, the Native Lands Trust Board also charged with sustainable development of native lands, and pressure to provide access and benefit-sharing

of natural resources also provides opportunities to coordinate efforts to make development, sustainable.

THE PURPOSE OF THE FIJI ENVIRONMENT MANAGEMENT ACT 2005

The definitions section sets out the scope of the terms in the Act and identifies interests of the indigenous Fijians, as well as the lease-holders of indigenous land. [32]

Defining sustainable development

The purpose of the Act is as much about sustainable use, as it is about identifying "matters of national importance for the Fiji Islands." [33] The first purpose, "to apply the principles of sustainable use and development of natural resources" is further elucidated by the definition in the Fiji Environment Management Act for sustainable development:

> Sustainable development means development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs, and implies using resources to improve the quality of human life within their carrying capacity;[34]

Compare this to the definition of "sustainable use" in the Convention on Biological Diversity:

> "sustainable use" the use of components of biological diversity in ways and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.[35]

The definition in the Fiji Environmental Management Act favours utilisation of natural resources to meet the needs of the people, and further, to *improve* the quality of human life. The Fiji Environment Management Act does not include a requirement to preserve all components of biological diversity, in its concept of sustainable development, rather it focuses on improving the quality of human life. The definition states a policy of making the improvement of the quality of human life a priority through the use of natural resources, at a rate which ensures the existence of the ability of future generations to use the resources. The Fiji Environment Management Act does not commit to maintaining the potential to meet the needs and aspirations of present and future generations, as in the Convention on Biological Diversity; but rather places responsibility on future generations by simply committing not to compromise the "ability" to meet their needs. This distinction between "maintaining its potential" which refers to biodiversity in the CBD and without compromising its ability which refers to future generations in the Fiji Environment Management Act marks a clear emphasis on people rather than on the environment. This is a policy which strikes a balance between the needs of the people of a developing island nation and that of the need to sustain the nation's natural resources, but without compromising future generations abilities to meet their needs.

The Fiji Constitution and Customary and Traditional Approaches to Law

The Fiji Constitution and its amendments in 1997 provide for the requirement to include customary laws into legal dispute resolution systems as follows:

> *Customary laws and customary rights*
>
> 186(1) The Parliament must make provision for the application of customary laws and for

> dispute resolution in accordance with traditional Fijian processes. (2) In doing so, the Parliament must have regard to the customs, traditions, usages, values and aspirations of the Fijian and Rotuman people.[36]

This constitutional provision is supported by another provision in the Constitution specifically addressing natural resources. This section provides for the appointment of five committees for oversight of governmental functions, one of which is a committee on natural resources which reviews all legislation that addresses issues of sustainability and development. However, based upon the interpretation that customary law is subject to the Constitution and statutory law, the incorporation of customary law will *only* be law when it is incorporated into formal statutory law.[37] The crafting of the Fiji Environment Management Act evidences the incorporation of traditions and custom into the formal law of the Fiji Islands.

Silence on the Native Land Trust Board Act

The Native Land Trust Board Act is not mentioned in Schedule 1 of the Fiji Environment Management Act, among the environment and resource management acts which are related to this one.[38] However, the definition of 'landowner' in the Fiji Environment Management Act refers to *mataqali* [elsewhere *matanggli]* or other division or subdivision of Fijians having a customary right to occupy or use any native lands,[39] in this way, incorporating (although without reference) the Native Land Trust Board Act. Requiring further integration with the Native Land Trust Board Act is the Charter of the Native Land Trust Board which has its own Environmental Charter stating that the NLTB will promote sustainable development:

> The proper management of all agricultural lands, forests, water catchments, minerals and developed areas so as to ensure their appropriate, orderly development and the continued availability and productivity of valuable natural resources.
>
> The conservation, protection, preservation and enhancement of important aspects of the Fijian environmental inheritance for their natural, cultural, educational, scientific, recreation and tourism uses and values.

The Charter also requires the establishment of environmental policy and guidelines, legislation and monitoring,[40] which is achieved in the Fiji Environmental Management Act of 2005. In spite of this lack of reference to the Native Lands Trust Board Act, the Fiji Environment Management Act should be in conformity with the NLTB Charter, and the approval of an environmental impact assessment should require the co-approval by the Native Lands Trust Board as well as approval from the National Environmental Council, on any of the 83% of Fiji's lands which are held by the Native Lands Trust Board. This suggests an active, ongoing, relationship with the NLTB and the National Environment Council, although the Act is silent on any relationship.

THE STRUCTURE OF THE ACT

A general summary of the scope of the comprehensiveness of Fiji Environment Management Act provides the framework for the incorporation of traditional and customary practices and the use of scientific methods of environmental management.

The Act sets out the establishment of the National Environmental Council[41] and established units within

the Administration of the "environmental impact assessment unit",[42] the "resource management unit,"[43] the "waste management and pollution control unit,"[44] the "environmental management units,"[45] and "environmental management committees."[46] To implement the laws and regulations, an "Environmental Register" for publication of rules is established,[47] and "appointment of inspectors" and their powers are set forth.[48]

The establishment of Natural Resource inventories is among the duties of the Environmental Council, as well as environmental audits of those inventories, as required in the Fiji Environment Management Act.[49]

In Part 3, four major reports are required. Environmental reports and plans include the National Report,[50] the National Environmental Strategy[51] and the National Resource Inventory and the National Resource Management Plan.[52] The right of the public to see these reports is also provided in this section.[53] This placement of the access provision in the Part requiring reports, applies only to the final report, and does not grant access to any proceedings or documents used in the development of those plans.

