



# Technical Assistance Consultant's Report

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## Regional: Mainstreaming Environmental Considerations in Economic and Development Planning Processes in Selected Pacific Developing Member Countries (Financed by TASF)

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For ADB

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Asian Development Bank

# COUNTRY ENVIRONMENTAL ANALYSIS

## VANUATU



October 2007



# Map



## Executive Summary

The Country Environmental Analysis (CEA) is not only intended to assist the Asian Development Bank (ADB) in updating its Country Partnership Strategy with the Government of Vanuatu but also to assist Vanuatu's other development partners by providing a roadmap to address the current environmental issues. Prepared in a participatory manner, the CEA provides background information on Vanuatu's environmental constraints, needs, and opportunities, describes the environmental issues that are most important to Vanuatu's sustainable development strategy, and outlines the possible role that ADB and other development partners could play in helping to address the critical environmental constraints.

The key drivers of environmental change in Vanuatu are a rapidly growing economy (after many years of inconsistent economic performance), a young population and rapid population growth, urban drift, land speculation, agricultural intensification, deforestation, inadequate fisheries and marine management, industry and trade, tourism, imported energy and transportation needs, extractive industries, and the global rise in greenhouse gas emissions.

The cumulative impact of these drivers on the state of the environment in Vanuatu is often unclear due to lack of reliable data. The key environmental issues facing the country are climate change and sea level rise, soil erosion and land degradation, coastal erosion, forest loss, loss of biodiversity, water availability and quality, waste disposal and lack of recycling, reef destruction and over-exploitation of marine resources, and natural disasters.

At a glance, Vanuatu would appear to be well placed to respond to these changes in environmental quality, with constitutional provisions and a suite of laws to protect the environment, adoption of most multilateral and regional environmental agreements, a comprehensive medium term strategic framework linking planning documents from the national policy level to local planning areas, and a streamlined public administration focused on performance. A closer look, however, shows a distinct lack of political commitment to the environment, a tiny allocation of the national budget to environmental issues, a virtually defunct Environment Unit constantly being moved from one ministry to another and widespread evasion or abuse of the carefully crafted laws.

Faced with this reality, environmental officials in Vanuatu have resorted to accessing regional and global funding of environmental programs, cognizant that this may divert attention away from national priorities. While Vanuatu has ratified many regional and multilateral environment agreements and is an active participant in global discussions on issues affecting small island developing states, the reporting burden of these agreements further diverts attention away from routine environmental administration tasks, such as monitoring environmental quality or closely inspecting environmental impact assessments and field level implementation of environmental management plans.

To change this situation, an environmental road map is proposed, hoping to attract the attention of the Government and the large number of development partners interested in Vanuatu. The road map comprises the following elements.

**Environment Summit** – A summit would focus government and other stakeholder attention on the excessive reliance on regional and donor-funded environmental projects

to address environmental issues in Vanuatu, rather than a country-driven process of prioritizing and providing adequate human and financial resources for routine environmental management. It could trigger renewed interest by the Government and local stakeholders in managing Vanuatu's precious environment.

**National Council on Sustainable Development** – One of the expected outcomes of the proposed summit would be a renewed commitment to create such a high level body, chaired by the Prime Minister, President, or Paramount Chief, and with broad representation of Vanuatu society as its members. The main objective of the Council would be to ensure that Vanuatu's commitments to Agenda 21, the millennium development goals (MDG) and the Johannesburg Plan of Implementation are acted on and to regularly report on actions to the UN Commission on Sustainable Development and to the people of Vanuatu.

**Department of Environment and Conservation** – Despite the provisions of the Environmental Management and Conservation Act 2002 to create a Department of Environment and Conservation, it has not been formed and the existing Environment Unit has been allowed to run down to a level where it is virtually defunct. The time is ripe for the Government to create this department now, and consider a full ministry in the near future.

**Mainstreaming environment into sector agencies** – Even under current proposals to create a Department of Environment and Conservation there would be a maximum of 5 staff, clearly inadequate to deal with the complex environmental conditions across dozens of inhabited islands. While other key sectoral agencies have shortages of staff too, it may be possible to add some environmental responsibilities onto existing positions. Environment officers in the sectoral agencies would be expected to examine the environmental implications of sector strategies and plans, prepare preliminary environment assessments for sectoral projects, collect environmental data relevant to sector activities, and provide the primary point of liaison with the Department of Environment and Conservation.

**Cross-sectoral coordination** – As in many developing countries, accessing information across sectors is difficult in Vanuatu, as information flows within ministries are designed to be vertical so that all critical decisions are taken at the highest level. As environmental concerns are clearly cross-cutting and cross-sectoral, it is a challenge to ensure that information routinely flows across government agencies at the appropriate levels and appropriate stages in the decision making process. A case study approach examining how environmental aspects of major projects (such as the planned oil palm development on Santo) were treated and how and when relevant information flowed to the Environment Unit would help to highlight current deficiencies.

**Sustainable financing** – The Vanuatu Government has relied heavily on foreign funding for its environmental functions and allowed the nationally funded administration to run down to an alarming level. One way to counteract this trend is to demonstrate that self-financing is not only possible but also that Vanuatu has been missing out on several potential sources of funding, including some of the avenues listed below.

**Environmental fees and charges** – Vanuatu does not have an established system of environmental fees and charges and is possibly foregoing considerable revenues. For example, environmental performance bonds for land developers and forest

concessionaires, lodgment fees for EIAs, charges for annual inspections of manufacturing facilities, discharge fees for discharge of treated water to watercourses, fees for accepting used batteries or e-waste for recycling, or fees for registration or certification of environmental industries could be considered.

**Payment for ecosystem services** – The sectors most dependent on a pristine environment, such as tourism, currently obtain free ecosystem services from a resource that belongs to all Vanuatu people. Such sectors should be prepared to pay for these services, provided that they are assured that the fees they pay are directly used to maintain or improve the environment.

**Eco-currency** – Widely used in Japan, eco-currencies allow retailers and utilities to contribute to improved environmental management in their community, while offering a form of employment to unemployed youth. Coordinated by an environmental NGO and the Chamber of Commerce, volunteers are encouraged to work on environmental activities like litter drives, planting mangroves, or cleaning beach areas and get paid in the form of a voucher or eco-currency. They can then redeem these vouchers as partial payment for retail items or to purchase books or other items for the local school or church.

**Access to GEF funding** – The new resource allocation framework for the climate change and biodiversity areas of GEF and Pacific Alliance for Sustainability provide Vanuatu with the opportunity to access additional GEF funds. The Least Developed Countries Fund for climate change is designed to implement the projects identified in the national adaptation plan of action and the resource allocation framework does not apply to this fund. In addition, the Clean Development Mechanism adaptation fund is projected to increase to 44 million CERs by 2012, estimated at \$160-950 million. Vanuatu should be gearing up to take maximum advantage of these opportunities, but this will require a more pro-active GEF team within Government, preferably coordinated by a GEF Focal point in the Ministry of Finance and Economic Management.

**Coalition for advocacy on environment** – The umbrella nongovernmental organization VANGO indicated that it has created several coalitions of NGOs around specific themes like the economy or gender and is open to the idea of creating a coalition for advocacy on environment. A small amount of seed funding from one or more development partners would help to kick start the coalition.

**Public-private partnerships** – The private sector in Vanuatu is not very active in the environmental arena and there are few companies that perceive the advantages of a strong environmental profile (eco-tourism operators are a possible exception). In similar circumstances elsewhere, Government has had to take the initiative to consult with the private sector, to make the owners and managers aware of emerging environmental problems, to stress the regulatory and compliance mechanisms available to the Government, and to suggest that voluntary public-private partnerships in finding common solutions are the preferred option.

**Community conservation partnerships** – Vanuatu now has considerable experience in establishing community conservation areas, with possibly as many as 100 sites already operating under some form of community-based management. A national protected area strategy needs to be developed that will outline how the various pilot community conservation areas can be scaled up to ensure that a nationwide system of

representative ecosystems is formally identified for conservation and the rules of community management are collectively agreed with customary landowners.

**Strategic environmental assessment** – Vanuatu has numerous strategy and planning documents from the Priorities and Action Agenda (PAA) to physical planning areas. There is also a plethora of laws and regulations and statements of government policy. Unfortunately there is no requirement to assess the economic, social, or environmental impacts of these policies, plans and programs, so that environmental implications are only considered at the project level (and for very few projects anyway). A formal requirement to consider the environmental impacts of these “upstream” documents might help to ensure that environmentally unsound proposals never see the light of day.

**Promotion of environment industry** – Countries like Costa Rica and Bhutan have taken maximum advantage of their natural resource endowment and strongly promoted their near pristine environments. Eco-tourism and bio-prospecting are two spin-off industries that have benefited from this national marketing. Vanuatu has an emerging “organic” agriculture sector that could offer distinctive advantages in its free trade relationships with neighboring states, although additional work is needed on certification and marketing. A study of Vanuatu’s comparative advantages in setting up environmental industries would help to underpin a government assistance strategy to promote (and provide seed funding for) a range of possible environmental industries.

**Priority Actions** – Priority actions that were recommended by the national consultations to commence implementation of the road map included:

1. Conduct an environment summit or national forum to map out a revitalized approach to environmental governance in Vanuatu. Complete the national capacity self-assessment and use this as one of the key inputs to the proposed environmental summit or national forum.
2. Proceed with creation of the Department of Environment and Conservation as specified in the Environmental Management and Conservation Act 2002. Examine alternative approaches to make environmental administration in Vanuatu essentially self-financing, so that Government has no fiscal management excuse for maintaining sub-optimal staffing and funding. Fully implement the priorities identified in the “environment and disaster management” section of the PAA. Provide the necessary funding for implementation of the disaster prevention and disaster management priority actions included in the national action plan 2008–2010.
3. Prepare for the advent of significant funding for climate change adaptation once the first commitment period of the Kyoto Protocol commences in 2008. Small island developing states will be given preferential treatment for access to these funds.
4. Consider amending the duty statements of one or more existing staff in key sectoral agencies (agriculture, forestry, fisheries, public works, health, education, trade etc.) to make them responsible for environmental issues associated with their sector, including environmental input to sector strategies and plans, preliminary environmental assessments, and environmental monitoring, among others.
5. Transfer the GEF focal point for Vanuatu from the Ministry of Lands and Natural Resources to the Ministry of Finance and Economic Management.



**ADB Role** – The CEA proposes that ADB fund three of these areas through its TA resources over the period 2008-2010, as follows:

(a) 2008 – ADTA on Climate Change Adaptation in Vanuatu (\$300,000) – the objective of this TA is to prepare projects for the emerging funding opportunities starting in 2008.<sup>1</sup>

(b) 2009 – Advisory TA (ADTA) on Sustainable Financing of Environment in Vanuatu (\$200,000) – the objective of this TA is to make the environmental administration in Vanuatu (whatever form it may take in future) essentially self-financing.

(c) 2010 – ADTA on Strategic Environmental Assessment in Vanuatu (\$200,000) – the objective of this TA is to put in place a formal system of examining policies, plans and programs for their environmental implications, prior to their approval.

It is hoped that other donors interested in the environmental area will begin to address some of the other immediate priority issues identified in the CEA report, as well as the medium term strategic priorities. Vanuatu does not have the capacity to respond to a major environmental disaster, so an ounce of prevention is the best long term strategy.

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<sup>1</sup> Part or all of the funding for this TA may be sourced from a large UK-funded regional technical assistance on adaptation being prepared by ADB.

## ABBREVIATIONS

ADB	Asian Development Bank
AFD	Agence Francaise Developpement
AusAID	Australian Agency for International Development
CBD	Convention on Biological Diversity
CDM	clean development mechanism
CEA	country environmental analysis
CER	carbon emission reduction
CITES	Convention on International Trade in Endangered Species
CO <sub>2</sub>	carbon dioxide
COP	conference of the parties
CPS	country partnership strategy
CSPU	country strategy and partnership update
EEZ	exclusive economic zone
EIA	environmental impact assessment
ENSO	El Nino Southern Oscillation
ESCAP	Economic and Social Commission for Asia and the Pacific
EU	European Union
EVI	environment vulnerability index
FAO	Food and Agriculture Organization
FFA	Forum Fisheries Agency
GDP	gross domestic product
GEF	Global Environment Facility
GHG	greenhouse gas
GIP	Government investment program
IFC	International Finance Corporation
IMO	International Maritime Organization
ITTO	International Tropical Timber Organization
IUCN	World Conservation Union
IWP	International Waters Programme
JICA	Japan International Cooperation Agency
LDC	least developed country
LPG	liquefied petroleum gas
MAQFF	Ministry of Agriculture, Quarantine, Forestry and Fisheries
MCC	Millennium Challenge Corporation
MDG	millennium development goals
MFEM	Ministry of Finance and Economic Management
NACC	National Advisory Committee on Climate Change
NAPA	national adaptation programme for action
NCSA	national capacity self assessment
NGO	non-government organization
NPB	National Parks Board
NSO	National Statistics Office
NZAID	New Zealand Agency for International Development
OECD	Organization for Economic Cooperation and Development
PAA	Priorities and Action Agenda
PACPOL	Pacific Ocean pollution prevention programme
PICCAP	Pacific islands climate change assistance project
PIFS	Pacific Islands Forum Secretariat

PIGGAREP	Pacific islands greenhouse gas abatement through renewable energy project
PIREP	Pacific islands renewable energy project
POP	persistent organic pollutant
PRC	People's Republic of China
PSR	pressure-state-response
REDI	rural economic development initiatives
RETA	regional technical assistance
SOPAC	South Pacific Applied Geoscience Commission
SPREP	Secretariat of the Pacific Regional Environment Programme
TA	technical assistance
UN	United Nations
UNDP	United Nations Development Programme
UNELCO	Union Electrique de Vanuatu Ltd.
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
URA	Utilities Regulatory Authority
VANGO	Vanuatu Association of Non-Government Organizations
VANRIS	Vanuatu Resource Information System
VCC	Vanuatu Cultural Center
VIPA	Vanuatu Investment Promotion Authority
VMA	Vanuatu Maritime Authority
WHO	World Health Organization
WMO	World Meteorological Organization
VQIS	Vanuatu Quarantine and Inspection Service
WSSD	World Summit on Sustainable Development

## **Preface**

This Country Environmental Analysis was prepared at the request of the Government of Vanuatu as an input to the Country Partnership Strategy that sets out the agreed program of assistance between Vanuatu and the Asian Development Bank. It is also intended to provide a roadmap for environmental support by other development partners.

The Ministry of Finance and Economic Management, especially through the support of the Director General, Mr. Simeon Athy, took a lead role in coordinating the study and provided office and other facilities for the consulting team. In the Asian Development Bank, the Country Environmental Analysis was coordinated by the Pacific Department's Senior Safeguards Specialist, Mr. Edy Brotoisworo. A team of consultants comprising Dr. Peter King and Mr. Ernest Bani was engaged to undertake the work during August 2007. A large number of participants contributed their time and information to the study and the consultative workshop held in Port Vila and their contribution is gratefully acknowledged.

The Asian Development Bank and the Government of Vanuatu sincerely hope that the Country Environmental Analysis will help to trigger a new era of improved environmental management in Vanuatu. The people of Vanuatu have benefited for generations from a clean, healthy and resilient environment. They have every right to expect that these conditions will continue for generations to come.

Director General  
Ministry of Finance and Economic Management  
Vanuatu

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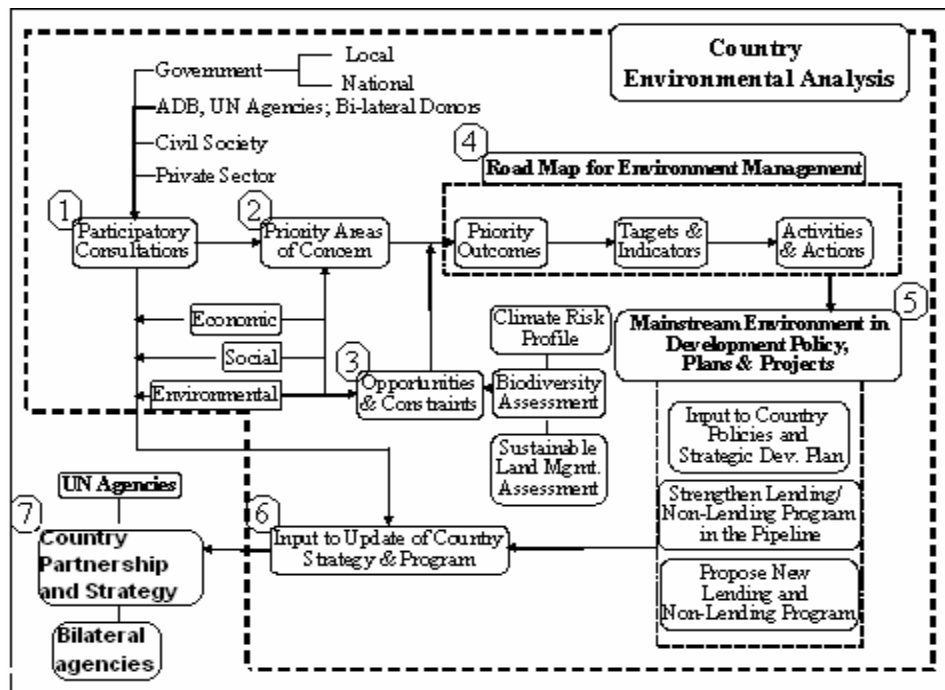
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# COUNTRY ENVIRONMENTAL ANALYSIS

## I. INTRODUCTION

This country environmental analysis (CEA) is prepared as an input to the Asian Development Bank's (ADB) country partnership strategy (CPS) exercise and to guide environmental assistance by other development partners. The CEA provides background information on the Republic of Vanuatu's environmental constraints, needs, and opportunities. It describes the environmental issues that are most important to Vanuatu's sustainable development strategy and ADB's possible role in helping to address the critical environmental constraints. The CEA is formulated in a participatory process with inputs from a wide range of stakeholders (see Annex 1). The CEA also provides a basis for monitoring country environmental performance as an input to the Performance Based Allocation for Vanuatu.

Figure 1. Process diagram for the country environmental analysis (CEA)



For each of the key environmental issues in Vanuatu, the CEA uses the commonly adopted Pressure-State-Response (PSR) analytical framework (OECD 2000). For example, in relation to the issue of climate change, the key pressures are fossil fuel use, deforestation, and methane release from landfills. The "state" includes measures of carbon dioxide (CO<sub>2</sub>) and other greenhouse gas (GHG) concentrations, average air and sea temperatures, and rates of sea level rise. Responses include mitigation and adaptation measures like energy efficiency or coastal zone setbacks, government policies, and institutional changes. The CEA examines whether any targets have been set for the key environmental issues identified by the Government, against which environmental performance and progress towards sustainable development might be measured.

## **II. SITUATION ANALYSIS**

### **A. Pressures on Environment and Natural Resources in Vanuatu's Economy**

#### **1. Overview**

Vanuatu's more than 100 islands,<sup>1</sup> stretching over 1,300 kilometers (km) from north to south, form one of the most diverse Pacific island countries.<sup>2</sup> The combined land area of 12,190 square kilometers (km<sup>2</sup>)<sup>3</sup> is set within a maritime exclusive economic zone (EEZ) of 680,000 km<sup>2</sup> (see Map). From low coral atolls to majestic volcanoes, Vanuatu is one of the most geographically diverse nations in the Pacific islands region. This geographic diversity is both an economic advantage as well as one of Vanuatu's main social and economic constraints.

With a total population of about 220,000 and the increasing movement of people from rural areas to the main cities, providing adequate services and infrastructure to the rural population throughout this scattered archipelago is a major drain on public finances. Already burdened by the dual French and English languages from its colonial past prior to independence in 1980, Vanuatu's scattered islands also have their own languages (about 110) and cultural differences. At the same time, Vanuatu's diverse landscapes and cultures are a major tourism attraction. Nearly all domestic exports are primary products reliant on Vanuatu's fertile soils and abundant rainfall, with copra and cocoa accounting for about a quarter of exports.

Vanuatu ranks 118<sup>th</sup> on the Human Development Index and 52<sup>nd</sup> on the Human Poverty Index. Poverty levels stubbornly remain at about 40% of the population, with about 26% on less than \$1 per day. Subsistence is still the main way of life for the majority of the population living in rural areas. Vanuatu is ranked as a Least Developed Country by the United Nations but this status is currently under review and could change by 2009.

Vanuatu's economic growth occurs inconsistently, declining over the period 2001-2002, but apparently returning to growth in 2003 (Figure 2). Gross domestic product (GDP) per capita has increased slowly, reaching \$1,862 by 2006 (NSO 2007). Fortunately, inflation appears to be under control, with the consumer price index increasing by only 1.2% in 2005, although the price structure remains high due to the high level of imports and several monopoly suppliers. Since the Government placed controls on borrowing to finance infrastructure, gross international reserves have grown to \$62.8 million by end 2005 and external debt has steadily dropped from a high of 33% of GDP to 22.7% by 2005. Slight fiscal surpluses have been maintained since 2004, although a deficit is expected in 2007.

In the most recent half-yearly economic and fiscal update, the Ministry of Finance and Economic Management (MFEM) has indicated that economic growth has been stronger than expected in 2006, growing by 7.2% in real terms, the highest since 1994. The major economic drivers were consumption and investment demand, tourism, trade, and a rebound in finance, real estate, and insurance. The service sector achieved a growth

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<sup>1</sup> Something as basic as the number of islands remains unclear in Vanuatu, varying from 80 to 107 in official documents.

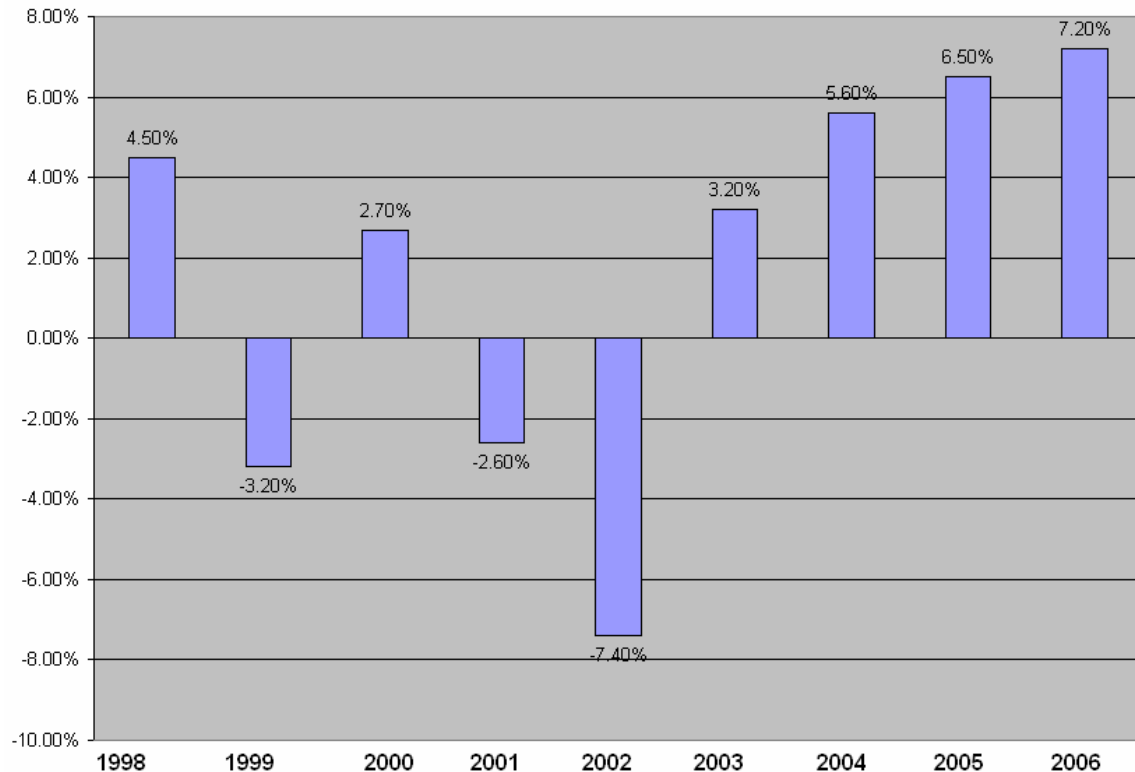
<sup>2</sup> About 66 islands have permanent population.

<sup>3</sup> While most government documents quote this area, NACCC 2007 uses an updated figure of 12,336 km<sup>2</sup>. The reason for the discrepancy is not known.



rate of 8.4% and contributed 85% to the overall growth in 2006. The construction sector, mainly for hotels, guest houses, and private houses (as well as some government infrastructure) grew by 15.7%. Industry grew by 7.0% and agriculture by 2.4% (NSO 2007).

**Figure 2 Real GDP Growth in Vanuatu 1998-2006**



Source: Ministry of Finance and Economic Management.

## 2. Population

Vanuatu has the distinction of being one of the least densely populated Pacific islands countries, with a population density of 16/km<sup>2</sup>, compared to 10/km<sup>2</sup> in PNG and 545/km<sup>2</sup> in Nauru (see Table 1).

Vanuatu's population has grown by more than 70,000 since 1990, reaching about 219,100 in 2005.<sup>4</sup> The annual population growth rate is estimated at 2.6% to 2.7% per annum and the population projection for 2010 is about 267,000. Although the total fertility rate (births per woman) has declined from 4.9 in 1990 to 4.1 in 2003, infant mortality has dropped from 52 per 100,000 live births to 31, and life expectancy at birth has increased from 62.8 years in 1989 to 68 in 2003. These demographic changes have resulted in a very young population, with 41% less than 15 years of age, along with corresponding social issues like urban drift, unemployment, crime and drug use.

<sup>4</sup> The agricultural census of 2006 recorded only 209,920. The National Accounts 2006 gave a mid-year estimate of 222,980 (NSO 2007). The reason for the discrepancy is not known, but may be due to inadequate coverage by the agricultural census in urban areas.

**Table 1 Population Distribution in Vanuatu**

Province	Number of Households		Population	
	1999	2006	1999	2006
Shefa	10,888	12,870	54,439	68,706
Sanma	6,970	8,272	36,084	41,596
Malampa	6,483	7,348	32,705	34,925
Penama	5,371	6,447	26,646	26,676
Tafea	5,364	6,577	29,047	29,398
Torba	1,339	1,798	7,757	8,620
Vanuatu	36,415	43,312	186,678	209,920

Source: Population and Housing Census 1999 and Agricultural Census 2006.

About 80% of Vanuatu's population is located on the flatter terrain, with population densities up to 48 per km<sup>2</sup> (Table 2). Fortunately, the half of the country that ranges from hills to mountains is more sparsely populated and should remain so.

**Table 2 Population Distribution by Terrain Type**

Terrain Type	Area coverage (%)	Population (%)	Population density
Littoral*	0.3	0.5	19
Coral terraces	5.0	26.0	48
Riverine plains, swamps, lakes	4.0	11.0	23
Terraces and plateaus	28.0	33.0	12
Terraces and plateaus, strongly dissected	14.0	9.0	6
Hills	6.0	2.0	3
Mountains	25.0	4.0	1
Volcano (alluvial plains)	1.0	3.0	21
Volcanic foot slopes	10.0	13.0	12
Volcanic cones and domes	8.0	1.0	1.5

Note: \* = mangroves, tidal flats, and beach ridges.

Original data from Vanuatu Resource Information System (VANRIS) – United Nations (2002b).

### 3. Urbanization

The urban population has doubled since 1990, reaching 47,600 in 2003, or 22.9% of the population. The urban population growth rate is estimated at 4.3% annually. Rural to urban migration has resulted in informal “slum” settlements on the outskirts of the capital, Port Vila. Rapid property price increases and easier foreign ownership rules are making it more difficult for ni-Vanuatu people to access urban housing close to central areas. The best residential plots close to Port Vila have been selling for A\$300,000–500,000 and luxury apartments are on the market for up to A\$1,000,000 (Patterson 2007). Strata titles<sup>5</sup> and long-term leaseholds (up to 75 years, extendable), plus guaranteed repatriation of investors' funds by the Vanuatu Investment Promotion Authority (VIPA),

<sup>5</sup> Strata titles initially intended for multi-storey buildings only have been abused and used as a mechanism to subdivide land. Unwinding this legal loophole may be very difficult.

combined with no income tax, capital gains tax, or death duties makes property purchase an attractive investment option for expatriates.

Rapid urban growth, especially in the peri-urban areas, is outstripping the capacity of the Government to provide adequate environmental services of safe water supply, sanitation, and solid waste collection. These peri-urban areas also tend to be more vulnerable to natural disasters such as storm surges, flash floods, and tsunamis. Upgrading of the round island road on Efate funded by the Millennium Challenge Corporation (MCC) is triggering a real estate boom along the coast and there is a danger that extensive strip development to capitalize on ocean views and access to beaches will take place along this road, creating future problems for infrastructure provision and public access to beach areas.<sup>6</sup>

Urban water supplies are predominantly from groundwater with no major health concerns to date. There is some concern with over-pumping of groundwater aquifers and the possibility of saline intrusion. Following concern over urban encroachment into the Tagabe water catchment that supplies Port Vila, the Matnakara Water Protection Zone was declared in 2004. The Luganville water supply was upgraded under the ADB-funded Urban Improvement Project.

Recent economic growth, such as in the construction sector, has been a major “pull” factor into urban areas. Formal employment (indicated by Vanuatu National Provident Fund membership) has grown from 17,222 in 2003 to 27,922 in 2006. Increased salaries in the civil service, starting from 2006, will feed into increased consumption and trade. Private consumption expenditure grew by 6.8% in 2006 (80% of household consumption is accounted for food, beverages, and tobacco (49.5%), transport and communications (21.6%) and housing, electricity, water, gas and other fuel (10.3%). Education and health expenditure is very low (1% and 2% respectively), reflecting high levels of government subsidies on these services (NSO 2007). Imports of consumer goods for home consumption have almost doubled since 2001 and the retail domination by ethnic Chinese storekeepers is becoming increasingly obvious. Increased imports are resulting in increased solid waste, e-waste, and liquid waste disposal issues. Traditional packaging using leaves and woven baskets is being replaced by plastic bags (despite a bye-law in Port Vila, which is not enforced) and cardboard.

#### **4. Agriculture**

Over 75% of the population is still located in rural areas, dependent on subsistence or commercial agriculture. Subsistence agriculture based on slash and burn rotation and cultivation techniques is becoming increasingly unsustainable as the rotation cycle is shortened due to population growth, establishment of large plantations, and leasing of prime land for residential and tourism development. The main agricultural products are beef, cocoa, coffee, copra, and kava. Niche markets exist for spices such as vanilla and pepper.<sup>7</sup> Local production of yams, cassava, breadfruit, vegetables, fruit and nuts mainly supply domestic markets. Poultry and pig production is also primarily for the domestic market, with pigs being particularly important for feasts and reconciliation ceremonies.

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<sup>6</sup> Informal estimates provided at a recent land workshop are that about 80% of the waterfront land on Efate has been leased to developers for subdivision.

<sup>7</sup> Another niche market exists for indigenous nuts (nangai, *Canarium* spp; navelle, *Barringtonia* spp.; and natapoa, *Terminalia* spp. but domestic demand exceeds supply (ADB 2001).

In 2006, the agriculture sector grew by 2.4% and contributed 6% to economic growth. Public investment in roads and other transport infrastructure over the next few years is expected to improve access to markets thus contributing to increased agricultural production. Vanuatu's position as a supplier of certain certified "organic" products, such as beef, vanilla and pepper will also help to capture niche export markets and to supply the tourism industry.

In a review of the agriculture and fisheries sectors in Vanuatu, ADB (2001) found that "a plethora of distorting taxes, policies and regulations have sapped the development of agriculture and fishing in Vanuatu." Areas of comparative advantage for Vanuatu's economy were seen as agriculture, processed agricultural products, and tourism – all based on Vanuatu's natural and human resource endowments. To remove impediments, the review recommended introducing regulations to protect the community against inappropriate development and providing cost-effective market information, extension services and research – areas where private service providers are not likely to be active (ADB 2001). Several useful loan and TA interventions were also proposed, but these were mostly not funded by ADB.

The 2000 review of the agriculture sector found that the CRP rightsizing exercise plus the 1993 public service strike has "reduced staff and other resources to a point where the Ministry of Agriculture, Quarantine, Forestry and Fisheries (MAQFF) can achieve very little" (ADB 2001). Fortunately, no major environmental issues associated with the sector were found, "apart from isolated examples of soil erosion due to monoculture on sloping lands, concerns that logging rates may be unsustainable in certain areas, fishing pressure near urban areas, and depletion of trochus on some reefs."

## **5. Deforestation**

From independence to 1998, Vanuatu's forests were subject to extensive commercial exploitation, with minimal controls. From 1991 to 1993, timber export volumes increased by 300% (Nakou 2002). The 1998 ban on export of whole round logs and the lack of easily accessible forest resources by that time reduced the rate of deforestation. According to the PAA 2006-2015, however, harvest rates are still greater than replanting rates, despite impressive progress in developing a Code of Logging Practice and systems for sustainable management of forests. The 1997 national forest policy estimated total sustainable yield at 68,000 cubic meters per year (m<sup>3</sup>/yr), ranging from 1,000 m<sup>3</sup>/yr on Ambrym and Epi, to 30,000 m<sup>3</sup>/yr on Santo/Malo islands (Department of Forests 1999). The traditional land tenure system is seen as a constraint on sustainable forest management, as there are still numerous disputes between customary owners and forestry leaseholders (Government of Vanuatu 2006a).

## **6. Fisheries and Marine Management**

As a vast area of sea dotted with tiny islands, fisheries and marine management are vital to the people of Vanuatu. Approximately Vt 1,000 million worth of tuna is caught in Vanuatu's EEZ by licensed foreign fishing vessels. According to the Forum Fisheries Agency (FFA) the value of the catch has risen from \$6.1 million in 1999 to \$9.23 million in 2005. Unfortunately the Government only receives 0.1% of this value from vessel

licenses (Robert Jimmy, pers. comm.).<sup>8</sup> The allowable annual tuna catch in Vanuatu waters is 8,250 t/yr (3,000 t albacore, 3,000 t skipjack, 2,000 t yellowfin, and 250 t of big eye) (Mourgues 2004), but pirate fishing vessels and transshipment make these quotas impossible to enforce.

A proposed new fish landing base in Vanuatu, which has been portrayed in the media as a PRC-funded fish processing plant, could increase the revenue take by the Government significantly (4% of the total value of tuna caught in the EEZ, \$2.50/ton transshipment fee, and license fees for carriers and bunkers, plus freight charges by the national airline). By landing fish caught in national waters, Vanuatu will also be able to place observers on the foreign vessels (as well as seamen) to ensure that all data are accurate and enforce compliance with the Western and Central Pacific Fisheries Commission conservation and management measures. Such a landing facility would recapture some of the revenue lost when the South Pacific Fishing Company tuna loining factory in Santo closed down in 1987, after 30 years of operation.

Vanuatu's Maritime Authority (VMA) has limited capacity to deal with marine environmental issues and has recently been involved in authorizing incidents involving dumping of waste from a US naval vessel, dumping of bunker oil from a cruise ship into the municipal landfill, and being unable to salvage a sunken tug boat leaking oil in Port Vila harbor. Vanuatu has no pump out facilities at its ports and to date has not been able to implement the regional oil spill contingency plan.