Environmental impact assessments are provided for in Part 4,[54] the process,[55] the contents of the report,[56] the review[57] and approval[58] of the report, the requirement for an environmental management and monitoring plan[59] by the proponent of any development, a reference to a list of proposals that are subject to the EIA process,[60] and a provision for public hearings on the final environmental impact assessment report.[61] The detailed list of projects which are subject to an environmental assessment are set out in Schedules, whereby the EIA Administrator must approve those on Schedule 1,[62] the local approving authority may approve those proposals listed on Schedule 2,[63] and those projects on Schedule 3, may not require an EIA.[64]

Part 5 provides for a "Waste Management and Pollution Control" program,[65] utilising a permit system for discharges of waste or pollutants,[66] provides for the power to issue permits[67] and the term,[68] provides for failure to obtain a permit,[69] the power to inspect and issue notices,[70] the power to issue orders to stop work,[71] the power to declare an environmental emergency,[72] and process of appeal of any decision requiring remedial action.[73]

Part 6 provides for offences and penalties, which includes a statute of limitations,[74] failure to have an EIA approval before commencement of a development project,[75] and provides for a fine of no more than $250,000 or no more than 3 years in prison,[76] a list of other offences which may result in a fine of no more than $10,000 or term of imprisonment not exceeding 2 years,[77] provides for a fine not exceeding $2,000 or a term of not more than 6 months in prison for either obtaining accreditation falsely,[78] or falsely holding oneself out as accredited.[79] It also provides for pollution offences with a second offence carrying a fine not to exceed $750,000 or a term of imprisonment of not more than 10 years.[80] Any intentional act or one with "reckless disregard to human health, safety or the environment,"[81] which results in harm to human health or safety, or sever damage to the environment is subject to a fine of not more than $1,000,000, life imprisonment or both.[82] For corporations, the fine is five times that provided for any offence.[83]

Other provisions in the act include a provision for general penalties,[84] other orders,[85] protection of employees who report violations of the Act,[86] a defence to an offence of discharging a pollutant where

the facility established that it took "reasonable measures" to prevent a discharge of a pollutant,[87] provision of civil claims and damages for economic loss,[88] loss of earnings, [89] loss of any natural resource,[90] costs incurred to determine the nature of the incident,[91] liability of corporations and directors,[92] the establishment of priority of claims for damages over that of any bankruptcy proceeding,[93] and evidence required for violations of the Act.[94]

Part 7 addresses miscellaneous provisions, including the ability for a citizen to institute proceedings to compel any Ministry to perform any duty required in the Act,[95] the establishment of an Environmental Trust Fund,[96] the establishment of an Environmental Tribunal to hear any appeal under this Act or any other written law,[97] and exemption from liability for any person acting in "good faith,"[98] provides for power to give directions, power to delegate, rewards for providing information or evidence of a violation of the Act, and the authority to promulgate regulations and guidelines.

ASSESSING THE ENVIRONMENTAL IMPACT IN THE CONTEXT OF INDIGENOUS CUSTOM

The assessment of environmental impacts is defined in the Fiji Environment Management Act to include a consideration of the broad "relationship of indigenous Fijians with their ancestral lands, waters, sites, sacred areas and other treasures."[99] The Act also requires that any function under this Act must Ahave regard to...the traditional owners and guardians of resources.[100]

The Natural Resource Inventory and the National Resource Management Plan is required to be developed and reviewed and approved by the National Environment Council.[101] The approach to this inventory is based on customary and traditional stewardship of natural resources. The data base that is currently being developed in Fiji, records the customary plant ownership with the following description: Province/district /island/village/tribe/plant. For example, ownership of a forest plant, the *Slato*, which causes itching when it is rubbed against the skin, is described with this nomenclature of ownership as Vuna/Vanu Levu/Nakorovou/Vun/Slato, signifying the *Slato* plant is owned by the
Vun tribe, in the Nakorovou Village, on the island of Vanu Levu, in the Province of Vuna.[102] While there is no specific legislation on access and benefit sharing in Fiji, the operation of any material transfer agreements is built upon this natural resource inventory system.

The Fiji Environment Management Act provides for the establishment of such an inventory, called the Natural Resource Inventory[103] which will move toward developing an equitable system of access benefit sharing. The U.S. has established a system of collecting biological data and information, but primarily for monitoring purposes. In 1994, the U.S. Congress created a new office in the Department of Interior, the National Biological Survey (since renamed the National Biological Service) whose mission is to collect biological information and data across the nation in collaboration with the states.[104]

The Fiji Environment Management Act includes in its definitions, what is meant by "protecting the environment." It simply means that measures must be established.[105] Measures might indicate that the environment is degrading, but the definition of "protecting the environment" is limited to measurements. This is not unlike the process of the U.S. NEPA which requires only that an environmental impact statement consider the environmental impacts,[106] but does not require that projects must be stopped because of their impacts on the environment.

The Environmental Act in defining "significant environmental or resource management impact," draws upon an almost identical structure used in the regulations promulgated to define "significance" in the U.S.