Deepwater snapper fisheries (locally referred to as poulet) supply mostly local markets with about 80 t/yr, while shallow water reef fish and coastal pelagic fish amount to about 40 t/yr, providing income of about Vt 48 million per year (ADB 2001). The artisanal and subsistence fishery harvest was estimated at 2,400 t/yr in 2000, providing an important source of protein in the diet and food security.

Management of coastal fisheries and coral reefs is increasingly being undertaken by communities, through community conservation areas and declaration of taboo areas as "no-take" zones. While traditional controls are effective locally, it is not certain that they have the backing of legal protection if needed, especially from some external threat.

A thorough assessment of the coastal fishery is given in Cillauren et al 2001. Fish poisoning (ciguatera) from fresh fish contaminated by algal blooms (*Gambierdiscus spp.*) restricts commercial sale of reef fish (Mourgues 2004). The Fisheries Regulations (1987) "provide for closed seasons (*Birgus latro*); limited harvesting (*Chelonidae spp.*); size limits (*Birgus latro*, *Charonia tritonis*, *Trochus niloticus*, *Turbo marmoratus*, *Panulirus spp.*, *Paribus caledonicus*); catch limits and quotas (*Birgus latro*); licensing of operators (aquarium coral and reef fisheries); and controls on potentially unsustainable harvesting technologies (e.g., dynamite fishing)" (Environment Unit 2006). Bans are also imposed on harvesting live wild corals and giant clams, although enforcement of all these measures remains an issue. A draft fisheries policy was produced in 1996 with FAO assistance (ADB 2001).

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<sup>8</sup> The National Accounts show that commercial fisheries contributed a mere Vt 70 million to national income in 2006 (NSO 2007).

## **7. Industry and Trade**

Vanuatu has a small industry sector (manufacturing, electricity, water and construction) which grew by 7.0% in 2006, contributing an unchanged contribution to GDP of 9.7%. The manufacturing sector, mostly food processing, is actually declining and its contribution to environmental degradation in Vanuatu is quite small. Manufacturing of wood products is increasing, partly in response to the demand for construction timber. Cement consumption, a key indicator for the construction industry, grew by 40.5% in 2006. Merchandise trade exports include mineral water, fish, garments, cement, fruit, and food items.

Vanuatu is not immune from the forces of globalization and has entered into an increasing number of free trade agreements or economic partnership agreements. The most significant of these at present is the Melanesian Spearhead Group Agreement, which has opened up the Vanuatu market to increased products from Papua New Guinea and Fiji Islands. The proposed replacement of the European Union's (EU) Cotonou Agreement with an economic partnership agreement, due to be signed by the end of 2007, will also be highly significant for Vanuatu, not least because considerable aid is tied to signing the agreement.

Vanuatu was established as an international finance center by the New Hebrides Government in 1971. Although this small tax haven only employs about 400 people, the finance center is responsible for about 12% of Vanuatu's GDP.

## **8. Tourism**

Tourism is possibly the most important sector in Vanuatu, with visitor numbers growing to 68,000 in 2006, along with another 60,000 cruise ship visitors (who have a short onshore visit and return to the ship). Vanuatu is also a popular destination for the yachting fraternity. Most tourism activity has been in the vicinity of the capital, Port Vila, but the recent opening of new airports and airline routes is beginning to spread tourism to the other islands. Hotels and restaurants recorded 11.7% growth in 2006. Specific events like the round island relay race, golf tournaments, horse racing and cultural events attract increasing numbers of visitors. Despite the high dependence on maintaining pristine environmental quality to attract increasing numbers of tourists, the tourism industry does not pay any specific environmental fee or charges. Potential environmental damage caused by excessive water consumption, transportation, solid wastes, septic tank seepage, and trampling on coral reefs has not been matched with an effective government response. A national sustainable tourism development strategy incorporating strategic environmental assessment is urgently needed.

## **9. Energy and Transport**

Most electricity in Vanuatu is generated by oil fired thermal power plants operated by UNELCO<sup>9</sup> under monopoly concessions (to 2031 in Port Vila and 2010 in Luganville). Some bottled liquefied petroleum gas (LPG) is imported by Origin Energy for household use in Port Vila. Refined (unleaded) petroleum and diesel is imported by two petrol companies. Due to the high cost of imported fossil fuels and the monopoly or near-monopoly supplier concessions, energy costs in Vanuatu are very high. Plans are

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<sup>9</sup> Union Electrique de Vanuatu Ltd., owned by Lyonnaise des Eaux of France.

underway to create a Utilities Regulatory Authority (URA) to introduce more competition and control monopoly pricing, although the counter argument has been that the small market will not support multiple suppliers.<sup>10</sup> A National Energy Corporation was approved by the Council of Ministers and enabling legislation was being drafted (Johnston 2004) but this appears not to have progressed further.

Renewable energy development has been funded by savings (relative to the cost of diesel powered electricity) from a Japan-funded Sarakata hydroelectric plant near Luganville. Solar energy, windmills, and coconut oil substitution for diesel are being implemented through a range of pilot projects. The most sustainable financing of these projects appears to be an arrangement for deducting operation and maintenance costs from the salaries of teachers and doctors, for electrification of schools and clinics, as well as their houses. In 2001, the Council of Ministers endorsed a “vision for 100% renewable energy economy by 2010” but there is little evidence that this vision is being vigorously pursued by the current government (Johnston 2005). There was also an announcement that all government vehicles would run on coconut oil, but this policy has not been implemented to date ([www.kokonutpacific.com.au](http://www.kokonutpacific.com.au)).

Most of rural Vanuatu remains without electrification. Energy in rural areas is primarily from fuel wood and other biomass. Vanuatu has considerable energy potential from its own natural resources, including geothermal, hydropower, wave energy, wind, solar, and biomass (especially coconut oil). There has been some assessment of potential contributions that these sources could make to the energy mix and some pilot level experience (especially with solar energy), but scaling up to make a significant contribution to national energy self-sufficiency remains elusive.<sup>11</sup> In principle, for example, biofuel from the 96,000 ha of coconuts in Vanuatu could replace the entire imports of fossil fuels, but the practicality of implementing such a scheme is daunting. The Pacific Islands Renewable Energy Project (PIREP) documents the main constraints on renewable energy in Vanuatu and suggests capacity building interventions to remove the main barriers (Johnston 2005). Key amongst these is the need for policy reform to create new incentives and remove disincentives for renewable energy.

According to the Pacific Regional Energy Assessment 2004, Vanuatu has “no effective regulations, laws, standards, or codes governing the power sector....There are apparently no legal standards for petroleum fuel or its transport, storage or disposal” (Johnston 2005). A National Energy Committee was established in 2002 but now appears to be defunct. The Government’s Energy Unit had 2 staff at the time of this report in August 2007. Another national energy policy is being formulated and it is hoped that it will have more success than previous policy documents.

Private transport services, including buses and taxis, registered 20.4% growth in 2006 and the number of vehicles in the urban area of Port Vila is reaching a stage of congestion at peak hours. As a reserved occupation, the increase in mini-buses and taxis appears to be uncontrolled and some rationalization of licenses should be

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<sup>10</sup> Port Vila and Luganville have only 7,000 consumers connected to the grid (about 15% of the national population).

<sup>11</sup> Since 1992, donors have provided about \$1 million for photovoltaic electricity pilot projects in about 180 sites (Johnston 2005). A few private sector solar energy companies are now established in Vanuatu and it may be better to create policy incentives for expansion of this private sector interest. A new World Bank/IFC initiative will provide low cost financing for solar panels through a commercial bank.

considered. Imports of second-hand or reconditioned vehicles and engines are also creating air quality and ultimate disposal problems.

The MCC is providing \$65.7 million in grant funding over 5 years to reconstruct priority transportation infrastructure on eight islands covering roads, wharfs, an airstrip, and warehouses and institutional strengthening of the Public Works Department (a project originally prepared for ADB loan funding). Completion of the project by 2010 is expected to add 3% each year to Vanuatu's GDP and benefit over 65,000 poor, rural inhabitants, with an economic rate of return of 25% (MCC 2006).

## **10. Mining and Extractive Industries**

Mining is not a significant industry in Vanuatu and does not even appear in the national accounts as a sector. Gold, manganese and possibly hydrocarbons have some potential but there has been no major exploitation to date. Nevertheless, the rapid increases in the construction industry and road construction have created burgeoning demand for construction materials like gravel, sand, and coral aggregate. Excavation of sand from coastal areas like Blacksands is causing aggravated coastal erosion. Sourcing road construction material from custom owned land may also lead to conflicts over royalties and inadequate rehabilitation of borrow pits and quarries.

### **B. Current State of Environment in Vanuatu**

Key environmental issues that confront the country include: (i) climate change and sea-level rise; (ii) soil erosion and land degradation; (iii) coastal erosion; (iv) loss of forests; (v) loss of biological diversity; (vi) water pollution; (vii) waste disposal and recycling; (viii) reef destruction and over-exploitation of marine resources; and (ix) natural disasters (earthquakes, volcanoes, tsunamis etc.).<sup>12</sup> Vanuatu's first national conservation strategy in 1993 identified much the same issues.

#### **1. Climate Change and Sea Level Rise**

Vanuatu's tropical climate is mainly affected by the southeast trade winds and the El Nino Southern Oscillation (ENSO). The two main seasons are a hot and wet period through November to April (the main cyclone period) and a cooler and drier period from May to October. In Port Vila, the average annual rainfall is about 2,300 mm and average annual temperature is 26°C. The northern islands tend to be wetter than the southern areas. In addition to the prolonged dry and wet periods associated with ENSO, Vanuatu is also subject to other extreme climate events including storm surges, coastal inundation, flooding, landslides, and hailstorms (NACCC 2007).

Vanuatu quickly recognized the potential effects of global warming and was among the first countries to sign and ratify the United Nations Framework Convention on Climate Change (UNFCCC) in 1993. Although not a significant contributor of greenhouse gases (GHG), part of Vanuatu's obligation under the UNFCCC is to communicate to the conference of the parties its national GHG inventory and to develop plans to mitigate

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<sup>12</sup> One possible reason for the lack of Government funding for environmental management may be that most environmental problems in Vanuatu are seen as bearable and/or acts of God. To date, there has been no major environmental disaster, like Minimata disease in Japan or the Torrey Canyon oil spill in the USA, to trigger widespread public concern.



climate change impacts and adapt to future climate regimes. In 1999, Vanuatu's first communication to the conference of parties to UNFCCC partly met this obligation (Government of Vanuatu 1999). Vanuatu was able to achieve this milestone with the assistance of the regional Pacific Islands Climate Change Assistance Programme (PICCAP), funded by GEF, executed by UNEP, and implemented by SPREP. The National Advisory Committee on Climate Change (NACC) (initially established in 1989 during the UNFCCC negotiations) was re-formed to provide the lead role in Vanuatu.

The GHG inventory concentrated on energy, land use, and forestry sectors, potentially omitting several sources such as natural sources (volcanoes, sulpharoles, sea vents, swamps etc.), landfills, fuel wood, and burning wastes. Energy provides about 55,000 t/yr of carbon dioxide (CO<sub>2</sub>) emissions, while agriculture provides about 11,000 t/yr of methane (CH<sub>4</sub>) emissions (methane's greenhouse impacts are about 26 times as great as carbon dioxide's). Permanent forest cover, as one of the main GHG sinks, absorbs a net 1,150 t/yr of CO<sub>2</sub>. As a nation heavily dependent on imports and inter-island trade by ships and by air, CO<sub>2</sub> emissions from aviation fuel and bunker oil are also relatively high.

Since the beginning of temperature recording on the main island (at Nambatu, Efate) in 1949, annual mean temperatures have increased by about 0.5°C. Sea level rise is difficult to detect in Vanuatu because of tectonic activity that causes some islands to rise and others to subside. Whether the rate of sea level rise will outstrip any tectonic rise in the longer term is still debatable. One tidal gauge has been installed with AusAID funding, as part of a regional monitoring network for sea level rise. Increased frequency of extreme weather events has been detected, although this may be partly due to better tracking by satellite imagery. Until the 1960's, less than 10 cyclones were recorded each year, but since the 1970's there have been around 25 cyclones per year. Annual average rainfall has declined on average since the 1970's, and El Nino periods seem to be more frequent.

The expected impacts of a climate regime that is drier and warmer, with more frequent extreme climatic events, warmer seas and possibly sea level rise are quite serious but difficult to predict with quantitative certainty. The main impacts identified include: (i) decreased agricultural production and reduced food security; (ii) increased incidence of diseases such as malaria, dengue, and water borne diseases; (iii) water shortages; (iv) inundation in coastal zones and estuaries and impacts on infrastructure and housing; (v) bleaching of coral reefs; (vi) uncertain impacts on coastal ecosystems; and (vii) uncertain impacts on fisheries. To date there has been no estimate of the economic impacts of these changes although such a study has been proposed to SPREP.

Adaptation opportunities were identified for each of the affected sectors, stressing the need for "no regrets" strategies that make good sense regardless of impending climate change.

(a) **Agriculture:** (i) diversification of crops; (ii) selection and promotion of crop varieties suited to the changed conditions; and (iii) promotion of the indigenous custom of selecting seed or propagation material adapted to climate change.

(b) **Human health:** (i) promotion of environmental management strategies to control disease vectors; (ii) promotion of hygienic waste disposal methods to prevent contamination during cyclones and floods; and (iii) catchment management to maintain a continuous supply of good quality water.

(c) **Water resources:** (i) integrated planning and management of catchments to maintain water quality and maximize groundwater recharge; (ii) improved management and maintenance of water supply networks; (iii) promotion of water conservation; (iv) policy to restrict extraction of freshwater from coastal aquifers; and (v) expansion of rainwater storage capacity.

(d) **Coastal development:** (i) improved planning to direct investments in housing, infrastructure, and agriculture to least vulnerable zones, based on modeling of the storm surge zone; (ii) improved engineering standards for infrastructure to withstand cyclones, floods, and high intensity rainfall; (iii) exclusion of extractive activities (like sand mining, mangrove clearing, and beach replenishment) from the coastal zone; and (iv) preparation of emergency preparedness plans, based on local coping strategies where available.

(e) **Coastal marine environments:** replacement of lost fishing harvests with alternate sources of protein and alternate livelihood opportunities.

(f) **Social and cultural concerns:** identification of coping strategies requires increased involvement of key social institutions, such as chiefs, women's organizations and churches.

A range of mitigation options were also presented, such as reducing dependency on fossil fuel imports, banning inefficient electrical appliances, improving operating efficiency of motor vehicles, planes, and ships, reduced demand for transport, promotion of public transport, and increased forest cover. It was stressed, however, that GHG emissions reduction is not an immediate priority in Vanuatu, given its miniscule contribution to global totals.

The National Action Programme for Adaptation (NAPA) was completed and approved by Cabinet in 2007 (NACCC 2007). A prioritized list of projects (each requiring \$1 million from GEF) was prepared for (i) agriculture and food security; (ii) water management; (iii) sustainable tourism; (iv) community based marine resource management; and (v) sustainable forestry management.<sup>13</sup> Unfortunately, the NAPA assumed that only the least developed county (LDC) fund could be tapped for adaptation projects, so all projects were scaled as medium sized projects (less than \$1 million). The larger Adaptation Fund under the CDM Executive Board is likely to be a more significant source of funding for small island developing states (Mueller 2007). The NAPA also omitted projects related to infrastructure development in the belief that they would be adequately addressed by the yet to be approved Pacific Adaptation to Climate Change project (NACC 2007).

## 2. Soil Erosion and Land Degradation

As much of the land in Vanuatu is of volcanic origin (Table 3), it has a natural fertility due to frequent ash cover.<sup>14</sup> While over 40% is classified as cultivable, it is widely reported that only 14% (one third) is utilized (Johnston 2005). As the hills and mountains are

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<sup>13</sup> As the Pacific Adaptation to Climate Change project was concentrating on infrastructure, this sector was dropped from the NAPA prioritized projects.

<sup>14</sup> Vanuatu has 9 active volcanoes, including two under the sea.

sparsely populated, most cultivation is on coral terraces, littoral zones and volcanic alluvial plains.

During the colonial period, large tracts of land were taken up by foreign controlled plantations, forcing indigenous people onto marginal lands and increasing population densities. The traditional “slash and burn” system to establish gardens was forced into shorter rotations, with insufficient fallow periods. In drought periods, such as the El Nino episode in 1997/98, fires escape from beyond the garden boundaries, exposing bare soil to heavy rainfall in the following wet season. Sheet erosion removes the shallow layer of fertile soil, exposing more erodible subsoil. As these eroded areas are no long suitable for agriculture, the arable area available declines further, putting even greater pressure on the garden rotations. This vicious cycle results in considerable soil erosion in the long term.

**Table 3 Land Types and Islands by Province**

Province	Provincial headquarters	Number of principal islands	Island types
Torba	Vanua Lava	13	Volcanic and raised atolls
Sanma	Luganville	6	
Malampa	Malekula	9	
Shefa	Port Vila	13	Mixed
Penama	Ambae	3	Volcanic
Tafea	Tanna	45	Volcanic

Source: After Johnson 2005.

The Constitution provides that all land in the Republic of Vanuatu belongs to the indigenous custom owners and their descendants, and that the basis of ownership of land shall be determined according to custom. The Government is the protector of the custom owner’s land rights by requiring Government’s consent for land transactions between custom owners and other people wanting to acquire land. It also establishes the right of Government to acquire land in the public interest, and to acquire and distribute land to indigenous citizens. The lack of secure land tenure, except in urban areas,<sup>15</sup> is a constraint on economic development opportunities, especially where foreign investment is involved. Collective ownership by clans also makes access to bank financing and long-term investment in soil productivity problematic.<sup>16</sup> There is currently no provision for the custom ownership of land to be registered, other than through the registration of leasehold titles (Lunnay et al 2007). A pilot project registering custom land boundaries, using global positioning satellites and walking the boundaries with custom owners, is being implemented on Nguna Island (North Efate) and this approach needs to be extended nationwide.

Despite explicit provision in the Constitution (Article 76), there has been no overarching national land law. In the land sector, a complicated amalgam of the Alienated Land Act (1982), Land Reform Act (1980), Land Leases Act (1983), Urban Land Act (1993), Land Acquisition Act (1992), and the Strata Titles Act (2000) guide the operations of

<sup>15</sup> After independence, nearly all property in urban areas remained with their pre-independence owners, although all freehold titles were converted to leasehold titles.

<sup>16</sup> ADB has addressed this bank security issue through technical assistance on setting up a national chattels register, where movable assets can be registered as security for loans.

Vanuatu's Land Use Planning Office.<sup>17</sup> There are also many other laws related to land surveying and valuation and land dispute settlements and land use policies have been formulated to ensure effective management of lands and related resources, such as the National Land Use Plan and Policy, Provincial Land Use Plans and Strategies, and Land Suitability Criteria.

A Land Summit was held in 2006 and recommended 20 follow up actions in the following categories (i) land ownership; (ii) fair dealings; (iii) certificate to negotiate; (iv) power of the Minister over disputed land; (v) strata title; (vi) agents/middle men or women; (vii) lease rental and premiums; (viii) sustainable development; (ix) conditions of lease; (x) public access; (xi) enforcement; (xii) zoning; and (xiii) awareness (Lunnay et al 2007). Many of these resolutions are being tackled with assistance from AusAID and NZAID, under the guidance of a national Steering Committee.

Vanuatu ratified the United Nations Convention to Combat Desertification in 1998 and has submitted its third national report on actions to implement the convention (Government of Vanuatu 2007). While the main threats are clearly identified, there has been no recent estimate of the area degraded or the economic costs of that degradation.

### **3. Coastal Erosion**

Vanuatu's coastline, covering more than 2,500 km, is the focus of most economic activities in the country, with the rugged interior terrain generally left undeveloped. The coastal fringe is estimated to occupy 5% of the land area but supports 26% of the population (UNDP 2005). As a tectonically active country, the coastline is still dynamic as the land area continues to rise and fall due to volcanic activity, earthquakes, and tectonic tilting. Accordingly, coastal sediments are not highly consolidated and frequent storm surges and cyclones often redistribute sediments. The highly active coastal environment has resulted in only small areas of mangroves, estimated at 2,750 ha (comprising 14 species) compared to the 33 species of mangroves in Papua New Guinea covering 200,000 ha (SPREP 1999c).<sup>18</sup> Coconut plantations are the dominant vegetation along the coastal zone.

To date, there has been no quantitative estimate of the extent of coastal erosion, partly reflecting the lack of specific institutional responsibility for the coastal zone. The emerging concern over climate change, however, is adding pressure on the Government to gain a better understanding of the current extent of coastal erosion and to identify the most vulnerable areas. Future location and design of infrastructure, in particular, requires a better understanding of coastal dynamics and coastal erosion hazards.

The main legal provision to prevent inappropriate development in foreshore areas are the Physical Planning Act (1986), currently administered by Provincial Governments, or Municipal Councils (for urban areas)<sup>19</sup> and the Foreshore Development Act (1975). Both acts provide wide powers to the Minister of Internal Affairs and both are widely abused and/or ignored. For example, leases are often given not only over the foreshore zone but also adjacent offshore reefs (Lunnay et al 2007). Those holding such leases feel free to

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<sup>17</sup> A Freehold Titles Act was drafted and brought into force in 1994, but it has never been implemented.

<sup>18</sup> Vanuatu has less than 1% of the Pacific region's 343,000 ha of mangrove cover.

<sup>19</sup> In interviews for this report, it was suggested that the Government is considering transferring the physical planning powers to the Ministry of Lands and Natural Resources.

build on the foreshore zone, without the necessary approval under the Foreshore Development Act or the Environmental Management and Conservation Act, and such developments are potentially affected by coastal erosion or cause erosion further along the coast by altering the direction or strength of wave action.

#### 4. Loss of Forests

Natural forest cover in Vanuatu (444,000 ha) is estimated at 36% of the total land area (UNDP 2005).<sup>20</sup> Most of the high value forests were over-exploited in the 1980s and 1990s, until the Government was forced to impose a ban on the export of round logs in 1998, a clear case of locking the barn door after the horse has bolted. At least 40% of the commercial forest area is regarded as degraded (Table 4). No major sawmills continue to operate in Vanuatu and most timber extraction is for local use.<sup>21</sup> The total volume harvested in 2000 was 35,143 m<sup>3</sup> (about half the estimated sustainable yield), resulting in payment of Vt 33 million in royalties (Mourgues 2004). There is a small amount of sawn timber exported to New Caledonia and some mouldings exported to Japan. Sandalwood oil is sent mainly to India, while the wood is sent to Western Australia for production of incense sticks. Plantation forests have expanded to about 3,000 ha.

**Table 4 Vegetation Types in Vanuatu**

Vegetation Type	Area (ha)	% of Land Area
Mid-height forests (20-30 m)	205,307	16.73
Low forest (10-20 m)	234,089	19.08
Woodlands (< 10 m)	386	0.03
Thickets (3-8 m)	433,941	35.37
Scrub (< 3 m)	45,018	3.67
Grassland	51,128	4.17
Swamp communities	2,261	0.18
Mangroves	2,519	0.21
Bare, agriculture, inhabited	252,256	20.56
<b>Total land area</b>	<b>1,226,905</b>	<b>100.00</b>

Source: ACIAR 1997 quoted in Mourgues 2004.

The Forestry Act of 2001 provides for the protection, development and sustainable management of forests and the forest industry. The Act is administered by the Department of Forests under the Ministry of Agriculture, Quarantine, Forestry and Fisheries (MAQFF). The Forestry Act also establishes the Forests Board of Vanuatu whose main task is to supervise negotiations for timber rights agreements and advise the Minister on matters relating to forestry policy and administration. The International Tropical Timber Organization (ITTO) has an ongoing project on restocking the Vanuatu natural forest areas. A proposal to develop the National Forest Sector Plan has been

<sup>20</sup> According to UNDP (2005), natural forest cover is down from 70% in 1980, although in interviews for this report the Department of Forestry stated that total forest cover is still 70%. The discrepancy is possibly accounted for by the fact that 40% of the land area is covered by smallholder agriculture (bush gardens) and commercial plantations. A new inventory based on Landsat 7 satellite images obtained by the Lands Department should clarify the current status.

<sup>21</sup> The National Forest Policy 1997 states that national sustainable forest yield is 68,000 cubic meters.

submitted to FAO. A national forest policy to replace the 1997 version is nearing completion, with the focus on replanting and forest conservation.

The Vanuatu Biodiversity Conversation Trust Fund has been established to provide a continuous source of financial assistance for the retention of forests in Vanuatu and related biological conservation. Its first funded project is 3,202-ha of forest in the Erromango Kauri Reserve, supported by the New Zealand Agency for International Development (NZAID).

## **5. Loss of Biodiversity**

The World Conservation Union (IUCN 2006) reported that a total of 34 species in Vanuatu are listed in its Red Data Book of threatened species, broken down as follows: 5 for mammals; 8 for birds; 2 for reptiles; 7 for fishes; 2 for mollusks; and 10 for plant species. Vanuatu has established a large number of protected areas (5 of which are marine protected areas) and has designated part of its EEZ as a whale sanctuary.<sup>22</sup>

The primary threats to biodiversity in Vanuatu include (i) over-exploitation of marine and terrestrial resources; (ii) unsustainable logging and deforestation; (iii) poor agricultural and livestock ranching practices; (iv) natural disasters; (v) introduction of alien species; (vi) intensified frequency of burning for slash and burn agriculture; (vii) infrastructure development; and (viii) global warming.

The National Parks Act (1993) provides for the declaration, protection and preservation of national parks<sup>23</sup> and nature reserves in Vanuatu. The Act is intended to be administered by the Minister of Agriculture, Quarantine, Fisheries and Forestry upon the advice of a National Parks Board (NPB). The NPB is charged with preparing a management plan for an established park or reserve and consultation with concerned custom owners and local authorities is required in performing the task. A local management committee is constituted for every national park or natural reserve declared. Unfortunately this legislation has not been implemented (Environment Unit 2006).

Other major regulations that concern ecosystems and biodiversity conservation are: (i) Wild Bird Protection Act 1989, (ii) International Trade (Fauna and Flora) Act of 1989, (iii) Convention on Biological Diversity (Ratification) Act (1992), and the Animal Importation and Quarantine Act (1988) which regulates the control of animal importation including the importation of animal products and biological products.

A National Biodiversity Conservation Strategy has been prepared (Environment Unit 1999). The strategy has six objectives (i) sustainable management and conservation of Vanuatu's biodiversity; (ii) appropriate policy, planning and legal mechanisms for the management of biodiversity; (iii) improved knowledge about biodiversity; (iv) adequate capacity of national, provincial, NGO and community organizations to manage biodiversity; (v) increased local awareness of the importance and value of biodiversity; and (vi) community participation in the management and conservation of biodiversity.

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<sup>22</sup> Only two legally recognized conservation areas were identified in the third national report on biodiversity—Vatthe Conservation Area and the President Coolidge/Million Dollar Point Historical Site, both on Santo Island (Environment Unit 2006).

<sup>23</sup> Customary land owners are sensitive to the term “national” park, as they view this as expropriation of land. Hence most protected areas in Vanuatu are referred to as “conservation areas” where customary use rights are retained.

Twenty priority actions were identified to meet these objectives. The Global Environment Facility (GEF) is providing support for Phase 2 of the National Biodiversity Project.

### Box 1 Coconut Crabs

A major attraction for tourists and locals alike is a feast of coconut crabs, but coconut crabs are under threat due to over-exploitation. Following approval of the Fisheries (Ban on Coconut Crabs) Regulation in 2004, AusAID recently approved a small project (A\$20,000) to fund the Operasen Savem Krab Kokonas in Sanma Province. This project showed that a 3 year ban was effective in allowing mature female crabs to reproduce, despite numerous instances of villagers breaking the ban. The Lonu Protected Area had the highest number of crabs, illustrating the effectiveness of legal protection and closed seasons. Based on these results the ban has been extended for a further 5 years, to 2012.

Eco-tourism activities and forest conservation have been encouraged, notably through the Vatthe Conservation Area by the local communities of Sara and Matantas. Vanuatu has also benefited from several regional biodiversity projects such as (i) GEF/SPREP South Pacific Biodiversity Conservation Project; (ii) UNDP/SPREP Capacity 21 Programme; (iii) AusAID/SPREP Bibliography of Environmental Literature Programme; and (iv) AusAID/SPREP Environmental Education Awareness Project (Environment Unit 1998).

**Table 5 Places and Habitats of Conservation Significance**

Important places	Damaged or degraded due to human impacts	Vulnerable places
<ul style="list-style-type: none"> <li>• Bat caves – Malo, NW Malekula, Efate, Santo and Vanua Lava</li> <li>• Mangroves on Efate, Malekula, Santo and Vanua Lava</li> <li>• Coconut crab habitat on Hiu, Loh and Tegua, Torres Islands</li> <li>• Lake Letas and adjacent areas, Gaua</li> <li>• Petaview waterfall, catchment and inland lakes, Epi</li> <li>• Rivers on Maewo, Tanna, Vanua Lava, Efate</li> <li>• Undisturbed forest between Homo Bay and Ranwas, South Pentecost</li> <li>• Creek Ai, Efate</li> <li>• Flying fox habitat, Mota Lava</li> </ul>	<ul style="list-style-type: none"> <li>• Mangroves throughout Vanuatu</li> <li>• Coconut crab habitat</li> <li>• Rivers on Tanna, Efate, Maewo, Vanua Lava and elsewhere</li> <li>• Seagrass beds off Efate, Malekula and Santo</li> <li>• Remnant bush on Tanna</li> <li>• Lowland forest ecosystems on most islands)</li> <li>• Coastline at Mele Bay and Samoa Point, Efate (sand mining)</li> </ul>	<ul style="list-style-type: none"> <li>• Coconut crab habitat</li> <li>• Mangroves</li> <li>• Rivers on Tanna, Efate and Maewo</li> <li>• Forest on South Pentecost</li> <li>• Petaview waterfall on Epi and surrounding areas</li> <li>• Bat caves on Santo, Malo and NW Malekula</li> <li>• Seagrass beds on Efate, Malekula, Santo and Ureparapara</li> <li>• Lowland forest ecosystems on most islands</li> <li>• Sea bird rookeries</li> </ul>

Source: Environment Unit 1999.

The Environment Unit is also implementing a GEF/UNDP Landholders Conservation Initiative Project involving communities on three islands (Gaua, Santo and Tanna) to assess the extent to which biodiversity is conserved through the existing mosaic of local resources management initiatives on those islands.

Vanuatu's first national report to the Conference of Parties on the Convention on Biological Diversity (CBD) states that, in 1993, the Government "signed and ratified the CBD without considering the practicality or priority of meeting the treaty's obligations." Acknowledging the contribution of the United Nations Environment Programme (UNEP)

and GEF in 1997 to assist with biodiversity conservation planning, the Government indicated at the time that it would be “unlikely that Vanuatu will have the resources or political priority to continue (biodiversity) work unassisted” (Environment Unit 1998). Therefore it is remarkable that Vanuatu has now established a significant number of protected areas, compared to only 2 in 1998, and has begun to demonstrate the value of community-based conservation management.<sup>24</sup> Nevertheless, much remains to be done (Table 5).

The third national report to the COP notes that “most biodiversity conservation achievements have been either direct or indirect outcomes of projects funded by bilateral and multilateral agencies. This includes development of the Code of Logging Practice and National Forest Policy, development of a National Biodiversity Strategy and Action Plan, development of a Biosecurity Framework, research and field trials to inform management of *Trochus niloticus*, *Turbo marmoratus*, and *Birgus latro* and conservation plans for five priority tree species, and establishment of small ex situ and in situ collections of agricultural biodiversity” (Environment Unit 2006). Given the global importance of biodiversity this is not necessarily a bad arrangement but sustainability is a concern once the projects are completed. One of the challenges identified is that “community interest in locally managed marine and terrestrial protected areas often exceeds the capacity of government and non-government agencies to provide effective support and advice” (Environment Unit 2006).

Existing community based protected areas include Lonu protected area, Vathe Conservation Area, Ringhi te Suh (Maskelynes), Hideaway Island (Efate), Narong marine reserve (Uri Island), Mystery Island Reef (Aneityum), Nguna-Pele marine protected area, Epi, Central Pentecost, Lelepa marine protected area, Mangaliliu marine protected area, Spuaki conservation area (Nguna), and Wiawi (Malekula). Community based management practices and taboo areas are also widespread (Environment Unit 2006). One of the few efforts by the Government to create a publicly owned protected area, the Erromango Kauri Protected Area, has now lapsed as government funding of the lease could not be sustained. Vanuatu's first botanic garden is planned for the Tagabe River catchment (Environment Unit 2006).

An increasing threat to Vanuatu's biodiversity is the accidental or deliberate introduction of invasive or alien species and their spread from island to island. Among the more serious of these introductions are (i) mile a minute vine (*Mikania spp.*); (ii) American rope vine (*Merremia spp.*); (iii) water hyacinth (*Eichhornia spp.*); (iv) fire ant (*Wasmania auropunctata*); (v) African snail (*Euglandina fulica*); (vi) Indian mynah (*Acridothera tristis*); (vii) at least 3 species of rats; and (viii) feral pigs (Mourgues 2004). To date, there has been no comprehensive estimate of the economic damage caused by invasive or alien species. Some biological control organisms have been introduced to combat Vanuatu's quarantine and inspection services have been strengthened recently and a draft biosecurity policy has been submitted to the Government (Environment Unit 2006). Emphasis is being placed on controlling the importation of invasive species at the national borders, recognizing that control of the spread of species (like the fire ant) from island to island is difficult to control without additional human and financial resources.

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<sup>24</sup> The number of sites protected by custom taboos may be much greater than officially designated protected areas. Tapisuwe et al (2003) reported that of 106 conservation areas identified in 2001, only four had received external assistance. It is perhaps reflective of the parlous state of environmental governance in Vanuatu that no definitive figure on the number or area of protected areas can be stated at this time (Environment Unit 2006).



The National Biosafety Framework, prepared with UNEP/GEF assistance sets four desired outcomes for 2015 (i) a consistent national approach to biosafety based on risk assessment; (ii) best practice risk analysis and management procedures; (iii) effective networks to enhance available technical expertise; and (iv) informed decisions on the use of different species and products (VQIS 2005). Under the Cartagena Protocol<sup>25</sup>, the Vanuatu Quarantine and Inspection Service (VQIS) is identified as the national biosafety focal point and competent national authority.

## **6. Water Availability and Quality**

The World Bank (2006) reported that 60% of the total population has access to improved sources of water, with 52% and 85% of the rural and urban population, respectively.<sup>26</sup> The main source of water are from rivers, springs and wells (26.0%), shared piped water (19.3%), community water tanks (18.5%) and household water tanks (15.9%) (United Nations 2002b).

Human activities continue to contribute to inadequate waste management and pollution of lagoons and coastal areas around Port Vila and Luganville. An urgently needed urban sewerage and wastewater treatment system is being considered for the capital city but it will take time to resolve institutional, financial, and legal issues. A sanitation master plan was prepared as part of the urban growth management strategy for Port Vila prepared in 1997, but it has not yet been implemented (McIntyre and Wilson 2004). World Bank (2006) reported that only 50% of the total population (42% in rural areas and 78% in urban areas) has access to improved sanitation. Sanitation problems in urban areas, especially informal peri-urban settlements, are due to contamination of water supplies with human waste and inadequate disposal of household rubbish (reflecting the high cost of disposal in the formal landfill sites). In some areas, up to 20 families share communal standpipes, making disease transmission more likely (United Nations 2002).