NEPA.[107] This section in the U.S. NEPA explains the term "significantly" to require consideration of "both context and intensity." Similarly, the Fiji Environment Act requires that "significant . . . impact . . . means an impact on the environment, either in the *context* of the setting of the proposed development or in the context of the *intensity* of the proposed development's effect on the environment [emphasis added]." Context in the U.S. NEPA has been interpreted to mean that the environmental impact must be considered in several contexts, including the context of the overall nationwide impact, affected interests, and the locality. Intensity in the U.S. NEPA describes the severity of an action, but lists ways of qualifying Aintensity." This list parallels the list in the Fiji Environment Act, where an Aimpact on the environment. . in the context of the setting [and]. . . in the context of the intensity of the proposed development's effect on the environment. . includes, but is not limited to:

(a) the degree to which public health and safety are affected; (The U.S. NEPA criteria reads, "the degree to which the proposed action affects public health and safety," expressing essentially the same meaning.)

(b) the degree to which the unique characteristics of the geographic area are affected; (The U.S. NEPA criteria reads, "Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas," which cites examples, without excluding other geographic areas. In comparison, the Fiji Environment Act leaves to either regulation or to judicial interpretation what these unique characteristics of geographic areas might be.)

(c) the degree to which effects on the environment are likely to involve controversy; (The U.S. NEPA provides that "The degree to which the effects on the quality of the human environment are likely to be highly controversial." The U.S. NEPA describes a higher threshold for defining intensity than in the Fiji Environment Act, which triggers intensity merely where there is a likelihood of controversy. The description of the impact on the "human environment" in the U.S. NEPA is not distinguishable from the "environment" in the Fiji Environment Act because the "human environment" in judicial interpretation has proven to include everything on earth, with no notable exceptions. The U.S. NEPA regulation specifically describes the "human environment" as "the natural and physical environment and the relationship of people with that environment. This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement."[108] This has been interpreted to mean that the U.S. NEPA requirement to do an environmental impact statement which includes economic or social effects, may be required if there are other triggers requiring an environmental impact statement. The Fiji Environment Act likely would not require an economic or social effects analysis under any of the intensity criteria.

(d) the degree to which unique and unknown risks are taken; (The U.S. NEPA lists criteria: "(5) The degree to which the possible effects of the human environment are highly uncertain or involve unique or unknown risks."[109] The Fiji Environment Act omits the highly controversial description of "possible effects of the human environment are highly uncertain." The treatment of the word "risks" in the U.S. NEPA is modified by the words "unique or unknown" and describes the degree of the effects; while the Fiji Environment Act uses "unique and unknown risks" in terms of the degree to which these kinds of risks are taken. This is an interesting modification, because it is the degree to which risks are taken rather than their uniqueness or their uncertainty that establishes the criteria for intensity in the Fiji Environment Act. Presumably, a conservative approach to risk-taking, regardless of the uniqueness or uncertainty permits these kinds of risks, and the action would not increase the intensity of the significance of the effect on the environment.

(e) the degree to which a precedent for future action is created; (The U.S. NEPA lists in criteria "(6) The degree to which the action may establish a precedent for future actions with significant effects or

represents a decision in principle about a future consideration.") The Fiji Environment Act eliminates qualifiers of the creation of precedent and broadens the scope of the kinds of precedents which might be created, far beyond the scope of that of the U.S. NEPA regulations. The Fiji Environment Act does not require that the precedent have any "significant effects", just that it be a precedent for future action.

(f) the potential for cumulative environmental impacts; (The U.S. NEPA lists in its criteria "(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts."[110]) The U.S. NEPA has three types of effects: indirect, direct and cumulative. The effects are defined in the rules, and cumulative was also defined in rules, after litigation of the meaning of the term. In judicial interpretation, "cumulative" has been associated with "connectedness" of actions where the actions are "inextricably intertwined."[111] The case which defined connected actions held that an action is connected if it "cannot or will not proceed unless other actions are taken previously or simultaneously; and they are interdependent parts of a larger action and depend on the larger action for their justification."[112] The U.S. NEPA regulations now define "cumulative" in another regulatory section (not in the "significance" section) as "the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."[113] It is almost certain, given the litigation concerning the meaning and subsequent regulatory definition of "cumulative" in the U.S. NEPA cases, that these criteria in the Fiji Environment Management Act will either require regulatory definition or judicial interpretation on a case-by-case basis for determining what is cumulative.

(g) the degree to which the natural functioning of the ecosystem is likely to be inhibited; This is a significant departure from the U.S. NEPA which has no equivalent of this measure of intensity and while the Fiji Environment Act followed chronologically each of the criteria for significance in the U.S. NEPA regulation, this criteria in the Fiji Environment Act is inserted *between* the U.S. NEPA criteria (7) and (8). The major departure broadens the scope of the Environment Act to address threats to the "natural functioning of the ecosystem." This does not address whether change of a function of an ecosystem remains "natural", and will ultimately be raised when an ecosystem through development may be significantly changed, and the argument can be made that it is still a natural functioning ecosystem. For example, a waterfront development may significantly change the ecosystem, but if fish continue to thrive and reproduce around this waterfront, then it may be argued that the ecosystem is functioning, naturally.

(h) the degree to which a cultural, traditional, natural, scientific or historic resource may be threatened; (The U.S. NEPA in its criteria "(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources."[114]) The U.S. NEPA criteria requires that the action "adversely affect" these resources, while the Fiji Environment Act criteria requires a lower threshold of significance where consideration be made of the degree to which the resources are merely "threatened."

(i) the potential threat to the existence of protected and endangered species or their critical habitat; (The U.S. NEPA considers in its criteria "(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973").[115] This criteria in the Fiji Environment Act provides for the identification of protected and endangered species and critical habitat, all specific terms of art in the U.S. Endangered Species Act.[116] This statutorily created list can also make it enforceable through CITES, the Convention on International Trade in Endangered Species, which utilises specific countries' lists in preventing the illegal trade of those species through prevention of import of those species to any of the

signatory countries.

(j) the degree to which fish and wildlife resources of ecological, commercial, subsistence and recreational importance are jeopardised; (The U.S. Endangered Species Act, uses "jeopardy"[117] as a term of art, to indicate any threat to the existence of an endangered or threatened species.)

(k) the extent to which one aspect of use of a resource may conflict or contrary with another aspect of use of that resource; (The U.S. NEPA has no equivalent to this criteria.) It is worth observing that the list omits the first criteria of the U.S. NEPA list of qualifiers for intensity: that both beneficial and adverse effect must be identified in an environmental impact assessment.[118] Presumably, this may have appeared to go too far in the scope of activities which may be swept into the net of the requirement to do an environmental impact assessment.

The use of the term "scoping" is defined in the definitions section of the Fiji Environment Management Act[119] and is like the term "scope" as it is used in the U.S. NEPA, which requires a defined limit to the environmental impact assessment. In the Fiji Environment Management Act, the term "scoping" used as a verb, describes the determination of the limit of the environmental impact assessment.

Part 6 addresses the timing element of the environmental impact assessment, which provides for penalties for failure to have an environmental impact assessment approved "before commencement of a development project."[120] The U.S. NEPA provides that an environmental impact statement must be done "at the earliest possible time,"[121] which the U.S. Ninth Circuit Court of Appeals has stated is the "central purpose of an EIS." That is, it is of central importance to "force the consideration of environmental impacts in the decision-making process."[122] The remedy for failing to have an environmental impact statement completed is a challenge by parties with standing, to the NEPA violation which will result in, typically, a temporary injunction being ordered by the court.[123] Further the NEPA environmental impact statement is not approved by any administrative action, but rather it is the responsibility of the federal agency or party performing the "major federal action" to complete an environmental impact statement and make it public. Then members of the public have an opportunity to challenge the environmental impact statement and ask for judicial review of the sufficiency of the environmental impact statement or the process. The U.S. Endangered Species Act also provides for an injunction as well as penalties against a federal agency or a private party for proceeding in an action that jeopardises a threatened or endangered species, but this action must be challenged by individuals authorised by the citizen suit provisions.[124]

The provision for penalties, loss of earnings, economic damages for discharging a pollutant[125] is very similar to the U.S. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) which provides for penalties for costs of removal and remediation of environmental damage.[126] However, the joint and several liability provisions of CERCLA, allow for only limited defences for an Act of God, and Act of War or an act or omission of a third party.[127] Other defences based upon inheritance and innocent purchaser have been added to this initial list of defences, but there is no other defence, as in the Fiji Environment Management Act which provides for a defence Awhere the facility established that it took "reasonable measures" to prevent a discharge of a pollutant.[128] The Fiji Environment Management Act takes a negligence theory as its basis for liability; whereas the U.S. CERCLA statute takes a strict liability approach to liability for companies engaging in businesses with potential pollutants. The problem with the negligence-based defence is that if liability is avoided by the discharger for a pollutant discharge, then the costs for the clean up and remediation is externalised on the public. The discharger has no incentive to avoid future discharges if he can continue to show that he has taken "reasonable measures" to prevent the discharge. For example, if the business had a holding pond with a highly alkaline discharge from a coconut soap manufacturing facility, and a major rain storm caused an overflow of the holding

pond into an adjacent river, the fact that such a storm happened only every 100 years and that otherwise the pond did not overflow would be a defence under the Fiji Environment Management Act. It is not clear if this is a complete defence, but it would be preferable to have it only as a mitigating defence. Under the U.S. CERCLA liability standard, the business would likely be liable for clean up and remediation costs, as well as potential criminal penalties. Legislation proposing mitigating factors in this strict liability scheme of CERCLA was proposed by Senator Al Gore, but failed to pass. However, in CERCLA cases with mitigating circumstances, courts have relied upon what has come to be known as the "Gore factors" in this failed legislation, to craft more equitable remedies, however the legislation remains unchanged in its strict liability features.

This analysis of the Fiji Environment Management Act shows that consideration for the operation of custom and tradition has been made a part of process of the statute. The operation of custom permitted in this formal legislation, actually takes place outside the framework of the statute through the operation of "exemptions." The Fiji Environment Management Act identifies activities which will be exempt from environmental assessments, and among those are traditional land use activities[129] and traditional or customary structures.[130] This would exempt most of the activities of a village, practicing traditional culture, but the exemption is not lost if there is a mix of modern technology in the activities. The operation of the Fiji Environment Management Act protects traditional activities without subjecting them to EIA scrutiny at all, by exempting the broadest of activities that are considered "traditional land use activities" or "traditional or customary structures." In the vacuum of the formal statutory framework, the Chiefs are left to choose to govern or not to govern in the approval or disapproval of these exempted activities.