Several projects on water supply development and management are being implemented through the assistance of Japan, EU, Canada, NZAID and AusAID. NZAID supported a Water Resources Project (1998-2003) to trial training on community financial management of new water supplies. NZAID is also supporting the development of a water resources strategic development plan and will consider assistance with implementation of the plan once it is completed by the end of 2007.

The Water Resources Management Act (2002) provides for the protection, management and use of water resources in Vanuatu. The Act is administered by the Minister of Lands and Natural Resources. In addition, the Public Health Act provides for general public health in Vanuatu including prohibition of pollution of water resources and the regulation of adequate sanitary systems. Vanuatu has not developed its own water quality standards to date and relies on the World Health Organization (WHO) standards as a reference.

The Pesticides (Control) Act implemented in 1998 makes provision for the regulation and control of the importation, manufacture, sale, distribution and use of pesticides, including persistent organic pollutants. The Act provides for the (i) registration of all pesticides for

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<sup>25</sup> An international treaty subsidiary to the Convention on Biological Diversity dealing with international cooperation in transboundary movement of living modified organisms.

<sup>26</sup> United Nations (2002b) reports an earlier "national level of safe water" at 74% by UNICEF.

import, manufacture, packaging or export purposes maintained by the Registrar of Pesticides, and (ii) setting out minimum standards when dealing with pesticides in Vanuatu.

## **7. Waste Disposal and Recycling**

Vanuatu is one of the recipients of the Japan-assisted Regional Waste Management Strategy. The Japan International Cooperation Agency (JICA) is funding the development of a sanitary landfill at Boufa for the Port Vila Municipal Government. A draft master plan has been prepared which serves as the umbrella document in developing waste management policies and action programs both at the national and regional levels. Vanuatu is also participating in the implementation of other SPREP waste management projects implemented through financial assistance from the EU, AUSAID, NZAID and UNEP-GEF. So far, it has already produced its own Solid Waste Characterization and Management Plan. There are a number of laws and local bylaws in Port Vila that have implications for solid waste management. Draft laws relating to pollution standards have been prepared but not yet implemented.

## **8. Reef Destruction and Over-exploitation of Marine Resources**

Vanuatu has about 620 km<sup>2</sup> of reefs, which are tremendously important for protection of the coastline and provision of protein for coastal communities, and are normally included inside the boundaries of customary land. The Maritime Zones Act (1981) provides for the delimitation of the maritime zones in Vanuatu which are consistent with applicable international laws and acceptable to other countries. The Fisheries Act (1982) controls the management of the fisheries sector, specifically the preparation of management and development plans, access and licensing, conduct of marine scientific researches, and implementation of overall fisheries conservation program. The Foreshore Development Act (1975) regulates all works carried out on the foreshore areas. Other Acts which relate to marine and coastal resources management are: Maritime Act of 1982; Vanuatu Maritime Authority Act of 1998; and Ports Act of 1985. Related policies are: Foreshore Development Act (1975); Shipping Act (1968); Maritime Regulations (1981, 1982, 1986); Fisheries Regulations (1983, 1989).

Through the UNDP-GEF funded International Waters Programme (IWP), Vanuatu has established the Crab Bay Locally-Managed Marine Protected Area and developed among the local community better understanding of the environment. Local people are able to help in holding meetings with elders, youths, and women; discuss resource management issues; build greater understanding of their resources; and participate in management decisions that have a direct impact on their livelihoods.

The international NGO, Greenpeace, has started the Stolen Fish campaign, claiming that the pirated fish catch in the Pacific is 5-15% of the total catch, causing a loss of 300,000 t/yr of tuna, valued at \$134-400 million (4 times the level of access fees paid to Pacific nations). Greenpeace argues for the current level of fishing effort to be halved and up to 40% of the ocean set aside as no-take areas, plus various other measures so that tuna stocks can recover.<sup>27</sup>

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<sup>27</sup> Greenpeace quoted a 2001 assessment that suggested that 22,000 rural households engage in fishing, with 40% of these selling some fish for income (Vanuatu Daily Post 14 August 2007).

## 9. Natural Disasters

Geographically located on the seismically active Pacific “rim of fire”, Vanuatu suffers from a wide range of natural disasters, at a rate of one every second year. The Commonwealth Secretariat ranked Vanuatu as the most vulnerable state of 110 small developing countries (United Nations 2002a). The International Disaster Database (<http://www.em-dat.net>) shows that Vanuatu is regularly affected by typhoons with over 200 people killed, more than 200,000 affected, and a damage bill running into hundreds of millions of dollars since 1940 (Table 6). Earthquakes, landslides, and floods are less frequent and less damaging on average (Table 7). There is some evidence that frequency of natural disasters is increasing in the Pacific islands region (World Bank 2006).

**Table 6 Most Severe Natural Disasters in Vanuatu (1950-2006)**

Date	Disaster Type	Number Killed	Number Affected	Economic damage (\$)
24/12/51	Wind storm	100	n.a.	250,000
7/02/87	Wind storm	48	48,000	25,000,000
8/05/99	Wind storm	32	n.a.	n.a.
27/11/99	Earthquake	12	14,100	n.a.
16/01/85	Wind storm	9	117,500	173,000,000
2/02/72	Wind storm	4	n.a.	n.a.
30/03/93	Wind storm	4	12,005	6,000,000
9/01/92	Wind storm	2	n.a.	n.a.
25/02/04	Wind storm	2	54,008	n.a.
27/11/05	Volcano	0	5,000	n.a.
11/01/88	Wind storm	0	4,700	n.a.
8/06/01	Volcano	0	4,500	n.a.
21/12/02	Flood	0	3,001	n.a.

Source: Em-dat database (<http://www.em-dat.net>) accessed 24 June 2007.

Tragic as these events are for the families and businesses affected, disaster recovery is also a major drain on public finances. Paradoxically, disaster prevention and planning have been barely addressed by previous government funding. Apparently, there is a perverse incentive to wait for the damage to be done and then ask for the international donors to provide disaster relief funding and to reinstate damaged infrastructure (World Bank 2006). As disaster and emergency funding is provided by donors outside of their normal funding envelopes and can be released quickly with less bureaucratic red-tape, this rather politically incorrect view may have some legitimacy. Some donors, notably the EU, have a specific assistance window (B envelope) for emergency assistance.

In a pilot study of risk management prepared for the World Bank and AusAID, the reinstatement costs of infrastructure assets in Port Vila and neighboring Mele area at risk from various natural disaster scenarios was estimated at A\$39.3 million (Shorten et al. 2003). Modeling of a tropical cyclone with a recurrence interval of 1 in 100 years was estimated to damage 28.5% of current buildings. Modeling of wave run up during cyclone events suggest that setbacks of 25-50 m are desirable along the Port Vila foreshore, indicating that several existing buildings are at threat of damage. Tsunami modeling based on a worst case scenario computed up to 9 m maximum vertical

inundation in Port Vila harbor and water penetration about 200 m from the shoreline (Shorten et al. 2003). Building repairs or reinstatement would cost about A\$64 million. Unfortunately, the results of this study have not resulted in any major changes or mitigation measures, so the probability of damage in an extreme event remains quite high.<sup>28</sup> A draft building code has been prepared since 1990 but it has not yet been approved by Government.

**Table 7 Summary Table of Natural Disasters in Vanuatu (1940 – 2006)**

	# of Events	Killed	Injured	Homeless	Affected	Total Affected	Damage (US\$'000)
Earthquake	8	12	105	2,000	13,000	15,105	0
Avg. per event		2	13	250	1,625	1,888	0
Flood	1	0	1	0	3,000	3,001	0
Avg. per event		0	1	0	3,000	3,001	0
Slides	1	1	0	3,000	0	3,000	0
Avg. per event		1	0	3,000	0	3,000	0
Volcano	3	0	0	0	9,500	9,500	0
Avg. per event		0	0	0	3,167	3,167	0
Wind Storm	23	203	23	10,895	231,655	242,573	205,250
Avg. per event		9	1	474	10,072	10,547	8,924

Source: Em-dat database (<http://www.em-dat.net>) accessed 24 June 2007.

A short-term National Action Plan for 2008-2010, estimated to cost \$3,777,808 has been prepared (encompassing \$650,000 for actions already approved by donors), but there was no evidence of it being included in the 2008 Government Investment Program (Government of Vanuatu 2007c).

## C. Regulatory and Institutional Responses

### 1. Legal Framework

The Republic of Vanuatu is governed under a Constitution, enacted in 1980, which creates a sovereign democratic state, defines citizens, defines the sovereign franchise including a universal voting franchise amongst adult citizens, identifies fundamental rights and duties of citizens, designates national languages, and creates the structure of government. This structure includes the President as Head of State, a legislature as Parliament, an executive headed by a Prime Minister, an independent judiciary with a Judicial Services Commission, an Ombudsman, a Public Solicitor, and a Public Prosecutor. It also includes a Public Service with an independent Public Service Commission.

Vanuatu's Constitution (revised 1988) holds that it is a fundamental duty of all "to protect the Republic of Vanuatu and to safeguard the national wealth, resources and environment in the interests of the present generation and of future generations." To implement this constitutional provision, the Government is empowered to enact specific laws and create institutions to protect and manage the environment.

<sup>28</sup> These results have not deterred an ambitious plan by expatriate property developers to construct an artificial island in Port Vila bay for waterfront housing development.

The principal legislation is the Environmental Management and Conservation Act No. 12 of 2002. The main parts of the Act deal with (i) administration; (ii) environmental impact assessment; (iii) biodiversity and protected areas; and (iv) offences under the Act. The Act provides for a department to develop, implement, and coordinate the Government's environmental policies and programs. The Act makes it mandatory to (i) prepare and publish a national state of environment report at least once every ten years and (ii) maintain a publicly accessible environmental registry. The Act provides for establishment of a Biodiversity Advisory Council, and specifically covers the issues of bio-prospecting and community conservation areas.

## **2. Institutional Framework**

The Environment Unit of the Ministry of Lands and Natural Resources<sup>29</sup> implements the Environmental Management and Conservation Act. The Environment Unit also leads the preparation of both the National Conservation Strategy and the National Biodiversity Strategy and Action Plan, and is involved in the development of the National Waste Management Strategy and the National Climate Change planning process. It is the Operational Focal Point for international environmental conventions like the Convention on Biological Diversity (CBD), United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention to Combat Desertification (UNCCD), and the Convention on International Trade in Endangered Species (CITES), among others (SPREP-IWP 2004). Currently the staff strength of the Environment Unit is well below a minimal operational level (in August 2007 there was only one staff remaining).<sup>30</sup>

The Comprehensive Reform Program in 1997<sup>31</sup> recommended creation of a Department of Environment and Conservation, as did the Environmental Management and Conservation Act (2002) and the proposed structure is as shown in Figure 3.

Environmental management is also implemented through sector specific legislation (see Appendix 2). In the land sector, the Land Lease Act (1983) and the Urban Land Act (1993) guide the operations of the Vanuatu's Land Use Planning Office. There are also many other land use policies formulated to ensure effective management of lands and related resources, such as the National Land Use Plan and Policy and the Provincial Land Use Plans and Strategies, Land Suitability Criteria, etc. Other laws that regulate the use of natural resources by other sectors are the: Mines and Minerals Act, Petroleum (Prospecting and Production) Act, Geothermal Energy Act, Forestry Act, Fisheries Act, Foreshore Development Act, the Pesticides Act, and others.

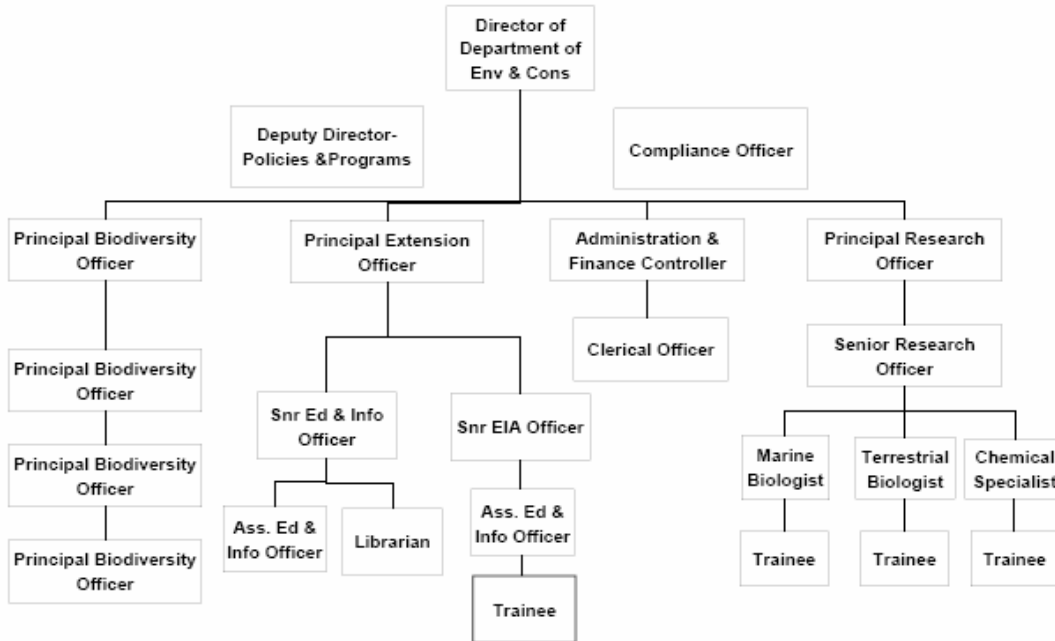
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<sup>29</sup> In the 2007 budget submission, the Ministry was still referred to as the Ministry of Lands, Geology and Mines. For the sake of consistency, the Ministry of Lands and Natural Resources is used hereafter.

<sup>30</sup> Since the original CRP in 1997, it has been government policy to give the Environment Unit departmental status, but in reality it has been allowed to become almost defunct.

<sup>31</sup> The CRP right-sizing exercise starting in 1997 was intended to improve the effectiveness of government, as well as cost-savings, but the World Bank (2007) governance assessment finds that government effectiveness has not improved since 1996.

**Figure 3 Proposed Structure of the Department of Environment and Conservation**



Source: Lunnay et al 2007.

The Department of Geology, Mines and Water Resources under the Ministry of Lands and Natural Resources administers the Geothermal Energy Act of 1987 which regulates the exploitation of geothermal energy, as well as the Petroleum (Exploration and Production) Act of 1993 which regulates the searching for and producing of petroleum on land – including land beneath water, the seabed and the subsoil beneath the territorial seabed; and the seabed and the subsoil of the continental shelf or beneath the waters of the exclusive economic soil. The Ministry of Land and Natural Resources implements the Mines and Minerals Act (1986), which regulates the explorations and development of minerals and related matters through a licensing and permit system. Quarrying is the only current mining activity but presence of gold on Santo and Malekula has been confirmed. There may be reserves of petroleum, although this is not yet proven.

### **3. National Environmental Policies and Strategies**

Vanuatu’s first national conservation strategy was prepared in 1993 (Environment Unit 1993), with assistance from SPREP, AusAID, and IUCN. The highest priorities were identified as (i) improving environmental education and awareness; (ii) improving legislation and law enforcement; (iii) strengthening existing environment institutions; (iv) preserving natural resources and tabu places; and (v) using resources more efficiently. Some of the strategies identified in 1993 were implemented, while many others were not.

A recent independent review of the Comprehensive Reform Program (Government of Vanuatu 2006c) found that the Environment Unit was doing good work in relation to (i) identifying conservation areas and sacred sites; (ii) raising public awareness about the importance of environmental protection; and (iii) facilitating community based management of natural resources. It goes on to state that “it is sad however to note that this effort has not been recognized and supported by the past governments as well as

the present one.” As government policy to transform the Environment Unit into a full department has not been acted on and the Environment Unit is now almost defunct due to lack of permanent staff, the lack of policy support is worrying. The review recommended that an annual Environment Summit should be convened to raise the profile of environmental issues in Vanuatu and to provide a forum for an exchange of views, but this has not yet been acted on.

The MDG report for 2005 states that “a priority activity for the Environment and Energy units is to integrate sustainable environmental management into national and provincial development planning” (UNDP 2005). In practice, this means to ensure that sustainable development forms the cornerstone of the PAA and Rural Economic Development Initiatives (REDI). However, until these two levels of planning are fully harmonized, setting realistic targets and indicators at the two levels of government, and then ensuring that government agencies are accountable for delivering on these targets, the ideal of mainstreaming environment remains unachievable.

The PAA 2006–2015 is a good indication of how far Vanuatu still has to go in mainstreaming environment into other development sectors. The policy objectives for environmental management are (i) promote sound and sustainable environmental management practices; (ii) ensure sustainable management and conservation of Vanuatu’s biodiversity; (iii) integrate hazard and risk management concerns into policies in order to reduce environmental risk; and (iv) promote traditional and cultural disaster management know-how and self-help within the community. Although widely recognized as a cross-cutting issue, the PAA does not mention environmental management in any sector other than primary production. The only two annexes included are economic and social indicators (there is no mention of environment). In the primary production chapter the following priorities and strategies, other than promotion of increased production, are listed for the primary sectors:

- (a) Prepare a national agricultural sector strategy with the involvement of all stakeholders;
- (b) Maintain and improve the regulatory and management framework for the sustainable development of the forest sector through (i) improved institutional capacity in the Department of Forestry, (ii) preparation of a forest inventory update and sector plan update, and (iii) effective enforcement of the Code of Logging Practice;
- (c) Develop effective methods of dealing with the traditional land tenure system;
- (d) Improve fisheries policy and management; and
- (e) Sustainably manage coastal and reef resources and offshore fisheries.

Under the “environment and disaster management” section of the PAA, the following priorities and strategies are recognized:

- (i) Implement the Environmental Management and Conservation Act and the regulation of related activities;
- (ii) Encourage the development of protected areas;
- (iii) Improve sewage treatment and reduce pollution in the harbors and lagoons near urban centers;
- (iv) Conduct a solid waste disposal study;
- (v) Encourage eco-tourism, where feasible, as a means to protect the environment;

- (vi) Conduct community awareness of the need to protect the environment, including through reduction of risks from natural hazards;
- (vii) Develop and implement risk reduction programs in communities; and
- (viii) Prepare a Port Vila development plan to define how public amenity can be maintained or improved and the attractiveness of the town enhanced for both residents and tourists.