The Environment Management Act does protect against any proposals that "could challenge or contravene established customary controls over the use of natural resources," through the requirement that only the EIA Administrator can approve such a proposal.[131] This curiously allows the approval of such a proposal, even if it could contravene customary control. Traditional construction activities that are located a sufficient distance (30 meters) from any "river, stream or high water mark" are allowed to escape the environmental impact assessment process.[132] Proposals that "could harm or destroy important cultural resources" may also be approved, but at the second tier level of an approving authority.[133] An "approving authority"[134] includes a "statutory authority, local authority or person authorised under a written law to approve the proposal." It is the tier two level which should make clear that also included as an approving authority as a "local authority" might be a Village Chieftain, giving final approval of an environmental impact assessment which threatens cultural resources to the Village Chieftain.

This could be remedied by amending one of the three tiered categories for which authorities have approval of environmental impact assessments, by promulgation of a regulation which includes a Village Chieftain as a "local authority" within the statutory definition of "approving authority," or by order of a court, constituting "a person authorised under a written law to approve the proposal."[135] The opportunity to codify authority for villages to create bylaws, which are rules of process made by villages within the context of custom and tradition, would permit an institutionalisation of the village system of governance. The codification of the authority to make bye-laws, provides for a framework in which custom and tradition can change and evolve outside of the statutory process.

While operation outside the formal framework of the statute is workable when Village Chiefs administer justice to indigenous residents of the Village or even other villages, the question of enforcement against commercial fishers, tourists or others not a part of the village community leaves a gap in the ability for Villages to protect their natural resources.[136] In some villages in Fiji, honorary fish wardens" patrol the fishing grounds and see it as a Anatural part of their traditional service to the community."[137] However, without the cooperation of law enforcement officers to make an arrest, the power may be diminished. In

some examples, the violation of a taboo not to enter a lagoon after the death of the Chieftain responsible for its protection, has resulted in death or injury to the violators. For example, oral history has it that on more than one occasion, a tourist wandered into a taboo area and went for a swim in the lagoon and consequently died from a shark attack, another drowned. Posting warning signs has been discussed as a method of deterrence.[138]

Are coral reefs and coastal areas protected in the Fiji Environment Management Act?

Coastal resources and coral reefs are not identified as targets of the Fiji Environment Management Act, although many land activities and activities within the governance of villages have an impact on the shore, the coastal waters and consequently on the coral reefs. However, the Fiji Environment Management Act does include in the definitions sections some consideration of impacts on the coastal zones. In the definition of Atraditional or customary structure," it is clear that if a Aseawall or shore protection," is produced traditionally with traditional materials it will remain outside of the reach of an environmental impact assessment.

According to the Status of Coral Reefs Report of 2004, the coral reefs of Fiji are recovering from the 2000 and 2002 bleaching events, but are mostly healthy. The greatest damage is being done in the areas near the largest cities, where over-exploitation, pollution runoff and sediment are harming the reef. The prediction for 2014 is that the reefs near the large cities in Fiji will continue to sustain increasing damage. This pressure in combination with bleaching, almost certainly will result in damaged reefs near the large cities.[139]

The protection of genetic resources however, extends to the natural resource inventory of village stewardship of particular species. For example, one village have stewardship for oysters, fish which survive on the reef and other oceanic resources which would impact the entire coastal ecosystem of which they are a part. The natural resources inventory, in that sense, includes the coastal and reef resources.

Because as many as 1,000 different species have been found per square meter in some Pacific Ocean areas, the attraction for bio-prospecting is increasing.[140] The next challenge will be keeping bio prospectors outside the 200 mile jurisdiction of countries, as they seek new species in the deep coral reef or deep ocean areas.

CONCLUSION

The purpose of the Fiji Environment Act focuses on people rather than the environment with an emphasis on sustainability in the context of development. This important balance between preserving natural resources that are of value not only to Fiji but to the world, and the needs of a developing country seeking to increase the quality of life of its citizens is carefully crafted in the Fiji Environment Management Act.

The incorporation of the requirement of the Native Lands Trust Board to establish environmental policy and guidelines, legislation and monitoring, is not acknowledged in the Fiji Environment Management Act, nor is the inclusion of the NLTB in environmental assessments on Native Lands. To be consistent with the Native Lands Trust Board charter, environmental assessments should also be approved in collaboration with the NLTB.

The heart of defining what is a "significant" impact on the environment is found in the definitions section of the Fiji Environment Management Act and is designed precisely around the U.S. NEPA regulations which defines "significant" as it describes environmental impacts. While the Fiji Environment Act follows

precisely the substance and order of the U.S. NEPA definition of "significance" it also departs in major substantive content from its U.S. counterpart. The addition of a criterion in the Fiji Environment Act, which addresses the threat of actions to the "natural functioning of the ecosystem", expands the meaning to protection of the environment for its existence value, and not in the context of its impact on humans or development. The omission of the U.S. NEPA criteria in the Fiji Environment Management Act for significance if an action has either a "beneficial or adverse effect" avoids triggering an environmental assessment where the effects of an action are potentially "beneficial" to the environment, potentially reducing the number of necessary environmental impact assessments.

The exemption mechanism is a broad category for traditional activities, not incorporated into the formal framework of the statute, but left presumably to the governance of the Chiefs. By leaving this completely unstructured, custom and tradition may remain flexible in its development and in its processes in addressing this broad area of exempted activities. At the same time, the lack of institutional recognition of Village Chieftain authority over environmental management may inhibit the enforcement capabilities of the Villages.

Finally, the process of tiering authority in Schedule 1, Part 3, where exempted activities may not require an environmental impact assessment, does not preclude the requirement that the villages may require approval of any such proposal. The amendment of the Fiji Environment Management Act to provide for the development of bylaws to address any activity found exempted by the Environmental Council Administrator, would institutionalise the Village system of governance in the environmental impact of projects.

Not only has Fiji made a significant contribution to the jurisprudence of customary law in its own jurisdiction, but it also serves as evidence of a movement toward the incorporation of custom and tradition into dominant legal systems in the context of environmental law in the South Pacific.

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[1] Environmental Management Act of 2005 (17 March 2005). *Vanua* is a concept held by the Fijians (and other indigenous peoples) that the land is an extension of oneself, including one's life, sustenance and culture.

[2] Victoria Sutton, MPA, PhD (Environmental Sciences), JD, Robert H. Bean Professor of Law, Texas Tech University School of Law, former Assistant Director of the White House Office of Science and Technology Policy.

[3] See Map on High Levels of Biodiversity, Millennium Report, May 2005.

[4] Green, Fhys E., Balmford, Andrew, Crane, Peter R., Mace, Georgina M, Reynolds, John D. & Turner, R. Kerry (2005) A Framework for Improved Monitoring of Biodiversity: Responses to the World Summit on Sustainable Development. Conservation Biology 19 (1), 56-65.

[5] Klaus Topfer, *Foreword*, United Nations Environment Program and the World Wildlife Fund Coral Reefs Advocacy Initiative, *Conventions and Coral Reefs* (May 2003).

[6] Convention on Biological Diversity, Report on Biological Diversity (2004), <http://www.biodiv.org /gbo/> (Accessed 4 November 2005).

[7] South Pacific Tourism Commission, Press Release, October 2004. In 2004, Fiji had an 18% increase in tourism in contrast to the South Pacific region's 9% increase.

[8] R.E. Johannes, 'Traditional Marine Conservation Methods in Oceania and Their Demise', (1978) 9 *Annual Review of Ecology and Systematics* 349-64, 327.

[9] Bruno Saura, "Customary Rules in French Polynesia," Paul de Deckker, Jean-Yves Faberon, eds., *Custom and the Law*, Asian Pacific Press 82 (2002).

[10] Geoffrey M. White, "The Discourse of Chiefs: Notes on a Melanesian Society," Geoffrey M. White, Lamont Lindstrom, *Chiefs Today: Traditional Leadership in the Postcolonial State*, Stanford University Press 230 (1997).

[11] Ratu Moses Volavola, The Native Land Trust Board of Fiji, *Customary Land Tenure and Sustainable Development: Complementarity or Conflict?* [South Pacific Commission and the University of the South Pacific, Suva (1995) 50.
[12] Ratu Moses Volavola, The Native Land Trust Board of Fiji, *Customary Land Tenure and Sustainable Development: Complementarity or Conflict?* [South Pacific Commission and the University of the South Pacific, Suva (1995)] 50.
[13] William R. Geddes, Deuba: A Study of a Fijian Village," Institute of Pacific Studies, University of the South Pacific, Reprint Series (2000) 6.
[14] Ati George Sokomanu, Secretary-General, South Pacific Commission, [South Pacific Commission and University of the South Pacific, Suva (1995)] 2.
[15] Ron Crocombe, 'Does Customary Tenure Enhance Sustainable Development?' *Customary Land Tenure and Sustainable Development: Complementarity or Conflict?* [South Pacific Commission and the University of the South Pacific, Suva (1995)] 2.
[16] Crocombe (1995) 5.
[17] Crocombe (1995) 5-6.
[18] Charles Hardin, Tragedy of the Commons, 168 Science 1243 (1968). This short essay describes as story where the degradation of land held in common, where people had much to gain but little to lose in their consumption of natural resources when they were held in common.
[19] Crocombe (1995) 6.
[20] Crocombe (1995) 7.
[21] R. E. Johannes, 'Traditional Marine Resource Management in Oceania and Its Demise', (1978) 9 *Annual Review of Ecology and Systematics* 349-64.
[22] Aalsbersberg, W., Korovulavula, I., Parks, J.E., D. Russell, 'The Role of Fijian Community in a Bioprospecting Project', at
<http://www.dec.org/search/dexs/index.cfm?fuseaction=dexs.citation&rec_no=103829> (Accessed 4 November 2005).

[23] The story was related to me by Joeli Vakabua, University of the South Pacific, Suva, Fiji, June 7, 2005.

[24] Crocombe (1995) 9.
[25] Crocombe (1995) 8.
[26] See <http://www.sidsnet.org/pacific/sprep/whatsprep_.htm> (Accessed 4 November 2005) .
[27] See <http://www.sidsnet.org/pacific/sprep/whatsprep_.htm> (Accessed 4 November 2005).
[28] The Convention on Biological Diversity, Article 15. AAccess to Genetic Resources" reads as follows:

> 1. Recognising the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation.
> 2. Each Contracting Party shall endeavour to create conditions to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties and not to impose restrictions that run counter to the objectives of this Convention.
> 3. For the purpose of this Convention, the genetic resources being provided by a Contracting Party, as referred to in this Article and
> Articles 16 and 19, are only those that are provided by Contracting Parties that are countries

of origin of such resources or by the Parties that have acquired the genetic resources in accordance with this Convention.
4. Access, where granted, shall be on mutually agreed terms and subject to the provisions of this Article.
5. Access to genetic resources shall be subject to prior informed consent of the Contracting Party providing such resources, unless otherwise determined by that Party.
6. Each Contracting Party shall endeavour to develop and carry out scientific research based on genetic resources provided by other Contracting Parties with the full participation of, and where possible in, such Contracting Parties.
7. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, and in accordance with Articles 16 and 19 and, where necessary, through the financial mechanism established by Articles 20 and 21 with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilisation of genetic resources with the Contracting Party providing such resources. Such sharing shall be upon mutually agreed terms.