The original national forest policy (1997) established a vision for the Government to work cooperatively with the landowners and the forest industries to achieve sustainable forest management (Department of Forests 1999). In a section on environment and conservation, the policy objectives included (i) protection and conservation of biological, germplasm, cultural, historical and other non-timber forest values; (ii) establish and manage conservation areas with landowner conservation; (iii) identify potential environmental impacts before new timber licences are issued; (iv) encourage communities to minimize soil erosion and to rehabilitate existing eroded areas; and (v) conserve mangrove ecosystems and restrict any non-sustainable uses of them.

#### 4. Regional Agreements and Strategies

As for most Pacific island countries, Vanuatu is an active member of the regional organizations, such as the Secretariat of the Pacific Regional Environment Program (SPREP), the South Pacific Applied Geoscience Commission (SOPAC), the Forum Fisheries Agency (FFA) and others. As a member of these organizations and with their support, Vanuatu is a signatory to several regional environmental agreements and treaties (Table 8).

**Table 8 Regional Agreements and Treaties Ratified by Vanuatu**

<b>Regional Agreement or Treaty</b>	<b>Status</b>
South Pacific Nuclear Free Zone Treaty	Ratified 1995
Convention on the Prohibition of Fishing with Long Drift Nets in the South Pacific	Ratified 1991
Niue Treaty on Cooperation in Fisheries Surveillance and Law Enforcement in the South Pacific Region	Ratified 1995

Source: Tapisuwe 2002.

Other regional agreements and treaties which Vanuatu has signed but are yet to be ratified include:

- Convention for the Protection of Nature in the South Pacific (Apia Convention – 1976);
- Convention for the Protection of the Natural Resources and Environment of the South Pacific Region and related Protocols (SPREP Convention – 1986);
- Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Waste and to Control the Transboundary Movement of Hazardous Waste within the South Pacific Region ( Waigani Convention – 1995);
- Protocol Concerning Co-operation in Combating Pollution Emergencies in the South Pacific Region.



The main benefit of membership of regional environmental organizations is Vanuatu's ability to participate in the regional projects that they undertake. In fact, without these regional projects, Vanuatu would have almost zero capacity to undertake environmental work. Some of the key regional projects that have contributed to management of Vanuatu's environment are as follows.

(a) **Pacific Ocean Pollution Prevention Programme (PACPOL)** – With Canadian and International Maritime Organization (IMO) funding, SPREP assisted Vanuatu and other Pacific island countries to prepare a marine pollution risk assessment, a marine spill contingency plan, a regional marine pollution surveillance system, marine pollution legislation, improved ship waste management, and an awareness raising campaign (SPREP 1999a, SPREP 1999b).

(b) **Regional Wetlands Action Plan for the Pacific Islands** – In 1994, the Asian Wetlands Bureau and SPREP prepared an action plan for wetland conservation in the Pacific containing over 60 proposed actions. Based on a review of this action plan, SPREP decided to prepare an updated wetlands action plan, focused on mangroves (SPREP 1999c). Freshwater wetland areas in Vanuatu were also identified including 1,900 ha of crater lakes (like Lake Letas), 60 ha of lowland marshes (like Emaotfer Swamp), and 1,000 ha of lowland swamp forest (like the Jordan River floodplain).

(c) **Action Strategy for Environmental Education and Training in the Pacific Region (1999-2003)** – This regional project aimed to provide the “basis for practical and effective environmental education and training” in the areas of formal and non-formal education, planning and decision making, public awareness, and networking, communication and collaboration (SPREP 1998). Unusually for such action plans, there are specific, time-bound measurable targets (e.g. “by 2003, the SPREP webpage will be available to at least 12 countries to provide links to support national and local environmental awareness raising efforts”).

(d) **Action Strategy for Nature Conservation in the Pacific Islands Region (2003-2007)** – This strategy sets 30-year goals (to conserve the biodiversity and natural environment of the Pacific region, integrate nature conservation and sustainable resource use into all island economies, and to ensure that Pacific peoples and their governments are leading conservation efforts) and 5-year objectives.

(e) **Pacific Islands Framework for Action on Climate Change, Climate Variability and Sea Level Rise (2000)** – The main goal was to catalyse action and strengthen partnerships and responses at all levels to understand and respond to climate change, climate variability and sea level rise.

(f) **Bird Conservation Priorities and a Draft Avifauna Conservation Strategy for the Pacific Islands Region** – Sets a goal of recovering threatened bird species (11 species in Vanuatu) and conserving all other indigenous bird species and their habitats (SPREP 2001).

(g) **Invasive Species in the Pacific: A Technical Review and Draft Regional Strategy (2000-2004)** – This exercise was restricted to terrestrial invasive species and freshwater habitats, focusing on invasive species that pose a threat to native species and their habitats (SPREP 2000b).

(h) **Pacific Islands Renewable Energy Programme (PIREP)** – This GEF funded project assessed key energy issues, identified barriers to development of renewable energy and capacity development needs, and actions that need to be taken to address the existing barriers.

(i) **Pacific Islands Energy Policies and Strategic Action Planning (PIEPSAP) Project** – This project aims to assist with development of national energy policies and action plans to implement those policies.

(j) **Pacific Islands Greenhouse Gas Abatement through Renewable Energy Project (PIGGAREP)** – Another project that aims to reduce GHG emissions from fossil fuel use in the Pacific region through increased use of renewable energy.

(k) **International Waters Project – Vanuatu Strategic Action Programme (2002-2007)** – Identification of pilot projects to improve community based inshore fisheries management and integrated coastal zone management.

(l) **Pacific Regional Action Plan for Sustainable Water Management** – Covers water resources management, vulnerability, applicable technologies, institutional arrangements and financing.

## 5. Multilateral environment agreements

Vanuatu has ratified numerous multilateral environment agreements (Table 9). While there have been some benefits from participation in these agreements, they also impose a heavy reporting burden on the highly constrained Environment Unit.

**Table 9 Multilateral Environment Agreements Supported by Vanuatu Government**

<b>International Treaties</b>	<b>Status</b>
United Nations Convention on Biological Diversity	Ratified 1993
United Nations Framework Convention on Climate Change	Ratified 1992
Kyoto Protocol – greenhouse gas reductions	Acceded 2001
Montreal Protocol on Substances that Deplete the Ozone Layer	Acceded 1994
Vienna Convention for Protection of the Ozone Layer	Acceded 1994
United Nations Convention on the Law of the Sea	Ratified 1982
Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships	Ratified 1989
Convention on International Trade in Endangered Species of Wild Fauna and Flora	Ratified 1989
International Convention on the Establishment of an International Fund for the Compensation for Oil Pollution Damage	Ratified 1989
International Convention on Civil Liability for Oil Pollution Damage	Ratified 1983
International Convention for the Prevention of Pollution of the Sea by Oil	Ratified 1983
Treaty on the Non-Proliferation of Nuclear Weapons	Ratified 1995
Plant Protection Agreement for South East Asia and the Pacific	Ratified 1997
Agreement on the International Dolphin Conservation Program	Ratified 2003
Millennium Development Goals	Adopted 2000
International Tropical Timber Agreement	Ratified
Stockholm Convention on Persistent Organic Pollutants	Ratified 2006
United Nations Convention to Combat Desertification	Ratified 1998

Source: Tapisuwe 2002, Mourgues 2004.

Vanuatu has been one of the Pacific island countries that has benefited from the GEF. National projects funded by GEF are given in Table 10, while regional projects that have included Vanuatu are shown in Table 11.

**Table 10 National GEF-funded Projects – Vanuatu**

Project Name	Project Type	Focal Area	Implementing Agency	Date Approved	GEF Grant (\$ '000)
National biodiversity strategies, action plan, and first national report to the CBD	Enabling activity (EA)	Biodiversity	UNEP	15 Jan 1997	207
Clearing house mechanism enabling activity	EA	Biodiversity	UNEP	10 Jun 1988	13
Assessment of capacity building needs for biodiversity and participation in CHM	EA	Biodiversity	UNEP	7 Sept 2000	132
Facilitating and strengthening the conservation initiatives of traditional landholders and their communities to achieve biodiversity conservation objectives	MSP	Biodiversity	UNDP	10 Mar 2004	771
National adaptation programme of action	EA	Climate change	UNDP	7 April 2003	200
National capacity needs self assessment for global environmental management	EA	Multi-focal areas	UNEP	5 May 2004	225
POPs enabling activities for the Stockholm convention on POPs: national implementation plan for Vanuatu	EA	POPs	UNEP	24 Mar 2003	393

Table 10 shows that Vanuatu is probably not currently getting its nominal national share of the GEF resource allocation framework, which is estimated at \$1.29 million for climate change and \$1.58 million for biodiversity over the period 2006-2010. For the biodiversity focal area, 93 countries are grouped and expected to share a group allocation of \$146.8 million, while any country in the group can access up to \$3.5 million. For climate change, the group consists of 115 countries with a group allocation of \$148.6 million, thus allowing a specific country to access up to \$3.1 million. The total amount accessed by Vanuatu to 2007 only amounts to \$1.94 million (for 7 projects) of which only one project was a medium sized project. All of the other projects were for enabling activities, primarily to allow Vanuatu to report on its outstanding needs, rather than constructively tackling each of them.

The World Bank/International Finance Corporation (IFC) have just announced a \$9.5 million GEF-funded 10-year project to fund renewable energy (solar PV, pico-hydro, and biofuel) electricity supplies to rural communities in Papua New Guinea, Solomon Islands, Vanuatu, Fiji and the Republic of the Marshall Islands. The project addresses two key barriers "(i) the lack of a professional, accessible dealer network to supply and help maintain renewable energy equipment, such as solar PV kits and/or pico hydro units and

(ii) the reluctance of local financial institutions to finance renewable energy systems and energy efficiency investments on affordable terms. The ANZ Pacific bank will provide low cost, long term finance to purchase electricity at a fraction of the cost they would pay for diesel generation. The project will also provide technical assistance and draw on experience with the Teachers' Solar Lighting Project in Papua New Guinea (GEF 2007). Co-financing and leveraged resources will bring the total project cost to \$53.2 million.

**Table 11 Regional GEF-funded Projects involving Vanuatu**

Project Name	Project Type	Focal Area	Implementing Agency	Date Approved	GEF Grant (\$'000)
Safeguarding the coastal and marine biodiversity and cultural diversity of tropical island ecosystems	Medium sized project (MSP)	Biodiversity	UNEP	n.a.	788
Demonstrating and scaling up sustainable alternatives to DDT and strengthening national vector control capabilities in South Asia and Pacific	Full scale project (FSP)	Persistent organic pollutants (POP)	UNEP	Not yet approved	10,000
Pacific islands adaptation to climate change project (PACC)	FSP	Climate change	UNDP	n.a.	11,600
Implementing sustainable integrated water resource and wastewater management in the Pacific island countries	FSP	International waters	UNDP	n.a.	12,723
Pacific invasive species management	FSP	Biodiversity	UNDP	Not yet approved	5,030
Expedited financing of climate change enabling activities (Phase II) - PICCAP	Enabling activity (EA)	Climate change	UNDP	27 July 2000	1,000
Pacific islands renewable energy program (PIREP)	MSP	Climate change	UNDP	1 Feb 2002	700
Pacific islands oceanic fisheries management project	FSP	International waters	UNDP	6 April 2005	11,644
LDC-SIDS targeted portfolio for capacity development and mainstreaming of sustainable land management	FSP	International waters	UNDP	21 May 2004	29,000
Pacific islands greenhouse gas abatement through renewable energy project (PIGGAREP)	FSP	Climate change	UNDP	8 June 2005	5,225
Sustainable energy financing	FSP	Climate change	IBRD	1 Aug 2006	9,480
Climate change training phase II – training programme to support the implementation of the UNFCCC	EA	Climate change	UNDP	1 May 1995	2,700
Pacific islands climate change assistance project (PICCAP)	EA	Climate change	UNDP	1 Oct 1995	2,440
South Pacific biodiversity conservation programme	FSP	Biodiversity	UNDP	1 May 1991	10,000
Implementation of the strategic action programme of the Pacific small island developing states	FSP	International waters	UNDP	1 July 1998	12,290
Pacific islands oceanic fisheries management	FSP	International waters	UNDP	6 April 2005	11,644

## 6. Local Government

Through decentralization legislation introduced in the national parliament in 1994 greater authority has been delegated to local governments. The Decentralisation and Local Government Regions Act (1994) established six provinces, with each province including at least 2 of the larger inhabited islands in the group. Each province has prepared REDI plans to identify key development needs to be implemented by the provincial governments. Each province also has an elected Provincial Council and there are 64 elected Area Councils. The environmental administration capacity at the local government level, however, is very limited.

### D. Environmental Indicators and Information Needs

The Government of Vanuatu has a comprehensive system of performance assessment at the organizational and personnel levels. Each sector agency is required to establish a corporate plan consistent with the PAA. Annual budget applications are assessed against the corporate objectives and performance targets. Senior officials are given incentive payments to achieve their own personal objectives and targets, consistent with the corporate plan. There is an established annual cycle of preparing and submitting these performance assessment milestones and senior officials have received continuous training in application of the system. To date, there has been no attempt to identify environmental performance indicators across key sectoral agencies, although this would be an important way to mainstream environmental responsibilities into government agencies other than the Environment Unit. The PAA 2006-2015 states that “little data is available to measure performance in achieving the objectives” set for the environment sector.

The MDG 2005 report indicates that for MDG Goal 7 on “ensuring environmental sustainability” Vanuatu has only fair to weak monitoring and evaluation capacity (Table 12).

**Table 12 Environmental Monitoring and Evaluation Capacity for MDGs in Vanuatu**

Monitoring and Evaluation Components	Target 9 – Integrate sustainable development	Target 10 – Access to safe drinking water and sanitation	Target 11 – Improve lives of 100 million slum dwellers
Data collection capacity	Fair	Strong	Strong
Quality of recent survey information	Weak	Fair	Weak
Statistical tracking capacity	Weak	Fair	Fair
Statistical analysis capacity	Weak	Weak	Fair
Capacity to incorporate statistical analysis into policy, planning and resource allocation mechanisms	Fair	Weak	Weak
Monitoring and evaluation mechanism	Fair	Weak	Fair

Source: UNDP 2005.

The most comprehensive effort to tabulate environmental indicators for Vanuatu has been undertaken by SOPAC as part of its global assessment of an Environment Vulnerability Index (EVI) (Pratt and Mitchell 2003) (Appendix 1). The EVI consists of 54 separate indicators to estimate the vulnerability of the environment of a country to future

shocks. In the case of Vanuatu, data were collected for 30 of the 54 indicators. Of the 235 countries examined, Vanuatu was ranked at 177<sup>th</sup> in environmental vulnerability, mainly due to the lack of data on known vulnerabilities (like exposure to extreme climate events). Missing data included sea temperatures, wind strengths, lowland area subject to sea level rise, pathogens and algal blooms, introduced species, over-fished fish stocks, sulphur dioxide emissions, mineral extraction, sanitation, genetically modified organisms, fragmentation of vegetation, migratory species, and landslides. A further 29 indicators required confirmation or updating, while only 8 of the 54 indicators were regarded as complete (Pratt and Mitchell 2003).

## **E. Lessons Learned and Success Stories**

The ongoing national capacity self-assessment in relation to Vanuatu's ability to implement the three main multilateral environment agreements (biodiversity, climate change, and land degradation) is not very encouraging. Although the draft assessment has yet to be completed, one external observation is that “the capacity of Vanuatu to adequately protect and manage its environment in general is very limited....Vanuatu needs to go back to basics and establish a functional and effective environmental protection and management system” as envisaged in the Environmental Management and Conservation Act 2002 (Torbell 2007).

A recent review of Vanuatu's public expenditure and financial accountability found that there is very little connection between policy priorities and budget allocations (ECORYS 2006). Budget impacts of new policies are generally not assessed in the budget documentation. Although several ministries have sector plans and strategies, these are generally not costed and expected results are not quantified. The PAA set out sectoral policies and priorities, but there is no analysis of the effectiveness of previous expenditure patterns in achieving these priorities. In addition, there is no clear linkage between the CRP matrix, PAA, and provincial REDI plans. Despite the existence of departmental and personnel performance assessments, sectoral plans do not set quantified, time-bound targets or measurable indicators, so progress towards long-term objectives is never clear.

### **Box 2 A Successful Climate Change Adaptation Project**

Under the Capacity Building for the Development of Adaptation Measures Project the first global climate change adaptation project in Vanuatu was undertaken. The relocation of a settlement, Lateau on Tegua, an island in Torba Province was possible after vulnerability and adaptation assessment and community education and awareness were conducted with the full participation of the community. The community had faced regular inundation due to rising sea levels, water scarcity due to limited rainwater catchments and storage capacity, and as result serious health issues. With technical assistance of the NACCC, the entire settlement was relocated with the provision of the following basic amenities: 5 rainwater catchment facilities, an aid post, 6 rainwater storage tanks and catchments, a church, and capacity to access communication through microwave radio frequencies.

One feature of Vanuatu's budget and financial system is that almost the entire development budget is funded by donors. Therefore, if all donors agreed on improved environmental management systems (e.g., world class environmental impact assessments, environmental controls built into construction contracts, and community-based monitoring of environmental management plan implementation) then the impacts of development projects could be minimized. The downside of this arrangement is that

development priorities tend to be excessively influenced by donor interests, rather than national priorities (despite protestations of country-led priority setting). The recurrent cost implications of donor funded development projects are rarely considered in the project selection process (ECORYS 2006).

NZAID reviewed its own development experience from 2000-2005 and found that projects often had weak designs and/or overly ambitious goals, inadequate project management structures, unclear development impact indicators and lacked risk management strategies (NZAID 2006). They also found that asset management training should have been provided and that specific provision should have been made for inter-agency coordination, especially with provincial governments. Government capacities were consistently over-estimated and long term assistance is needed for sustainable impact. AusAID in a review of its 1992-2002 assistance to Vanuatu added the lesson learned that inadequate or non-existent exit strategies had a major impact on project sustainability.

### **III. REVIEW OF COUNTRY PARTNERSHIP STRATEGY**

#### **A. ADB's Development Strategy and Priorities**

ADB's Country Strategy and Program Update (CSPU) 2006-2009 (ADB 2006) focuses on creating the enabling conditions for private sector led growth. In support of the Government's PAA, the aim is to encourage accelerated economic growth as well as improved governance, reform of government business enterprises, and improved infrastructure services.

The chronically unstable political situation has created uncertainty for investors and development partners, derailed policy reforms, diverted public finances, and made coordination difficult in a coalition with diverse interests. One major impetus for economic growth is the planned infrastructure being funded by the Millennium Challenge Corporation (MCC). Tourism is also being boosted by two new international carriers and a new airport terminal at Santo.

The Government has maintained a "no borrowing" policy for several years and the CSPU was formulated on the assumption that this will continue over the period 2006-2008. Accordingly, ADB's contribution is limited to its technical assistance (TA) program, which has currently identified the following topics:

- (i) Institutional reform in the Financial Services Commission
- (ii) Strengthening rural and microfinance
- (ii) Company registry reforms
- (iv) Government-owned business enterprise reform

The TA allocation is \$800,000 (2006), \$600,000 (2007), and \$1,100,000 (2008). Ongoing TAs include development of the medium-term strategic framework, secured transactions reform, and rural microfinance outreach. In comparison to the 2004 CSPU, the current version is considerably more focused, with projects planned for economic and public sector reform, water supply and sanitation, transportation, and health, nutrition and social protection dropped from the program.

ADB's approach to environmental operations was clearly outlined in the Pacific Region Environmental Strategy 2005-2009, which states "ADB cannot address every type of environmental management problem currently occurring in PDMCs. Strategic focus must be applied to choose those areas of intervention that best draw on ADB's strengths, achieve complementarity with other ADB assistance, and take advantage of opportunities both to leverage resources and to form strong strategic partnerships. In general, stand-alone environmental assistance will not be pursued unless there is strong government commitment to mainstream environment issues into economic development planning and management" (ADB 2004b).

## B. Past and Current ADB Operations

Previous assistance to the environmental sector in Vanuatu has been primarily through regional technical assistance (RETA) rather than country-level TAs or loans as shown in Tables 13-15. There is no current direct TA assistance to Vanuatu other than through the regional program, which is currently focused on water and energy. The five previous direct TAs have had varying contributions to the environment in Vanuatu. The urban infrastructure TAs did result in a loan which improved the roads and drainage in Port Vila, but the sanitation master plan was not implemented. The agriculture and fisheries sector review provides good background for the sectors but few of the recommendations have been implemented. The outer islands infrastructure development project has been picked up by MCC and it has been agreed to place an environment officer in the Public Works Department to oversee the environmental management of this \$66 million project. The impacts of the regional projects are much harder to detect and it would be useful exercise for ADB to conduct an impact assessment study to see how effective such regional programs are in countries that have minimal environmental capacity to take advantage of them.

**Table 13 Environment Related TAs to Vanuatu 1992-2002**

TA No.	Project	Year Approved	Approved Amount (\$)	Source of Fund	Type
1952	Urban Infrastructure	1993	536,000	JSF	PP
2596	Urban Growth Management Strategy for Port Vila	1996	600,000	TASF	AD
2597	Sanitation Master Plan for Port Vila	1996	360,000	JSF	AD
3312	Agriculture and Fisheries Sector Review	1999	145,000	TASF	AD
3224	Outer Islands Infrastructure Development	1999	750,000	TASF	PP
<b>Subtotal (5 TAs)</b>			<b>2,391,000</b>		

PP = project preparatory TA, AD = advisory TA, JSF = Japan Special Fund, TASF = Technical Assistance Special Fund.

Note: From 1982 to 2006, Vanuatu was granted 56 TAs with a total amount of \$15,764,758 of which about 15.2% was environment-related.



**Table 14 Environment Related Lending to Vanuatu 1992-2002**

TA No.	Project	Year Approved	Approved Amount (\$)	Source of Fund
1448	Urban Infrastructure	1996	10,000,000	ADF
1684	Cyclone Emergency Rehabilitation	1999	2,000,000	ADF
	<b>Subtotal (2 Loans)</b>		<b>12,000,000</b>	

ADF = Asian Development Fund

Note: From 1982 to 1996, Vanuatu had a total of 9 loans from ADB with a total amount of \$51,250,000, of which about 23.4% was broadly environment-related.

**Table 15 Environment Related RETAs, Pacific Region 1992-2007**

RETA No.	Project	Date	Approved Amount (\$) Source
5491	Regional Study of Financing Mechanisms for DMC Environmental Programs and Projects	1992	100,000
5542	Regional Study of Environmental Indicators and Indexes	1993	137,000
5555	Institutional Strengthening and Collection of Environment Statistics in Selected DMCs	1993	165,000
5557	Regional Conference for Biodiversity Conservation	1993	40,000
5585	Ministerial Level Conference on the Environment and Development and Preparation of the State of Environment Report	1994	90,000
5591	Study of Status of Forestry and Forest Industries in Asian and Pacific Region	1994	39,000
5591	Study of Status of Forestry and Forest Industries in Asian and Pacific Region (Supplementary)	1997	4,000 Finland
5627	Regional Workshop on Solar Power Generation using Photovoltaic Technology	1995	88,000
5658	Capacity Building for Environmental Law Training in the Asia and Pacific Region	1995	120,000 JSF
5815	Development of an International Agreement on the Conservation and Management of Tuna Resources in Central and Western Pacific Ocean	1998	608,000
5816	Mayor's Asia-Pacific Environmental Summit	1998	17,000
5883	Performance Benchmarking for Pacific Power and Utilities	1999	250,000
5896	Strengthening the Live Reef Fish Trade Management in Pacific DMCs	1999	215,000
5913	Capacity Building to Promote Traditional Environmental Management in Pacific DMCs	2000	300,000 JSF
5939	Strategies for Poverty Reduction through Environmental Improvement	2000	100,000 JSF
5972	Promotion of Renewable Energy, Energy Efficiency and Greenhouse Gas Abatement Projects	2001	334,000 Netherlands
6001	Regional Consultations for the Third World Water Forum (Supplementary)	2002	472,777
6031	Promoting Effective Water Management Policies and Practices	2002	800,000 CFWS
6039	Formulation of the Pacific Region Environmental Strategy	2002	400,000 NZ
6064	Climate Adaptation Program for the Pacific	2002	4,000,000 Canada
6085	Preparing a Pacific Governance Strategy	2002	330,000 JAWA/Neth/ Denmark
6093	Promoting Effective Water Management Policies and Practices - Phase 2	2003	3,920,000

RETA No.	Project	Date	Approved Amount (\$) Source
			PEF
6102	Renewable Energy and Energy Efficiency Program for the Pacific	2003	4,300,000 CFWS
6123	Promoting Effective Water Management Policies and Practices - Phase 3	2003	600,000 Denmark
6150	Poverty and Environment Program	2003	1,000,000 CFWS
6180	Preparation of the Asian Environment Outlook 2005: Corporate Responsibility for Environmental Performance in Asia and the Pacific	22004	5,600,000 CFWS
6197	Supporting the Achievement of the Millennium Development Goals in the Asia-Pacific Region	2004	600,000
6204	Mainstreaming Environmental Considerations in Economic and Development Planning Processes in Selected DMCs	2004	350,000
6219	Promoting Effective Water Management Policies and Practices - Phase 4	2004	400,000
6261	Energy Efficiency Initiative Consultation Workshop (Supplementary)	2005	400,000
6274	Supporting the Achievement of the MDGs in the Asia and Pacific Region: Phase II	2005	325,000 Finland
6292	Promoting Environmental Investment in Asia and the Pacific	2006	600,000
6313	Prevention and Control of Avian Influenza in Asia and the Pacific (Supplementary)	2006	3,200,000 CFWS
6313	Prevention and Control of Avian Influenza in Asia and the Pacific	2006	600,000
6322	Energy Sector Strategy and Development	2006	1,000,000
6325	Promoting Effective Water Management Policies and Procedures (Phase 5)	2006	13,000,000
6325	Promoting Effective Water Management Policies and Practices (Phase 5) (Supplementary)	2006	300,000 UK
6346	Supporting the Inception of the Energy Efficiency Initiative in Developing Member Countries	2007	2,300,000
6365	Asia Pacific Sustainable Development Summit 2007	2007	1,000,000
6384	Establishing Renewable Energy, Energy Efficiency and Greenhouse Gas Mitigation Investment Funds	2007	400,000
6387	Energy Sector Strategy and Development 2007	2007	150,000 Canada
6388	Supporting the Asia-Pacific Water Forum	2007	1,200,000 CFWS
6392	Supporting the Implementation of the Energy Efficiency Initiative in Developing Member Countries	2007	4,222,000 Canada
	<b>TOTAL</b>		<b>54,076,777</b>

CFWS = Cooperation Fund for the Water Sector, DMC = developing member country, PEF = poverty and environment fund.

### C. Environmental Implications of the Strategy

ADB's strategy for Vanuatu could be characterized as a long pause in lending, technical assistance to create the enabling conditions for private sector led growth, and reliance on GEF (or other earmarked funds) for assistance on the environment. One criticism of this strategy heard in Vanuatu is that private sector led growth really means "foreigner" led growth.<sup>32</sup> Vanuatu stands at the uneasy crossroads of a modern cash economy linked to global economic forces and the traditional subsistence based economy and different islands within Vanuatu are closer to one end of the spectrum than the other.

<sup>32</sup> One observer said that private sector led growth means leasing customary land to a foreigner and then getting a job cutting the grass.

With land as the foundation of the subsistence economy, concerns are beginning to emerge that the hard fought gains of independence (when all land reverted to customary ownership) are being lost through long term leases (up to 75 years) negotiated on unequal terms. This is not to argue that either direction for long term economic growth is correct but merely to point out that the ADB strategy is assisting in the modernization process (along with many other donors) and this is likely to create social strains in future. The claim that up to 80% of Efate island may already be leased (mostly to foreigners) is symptomatic of how hidden processes of modernization can suddenly accumulate and reach a point of conflict.<sup>33</sup> The rapid increase in land prices in Port Vila is a further example, reaching a point where most ni-Vanuatu cannot afford to buy property in the more desirable areas of the municipality. The increasing Chinese interest in investing in Vanuatu, whether in the retail sector, fish processing, or oil palm plantations on Santo is another example, causing considerable nervousness among ni-Vanuatu people. The declaration of a Year of the Custom Economy is a reflection of tentative attempts to rein in the rapid pace of modernization.

The environmental implications of this strategy are clear. Official neglect of environmental controls can be seen in virtually every example of private sector led growth in Vanuatu. The kind of private sector led growth occurring in the country is not emanating from some reputation sensitive, giant multinational corporation with global environmental and social responsibility guidelines and annual environmental reports to its global shareholders. It is being driven by small and medium enterprises, land speculators, individual investors, and family firms that generally operate below the radar screen of compulsory EIAs. Very few developments are required to prepare full EIAs and even where they do, there is no capacity in government to adequately review the EIAs, set up appropriate sanctions for environmental damage during implementation or subsequent operations, monitor the implementation of environmental management plans, or put in place long term monitoring systems of the cumulative impacts of multiple small developments. To put it dramatically, Vanuatu is undergoing an environmental death by a thousand cuts!

Without corresponding assistance to improve environmental governance in Vanuatu, ADB could be accused of being complicit in this rampant private sector led destruction of the environment. Obvious contrasts are being made between the environmental implications of private sector led development with the traditional subsistence economy it is supplanting. Traditional systems of natural resource management are seen as more resilient and more in tune with the natural rhythms and cycles of ecosystems (Johannes and Hickey 2004). Private sector growth is often seen as short-term exploitation by foreign interests, who can always walk away if their venture fails, with very little investment in a sustainable future for Vanuatu.

Of particular concern is the lack of strategic thinking or analysis about the environmental implications of current developments in Vanuatu. Either relying on a flawed EIA process or waiting until the damage is done to implement remedial measures is not a sustainable development process. There is an urgent need to ensure that emerging strategies for land, energy, water, agriculture, forestry etc. are closely examined through the lens of environment. Strategic environmental assessments would be a useful tool to employ, but

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<sup>33</sup> The estimate of 80% seems very high as most of the interior of the island has not been subdivided and is currently being considered for a land management project which would set aside the more vulnerable areas as a reserve.

good tools without an adequate number of environmental officials to use them is not a useful advance.

#### **D. Lessons Learned from ADB Interventions**

ADB's Pacific Strategy 2005-2009 examines the lessons from previous assistance to Pacific island countries (ADB 2004a). It stresses the importance of participation, ownership by beneficiaries and communities, and effective capacity development. The strategy document notes that too often capacity building has been oriented to the needs of projects rather than building long-term capacity of host organizations, and better diagnostic studies of institutions are needed. In particular, managing the high turnover of staff in the Pacific and more effective use of consultants were noted as key lessons. Addressing the root causes of institutional weaknesses and understanding the institutional environment are important. Based on experience in other Melanesian countries, long term commitment to a few clearly defined objectives lies behind significant impact of ADB interventions, despite the obvious challenges of such an approach in a region with so many, diverse problems.

ADB's Pacific Region Environmental Strategy 2005-2009 also examines experience and lessons learned from previous environmental projects (ADB 2004b). These lessons include:

(a) **Conflict between State and local norms** – Finding the balance between modern environmental administration and local custom and norms is extremely difficult in the Pacific region. The greatest opportunities for success are when modern environmental management processes build on, or find an accord with, traditional approaches.

(b) **Overly complex legislation** – ADB consultants tend to draft comprehensive environmental legislation, often along the lines of New Zealand's omnibus Resources Management Act. Excessively complex legislation is then held up in the parliamentary processes for many years or is too complex to be enforced by relatively weak environment agencies.

(c) **Institutional strengthening and public participation** – Adequate time and a participatory and consultative process are essential for effective capacity building. Projects should not be supported unless the institutional setting is adequate to the demands of implementation.

(d) **Monitoring systems** – Experience suggests that sustainable field monitoring is possible where the direct costs of ecological failure are high. In most cases, however, monitoring stops as soon as project funding stops.

(e) **Sustainable financing** – Experience in transforming the Marshall Islands Marine Resource Authority into a self-funding agency suggests that this could be replicated in other parts of the Pacific region. The challenge is to portray environmental agencies as revenue generating rather than a drain on national resources.

(f) **Market feasibility** – Markets and market forces must be considered during the project preparation phase and built into the project design. Technical models developed

outside the Pacific often cannot succeed when transferred to the Pacific islands as the market structure, access, and size limitations constrain what can be done.

(g) **Privatization** – The common argument that the private sector is more efficient than government does not always apply in the Pacific region. Certain environmental services like water supply and sanitation in small, scattered, or poor communities are often not well served by private sector monopolies.

(h) **Human resources capacity** – Too many environmental activities in the Pacific region have over-estimated counterpart staff skills at the country level. Constant turnover and the need for continuous training suggest that training should be targeted at teams rather than individuals.

(i) **Regional cooperation** – As many environmental issues are held in common across the Pacific region, a regional approach to their solution makes sense. However, regional agencies are often perceived as building up their own capacity rather than delivering full services to national agencies or strengthening national environmental agencies.

#### **IV. PRIORITIES FOR ACTION**

##### **A. Government's Environmental Strategy and Priorities**

Formally, the Government's medium term strategic framework<sup>34</sup> consists of the following linked elements:

- The Priorities and Action Agenda 2006–2015;
- The Comprehensive Reform Program (CRP) Matrix;
- The Government Investment Program (GIP);
- The Policies and Corporate Plans of Government Ministries/Agencies;
- Medium-term development program proposals from Ministries/Agencies for the GIP;
- The Rural Economic Development Initiative (REDI) plans;
- Aid Management and Coordination through the Aid Management Unit of the Ministry of Foreign Affairs (MFA);
- The Medium Term Expenditure Framework (MTEF) once implemented in 2007;
- Program implementation, monitoring and evaluation; and
- The Annual Development Report for Vanuatu, which will be designed in 2007 and implemented in the first quarter of 2008.

Unfortunately, the theoretical hierarchy and linkages between all these documents exists only as an ideal on paper. In reality, there is very little connection between all of these elements. In addition, although environment is widely viewed as a cross-cutting issue, none of these documents are formally reviewed through an environment lens. Environmental impacts are not assessed until the project formulation stage and even then very few projects are subjected to full EIAs.

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<sup>34</sup> As announced by the Prime Minister at a meeting with all development partners on 28 November 2006.

Vanuatu's Priorities and Action Agenda 2006-2017 identifies seven strategic priorities (i) private sector development and employment creation; (ii) macroeconomic stability and equitable growth; (iii) good governance and public sector reform; (iv) primary sector development; (natural resources and environment); (v) provision of basic services, especially in rural areas; (vi) education and human resources development; and (vii) economic infrastructure and support services (Government of Vanuatu 2006a). By lumping environmental management in with primary sector development but not mentioning environment in relation to any other sector, one could question the commitment to mainstreaming environmental management, at least from the perspective of the national economic managers.

In a report prepared for the Johannesburg World Summit on Sustainable Development (Tapisuwe 2002), participants at a preparatory workshop in Port Vila assessed the situation as follows:

“The low environmental budget plus the retardation of the environment management and conservation regulation is a clear indication that environmental issues are not our priorities. In the rural areas, natural resources depletion is ongoing for other development purposes. It indicates that this is an attitudinal problem, which must be changed.”