[29] Part 3(24) Environment Management Act 2005 (March 17, 2005).
[30] Environment Management Act of 2003 (March 17, 2005).

[31] Clark Peteru, Legal Advisor, SPREP, electronic communication, June 29, 2005: The Fiji Environment Management Act "has a long history. When it was first drafted about 8 or so years ago, it was immense and when through countless changes. The original drafter was George De Romily but the final version has numerous contributions to it from other sources (i.e., the environment department and Attorney-General's Office of Fiji)."

[32] Act No. 1 of 2005, (17 Mar 2005), Sec. 2 ALandowner means the registered proprietor of any land, or of any estate or interest in it or proprietor of any lease or sublease and includes the *mataqali* or other division or subdivision of Fijians having a customary right to occupy or use any native lands."
[33] Sec. 3(2) The purposes of this Act areC (a) to apply the principles of sustainable use and development of natural resources; and (b) to identify matters of national importance for the Fiji Islands as set out in subsection 3.
[34] Environmental Management Act of 2005, Sec. 3 (17 Mar 2005).
[35] Convention on Biological Diversity, Definitions.
[36] The Constitution of the Republic of Fiji, Art. 186 (1997), <http://www.paclii.org/fj/legis/num_act/ca1997268/> (Accessed 4 November 2005).
[37] Jennifer Corin Care, 'The Status of Customary Law in Fiji Islands After the Constitutional Amendment Act of 1997', 4 *Journal of South Pacific Law* (2000) <http://www.vanuatu.usp.ac.fj/journal_splaw/articles/Corrin1.htm> (Accessed 4 November 2005) .
[38] EMA, Schedule 1 (Sec. 2).
[39] EMA, Sec. 2.
[40] Ratu Moses Volavola (1995) 51.
[41] Environmental Management Act of 2005, Part 2.
[42] EMA, Part 2(12).
[43] EMA, Part 2(13).
[44] EMA, Part 2(14).
[45] EMA, Part 2(15).
[46] EMA, Part 2(16).
[47] EMA, Part 2(17).

[48] EMA, Part 2(19-21).
[49] EMA, Part 2(22).
[50] EMA, Part 3(23).
[51] EMA, Part 3(24).
[52] EMA, Part 3(25).
[53] EMA, Part 3(26).
[54] EMA, Part 4.
[55] EMA, Part 4(28).
[56] EMA, Part 4(29).
[57] EMA, Part 4(30).
[58] EMA, Part 4(31).
[59] EMA, Part 4(32).
[60] EMA, Part 4(33).
[61] EMA, Part 4(34).
[62] EMA, Part 4(33)(1).
[63] EMA, Part 4(33)(2).
[64] EMA, Part 4(33)(3).
[65] EMA, Part 5.
[66] EMA, Part 5(35).
[67] EMA, Part 5(36).
[68] EMA, Part 5(36)(2).
[69] EMA, Part 5(37).
[70] EMA, Part 5(38).
[71] EMA, Part 5(39).
[72] EMA, Part 5(40).
[73] EMA, Part 5(41).
[74] EMA, Part 6(42).
[75] EMA, Part 6(43).
[76] EMA, Part 6(43)(3).
[77] EMA, Part 6(44)(1).
[78] EMA, Part 6(44)(2).
[79] EMA, Part 6(44)(3).
[80] EMA, Part 6(45)(1)(b).
[81] EMA, Part 6(45)(2).
[82] EMA, Part 6(45)(2).
[83] EMA, Part 6(45)(3).
[84] EMA, Part 6(46).
[85] EMA, Part 6(47).
[86] EMA, Part 6(48).
[87] EMA, Part 6(49).
[88] EMA, Part 6(50)(a).
[89] EMA, Part 6(50)(b).
[90] EMA, Part 6(50)(c).
[91] EMA, Part 6(50)(d).

[92] EMA, Part 6(51).
[93] EMA, Part 6(52).
[94] EMA, Part 6(53).
[95] EMA, Part 7(54).
[96] EMA, Part 7(55).
[97] EMA, Part 7(56).
[98] EMA, Part 7(57).
[99] The context of this criterion is in the Fiji Environment Act, Sec. 3(3) *A person required to perform any function under this Act relating to the use and utilisation of natural and physical resources must recognise and have regard to the following matters of national importance*.
(a) the preservation of the coastal environment, margins of wetlands, lakes and rivers;
(b) the protection of outstanding natural landscapes and natural features;
8) 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; or [emphasis added].
(e) the protection of human life and health.
[100] EMA, Sec. 3(4) *person performing a function under this Act relating to the use of natural resources must have regard to the following C (a) the traditional owners or guardians of resources*; *(b) the maintenance and enhancement of amenity values; (c) the intrinsic values of ecosystems; (d) the maintenance and enhancement of the heritage values of buildings and sites; (e) the maintenance and enhancement of the quality of the environment; (f) the finite characteristic of natural and physical resources.*
[101] Part 3 (25)(1), Environment Management Act 2005 (March 17, 2005).
[102] Presentation, Joeli Vakabua, University of the South Pacific, "The Fiji Fantastic Sheep Breeding Material Transfer Agreements," Dialogue on Pacific Experiences and Perspectives on the Use and Ownership of Genes, June 6-8, 2005, Suva, Fiji.
[103] Part 3(24) Environment Management Act 2005 (March 17, 2005).
[104] The NBS was established by a Secretarial Order issued September 1993 and became operational on November 11, 1993, when Congress passed the FY 1994 Interior Appropriations Act and it was signed into law by Pres. Clinton.
[105] *"Protecting the environment" means the establishment of measures to ensure the protection of human health, safety, property, legitimate uses of the environment, species of flora and fauna, ecosystems, aesthetic properties and cultural resources or preventing nuisance or risk of harm to any such value, on a sustainable basis;*
[106] 42 U.S.C. 4332(C) (2005).
[107] 40 C.F.R. 1508.27 (2005).
[108] 40 C.F.R. 1508.14 (2005).
[109] 40 C.F.R. 1508.27(b)(6) (2005).
[110] 40 C.F.R. 1508.27(b)(7) (2005).
[111] *Thomas v. Peterson*, 753 F2d 754, (9th Cir. 1985).
[112] *Thomas v. Peterson*, 753 F2d 754, (9th Cir. 1985).
[113] 40 C.R.F. 1508.7 (2005).
[114] 40 C.F.R. 1508.27(b)(8) (2005).
[115] 40 C.F.R. 1508.27(b)(9) (2005).
[116] "Endangered species," is defined as Aany species which is in danger of extinction throughout all or a significant portion of its range." 3(6); "Threatened species," is defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its

range. 3(20); and "critical habitat" designations are to be based upon Athe best scientific date available. . taking into consideration the economic impact, and any other relevant impact, of specifying any particular areas as critical habitat." 4(b).

[117] 16 U.S.C.A. 1538 requires that federal agencies ensure that their actions are "not likely to jeopardise the continued existence of any endangered species or threatened species . . ."

[118] 40 C.F.R. 1508.27(b)(1) (2005).

[119] *Scoping" means scoping of a development proposal under Part 4 to determine the scope of the EIA report in order to ensure that the report addresses all relevant issues and concerns arising out of the proposal;*

[120] EMA, Part 6(43).

[121] 40 C.F.R. 1501.2 (2005).

[122] *Thomas v. Peterson*, 753 F.2d 754 (9th Cir. 1985).

[123] See *Sierra Club v. United States Army Corps of Engineers*, 701 F.2d 1011 (2d Cir. 1983).

[124] ESA 11(g).

[125] EMA, Part 6(50)(1).

[126] CERCLA 107.

[127] 42 U.S.C. 9607(b).

[128] EMA, Part 6(49).

[129] *"Traditional land use activities" means the use of customary or traditional methods, practices and materials to enhance the occupation or use of land granted through the customary land tenure system, but does not include those activities requiring the substantial use of machinery and explosives and other modern methods or plastics, electricity, petrochemicals, metals, concrete, and milled timber or other modern materials*;

[130] "*Traditional or customary structure" means any dwelling or other building constructed with traditional materials or a combination of traditional and modern materials or the use of traditional or customary methods or a combination of traditional or customary methods and modern methods, but does not include:*

(a) any permanent dwelling, building, sea wall or shore protection works produced by modern methods or from modern materials; or

(b) a structure built on a significantly larger scale than those built historically.

[131] EMA, Schedule 1, Part 1 (u) includes on the list of activities that require an EIA and approval from the EIA Administrator: A(u) a proposal that could challenge or contravene established customary controls over the use of natural resources." . .

[132] EMA, Schedule 1, Part 3 (c) includes in the list of activities that Amay not require the EIA process or an EIA report": (c) a proposal for the construction of a traditional or customary structure (including the Fijian villages within native reserves under the Fijian Affairs Act or villages on the islands of Rotuma and Rabi made from traditional materials, or from natural rock, sand, coral, rubble, or gravel, if the construction or the customary structure is at least 30 metres from any river, stream or the high water mark."

[133] EMA, Schedule 1, Part 2 (b) includes in the list of proposals that can be approved by an Aapproving authority" A(b) a proposal that requires processing only because it could harm or destroy important cultural resources including , but not limited to, archaeological sites, cemeteries, historic sites and landmarks. . ."

[134] EMA, Part 1(2) Aapproving authority", in respect of a development proposal, means a Ministry, department, statutory authority, local authority or person authorised under written law to approve the proposal."

[135] EMA, Part 1 (2) Aapproving authority" definition.

[136] Without prior notice of these customs, a constitutional question of Due Process would be raised in

the United States, but there is no comparable right in the Fiji Constitution prohibiting this practice.

[137] Fong GM, 'Case study of a rational marine management system: Sas Village, Macuata province, Fiji, FAO Field Rep. RAS/92/T05.94.1. Rome: FAO, cited in R. E. Johannes, AThe Renaissance of Community-Based Marine Resource Management in Oceania," (2002) 33 *Annual Review of Ecology and Systematics* 317-340, 327.

[138] Story was related to me by Dr. Joeli Vakabua, University of the South Pacific, Suva, Fiji, June 7, 2005.

[139] Status of Coral Reefs 2004, 338-339, <http://www.aims.gov.au/pages/research/coral-bleaching/scr2004/pdf/scr2004v2-all.pdf> (Accessed 4 November 2005).

[140] United Nations University, Institute for Advanced Studies, Report, June 2005.