Furthermore, the “Government budget given to the Environment Unit and other natural resources departments such as fisheries, forestry and agriculture for sustainable natural resource management is about 1% or less. Over 50% of that is spent on staff emoluments and the rest to other administrative costs. They all have to depend on external aid.”

Has this situation changed since 2002? What kind of trigger would be needed to cause the necessary “attitudinal” change? What are the prospects, looking out over the next 5-10 years?

According to the GIP<sup>35</sup> in 2007, the Environment Unit has 8 ongoing projects and 6 planned projects (Table 16). The continued development of new projects is an essential strategy to maintain even minimal staff levels, as projects permit the recruitment of temporary project staff. The Director General, Lands indicated that recent submissions to the Public Service Commission for advertising positions for a Director and 2 additional staff (EIA Manager and Administration Officer) would not only result in creation of a Department of Environment and Conservation but also increase staffing levels to 5 by the end of 2007 (if accepted). He also reported that the Government intends to make provincial planners permanent civil servants, in an attempt to remove current political interference in their appointment (Russel Nari pers. comm.).

Vanuatu's policy on environment and conservation aims to provide an affordable framework of environmental protection and compliance within the country through the Environmental Management and Conservation Act of 2002. The Act requires environmental impact assessments (EIA) to be carried out for all development projects and programs that affect the environment before any local or national authority gives consent to developers and project proponents. Other laws that mandate EIAs are the

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<sup>35</sup> The GIP contains projects that are approved by Government to seek external financing.

Petroleum (Prospecting and Production) Act and the Forestry Act. Development projects in foreshore areas are also supposed to be subject to EIA provisions.

**Table 16 Planned and Completed Projects by the Environment Unit**

<b>Project Name</b>	<b>Status</b>	<b>Budget (Vt)</b>
Achieving environmentally sustainable economic growth through coconuts in Vanuatu	Approved by Ministerial Budget Committee (MBC)	3,140,000
Capacity building in sustainable land management	Approved by MBC	2,763,000
National compliance action plan to implement the Montreal Protocol on Substances that Deplete the Ozone Layer	Approved by MBC	1,562,665
Collect used batteries for dispatch to New Zealand	Submitted to donor	2,000,000
Promote public and private sector understanding and compliance with the Environmental Management and Conservation Act	Submitted to donor	6,400,000
Strengthening environmental education and advocacy in Vanuatu	Submitted to donor	2,241,000
Boufa landfill and sludge treatment development and management plans	Ongoing	6,810,000
Development of a national action plan for the UNCCD	Ongoing	841,840
Vanuatu national biodiversity phase 2	Ongoing	32,533,690
Facilitating community and landholder initiated conservation activities	Ongoing	70,448.537
Vanuatu strategic action program for the International Waters Project	Ongoing	19,053,187
National capacity self-assessment for global environmental management - Vanuatu	Ongoing	3,250,000
Environmental education and awareness materials	Ongoing	4,510,000
Management plan support for community-based conservation initiatives	Ongoing	2,535,000
Climate change assistance project	Completed	12,785,563
Environment posters and brochures	Completed	1,266,000
Sustainable community fishing project – Vatthe Conservation Area	Completed	769,812
National biodiversity strategy and action plan	Completed	29,256,836
Vanuatu strategic action program for international waters	Completed	4,383,893
National environment week – 2002	Completed	365,000
Waste project in Vanuatu	Completed	1,471,792
Total number of projects – 36 (including 15 abandoned projects for which donor financing was not approved)		483,751,902

Source: Ministry of Finance and Economic Management GIP (8 August 2007).

The real measure of government strategy and priorities, however, is if the budget allocations are adequate to implement the identified priorities. In the past, funding allocated to the environment “sector” has been clearly inadequate. The April 2002 preparatory workshop for Johannesburg WSSD identified the following distribution of

funds:

“Over the last 3 years, the Vanuatu Government has been operating an average annual budget of \$56 million (Financial Report 1999-2001). Its allocation between the social, economic and environmental sectors reflects the following trends:

- a. The social sector uses up to 70% with nine departments, the main consumers being the departments of education (30%), health (16%) and police (11%). The other six departments use the rest, each receiving 3–8%.
- b. The economic sector including the environment uses up to 30% between 13 departments, the main one being the department of economic and social development (72%)<sup>36</sup> and the other 12 departments sharing between 0.5%–5%.”

“The Environment Unit is only given 0.2% of the economic sector share or 0.08% of the total government annual budget (Tapisuwe 2002).” The 2007 budget for the Environment Unit is Vt 7 million (approx. \$60,000), slightly more than the cost of one Minister’s new car. The lack of adequate government resources in the annual budget has made it imperative for the Environment Unit to resort to other sources of funding, always cognizant that this may result in national priority actions receiving inadequate attention.

As the Environment Unit is part of a multifunctional ministry and is not a ministry in its own right with a Cabinet minister responsible only for environmental issues, is reflective of the low priority placed on environmental issues in Vanuatu. The current location of the Environment Unit in the Ministry of Lands and Natural Resources (after being shifted from one ministry to another) is not the most suitable arrangement because land development is a prime development activity in Vanuatu. Conflicts of interest within the Ministry have occurred and inevitably obstruct some environmental responsibilities.

The expenditure on environment in other government agencies is almost impossible to extract as environmental components may be attached to projects that are primarily for productive purposes. One attempt to identify the environment-related projects from the Department of Internal Affairs is shown in Table 17.

**Table 17 Environment-Related Projects in the Department of Internal Affairs**

<b>Project Name</b>	<b>Status</b>	<b>Amount (Vt)</b>
Strengthening community resilience project	Funding secured	153,625
Establishment of community nurseries in southwest Malekula and northwest Malekula	Funding secured	230,096
Lolovoli sustainable energy project	Funding secured	550,000
Mini coconut oil mill project	Project approved by MBC	3,820,000
Demonstration of solar stills to desalinate seawater (Phase 2)	Project approved by MBC	3,264,040
Town planning institutional strengthening and capacity building	Submitted to donor	4,000,000
Luganville Municipal Council garbage truck	Ongoing	3,600,000
World Heritage Convention preparatory assistance	Ongoing	1,875,385

Source: Government Investment Program (8 August 2007).

<sup>36</sup> Now renamed as Department of Economic and Sector Planning.



## **B. Addressing the Priorities: A Road Map for Environmental Management**

Based on the findings above, a medium-term road map to improve environmental management in Vanuatu is needed. This road map is intended as a generalized version of a draft medium term action plan that should be undertaken in Vanuatu. It is not expected that ADB would be able to assist with implementation of all aspects covered by the road map, but it might provide some insights for the Government and other development partners.

The main elements of the road map are (i) environment summit; (ii) institutional reform; (iii) sustainable financing; (iv) partnership with civil society and the private sector; (v) strategic environmental assessment; and (vi) promotion of the environment industry.

### **1. Environment Summit**

Over the past few years Vanuatu has had numerous summits, the most recent being the National Land Summit in 2006. While not wishing for the notion of a “summit” to be degraded by over-use, the neglect of environmental issues by the government and public alike appears to be so critical that only a major event like an Environment Summit is likely to focus attention on the current weaknesses and generate a real commitment to reform. The idea of a national environment summit was first raised in the independent review of the CRP in 2006 (Government of Vanuatu 2006c).

The objective of the summit would be to focus government and other stakeholder attention on the excessive reliance on regional and donor-funded environmental projects to address environmental issues in Vanuatu, rather than a country-driven process of prioritizing and providing adequate human and financial resources for routine environmental management. The regional and donor funded programs should be seen as supplementing Vanuatu’s environmental management processes, rather than dictating the priorities and moving attention to some of the more peripheral issues (such as mitigation of climate change). Unless Vanuatu has adequate resources for careful review and monitoring of EIAs, collection of basic environmental monitoring data, and effective regulatory control over those degrading the environment on a daily basis, then the longer term issues like bio-prospecting will have little meaning.

### **2. Institutional Reform**

(a) **National Council on Sustainable Development** – At various times proposals for establishment of a National Council on Sustainable Development have been entertained (Government of Vanuatu 2007a). One of the expected outcomes of the proposed summit would be a renewed commitment to create such a high level body, chaired by the Prime Minister, President, or Paramount Chief, and with broad representation of Vanuatu society as its members. The main objective of the Council would be to ensure that Vanuatu’s commitments to Agenda 21, the MDGs and the Johannesburg Plan of Implementation are acted on and to regularly report on actions to the UN Commission on Sustainable Development and to the people of Vanuatu. A small secretariat would need to be created to service the National Council on Sustainable Development, preferably located in the office of the chair of the Council. Rather than create a completely new organization, it may be possible to transform one of the existing consultative forums, such as the Lands Steering Committee into a broader National Council on Sustainable Development.

(b) **Department of Environment and Conservation** – Despite the provisions of the Environmental Management and Conservation Act 2002 to create a Department of Environment and Conservation, the existing Environment Unit has been allowed to run down to a level where it is virtually defunct. Numerous reports have stressed the need to create an effective environmental department but in a constrained public service environment following the right-sizing exercises under CRP and the recent salary increases awarded to civil servants it is understood that moves in this direction are likely to be deferred as long as possible. As the EU is considering making the creation of an environmental department in Vanuatu part of its policy dialogue and performance benchmarks for direct budget support under EDF 10, there may be increased pressure to address this issue. One possible avenue for the Government would be to request the EU to temporarily second staff from the European Environment Agency (or national environment departments) to a nascent Department of Environment and Conservation to provide on-the-job training and to act in in-line positions until local staff capacity is adequate to the task. Through its “governance for growth” program, AusAID has provided similar in-line support to the economic management departments in Vanuatu, so a matching approach from the EU or NZAID in the “environment for growth” area would seem feasible.

(c) **Mainstreaming environment into sector agencies** – Even under current proposals to create a Department of Environment and Conservation there would be a maximum of 5 staff, clearly inadequate to deal with the complex environmental conditions across dozens of islands. While other key sectoral agencies have shortages of staff too, it may be possible to add some environmental responsibilities onto existing positions. Capacity building efforts could then draw on a much wider pool of government officials, overcoming the normal constraints of high rates of staff turnover. Environment officers in the sectoral agencies would be expected to examine the environmental implications of sector strategies and plans, prepare preliminary environment assessments for sectoral projects, collect environmental data relevant to sector activities, and provide the primary point of liaison with the Department of Environment and Conservation (or Environment Unit if departmental status remains elusive). The MCC plan to locate an environment officer in the Public Works Department is a good model to follow.

(d) **Cross-sectoral coordination** – As in many developing countries, accessing information across sectors is difficult in Vanuatu, as information flows within ministries are designed to be vertical so that all critical decisions are taken at the highest level. As environmental concerns are clearly cross-cutting and cross-sectoral, it is a challenge to ensure that information routinely flows across government agencies at the appropriate levels and appropriate stages in the decision making process. Too often, by the time a project proposal reaches the Environment Unit for their input, a final decision has been made already by a Minister or senior official in the sectoral agency. It may be necessary to examine the enabling legislation for each sector and approval bodies like VIPA to ensure that it is mandatory for information to be provided to the Environment Unit (or department) at an early stage of decision making, while there is still a realistic chance to influence the outcome or project design. A case study approach examining how environmental aspects of major projects (such as the planned oil palm development) were treated and how and when relevant information flowed to the Environment Unit would help to highlight current deficiencies.

### 3. Sustainable Financing

The Vanuatu Government has relied heavily on foreign funding for its environmental functions and allowed the nationally funded administration to run down to an alarming level. One way to counteract this trend is to demonstrate that self-financing is not only possible but also that Vanuatu has been missing out on several potential sources of funding, including some of the avenues listed below. It is suggested that ADB consider a TA on sustainable financing to examine the feasibility of these and other options in Vanuatu.

(a) **Environmental fees and charges** – Vanuatu does not have an established system of environmental fees and charges and is possibly foregoing some of the revenues that other countries have been raising for many years. For example, environmental performance bonds for land developers and forest concessionaires, lodgment fees for EIAs, charges for annual inspections of manufacturing facilities, discharge fees for discharge of treated water to watercourses, fees for accepting used batteries or e-waste for recycling, or fees for registration or certification of environmental industries could be considered.

(b) **Payment for ecosystem services** – The sectors most dependent on a pristine environment, such as tourism, currently obtain free ecosystem services from a resource that belongs to all Vanuatu people. Such sectors should be prepared to pay for these services, provided that they are assured that the fees they pay are directly used to maintain or improve the environment. Some examples include (i) payment of a portion of the revenue stream from hydropower stations to cover the cost of watershed management and to compensate upstream landholders from undertaking logging or other land uses that would cause problems for the power station; (ii) payment of a volumetrically determined fee for bottled mineral water that would be used to compensate landowners and cover the cost of watershed management and mandatory water quality monitoring; (iii) payment of an environmental “bed tax” for all tourists based on the number of nights occupation in hotels or guesthouses (typically \$3-5 per night), with an assurance that the tax is used for keeping the environment clean; (iv) an environmental “docking fee” for all yachtsmen and cruise boat tourists, dedicated to monitoring and management of the harbor environment; (v) an aviation environment levy to be added to all airline tickets, partly to offset carbon emissions; and (vi) a small portion of government tax on fossil fuel levied to fund additional investment in renewable energy and to subsidize producers of high quality coconut oil, with environmental benefits from toxic emissions of diesel fuel and reduced carbon emissions.

(c) **Eco-currency** – Widely used in Japan, eco-currencies allow retailers and utilities to contribute to improved environmental management in their community, while offering a form of employment to unemployed youth. Generally coordinated by an environmental NGO and the Chamber of Commerce, volunteers are encouraged to work on environmental activities like litter drives, planting mangroves, or cleaning beach areas and get paid in the form of a voucher or eco-currency. They can then redeem these vouchers as partial payment for retail items or to purchase books or other items for the local school or church. Generally the retailers ensure that the price paid covers the base cost of these items and the vouchers are equivalent in value to the mark-up. Retailers are happy to participate because their turnover increases and unemployed youths are diverted from hanging around shop fronts and/or committing crime.

(d) **Access to GEF funding** – The new resource allocation framework for the climate change and biodiversity areas of GEF provides Vanuatu with the opportunity to access up to \$6.6 million from the Trust Fund over the next 3 years. The Least Developed Countries Fund for climate change is designed to implement the projects identified in the national adaptation plan of action and the resource allocation framework does not apply to this fund. To date, 15 donors have pledged \$120 million to this fund. In addition, the Clean Development Mechanism associated with the Kyoto Protocol provides for 2% of the carbon emission reduction (CER) credits to be deposited in a climate change adaptation fund, to be operative over the period 2008-2012. To date, about 1.5 million CERs have been deposited in the fund, but this is projected to increase to 44 million CERs by 2012, estimated at \$160-950 million (depending on the process of monetization) (Mueller 2007). Looking further out, proposals for an international air travel adaptation levy (\$4-10 billion per year) and carbon emission credits for “avoided deforestation”<sup>37</sup> suggest that climate change funding is potentially a significant source of funding for all Pacific island countries and Vanuatu should be gearing up to take maximum advantage of these opportunities.<sup>38</sup>

In 2003, GEF was designated a financial mechanism for the UN Convention to Combat Desertification and over the next three years GEF expects to invest more than \$250 million in this focal area. Other focal areas of interest to Vanuatu include international waters and POPs, although these are possibly more likely to be developed under regional projects.

#### **4. Partnership with Civil Society and the Private Sector**

(a) **Coalition for advocacy on environment** – VANGO indicated that it has created several coalitions of NGOs around specific themes like the economy or gender and is open to the idea of creating a coalition for advocacy on environment. A small amount of seed funding from one or more donors would help to kick start the coalition. A combined civil society approach on the environment is likely to put more pressure on the Government and the private sector, than individual campaigns around a narrow theme (like the “no plastic bags” campaign). VANGO is expected to coordinate the small grants program of UNDP/NZAID, so seed funding for elements of the coalition could be sourced from this funding envelope.

(b) **Public-private partnerships** – The private sector in Vanuatu is not very active in the environmental arena and there are few companies that perceive the advantages of a strong environmental profile (eco-tourism operators are a possible exception). In similar circumstances elsewhere, Government has had to take the initiative to consult with the private sector, to make the owners and managers aware of emerging environmental problems, to stress the regulatory and compliance mechanisms available to the Government, and to suggest that voluntary public-private partnerships in finding common solutions are the preferred option.

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<sup>37</sup> The World Bank has support from several countries to establish such a fund and has already indicated that it is prepared to commit around \$300 million, provided that avoided deforestation is accepted for carbon emission reduction credits at the forthcoming Conference of the Parties in Bali, Indonesia in late 2007.

<sup>38</sup> The current GEF focal point for Vanuatu is the vacant position of the Head of the Environment Unit. Consideration should be given to shifting the focal point to the Ministry of Finance and Economic Management, where greater attention would be paid to the potential revenue aspects, rather than the technical issues.

(c) **Community conservation partnerships** – Vanuatu now has considerable experience in establishing community conservation areas, with possibly as many as 100 sites already operating under some form of community-based management. Taboos and other traditional resource management techniques are being documented by the Vanuatu Cultural Center (VCC) and the re-empowerment of chiefs and customary land management is continuing. The dilemma for Vanuatu is how to ensure that unique ecosystems or habitats are protected in perpetuity in the absence of State control over land and near-shore waters. One avenue suggested by the VCC is to give greater formal power to the Malvatamauri (Council of Chiefs) to examine leases or other deals entered into by local chiefs, to ensure that the arrangement is in the long term national interest. Simply excising areas under compulsory acquisition powers and declaring them national parks or public lands would seem to be inadvisable, as are attempts to induce voluntary handing over of land by multiple landowner groups. A national protected area strategy needs to be developed that will outline how the various pilot community conservation areas can be scaled up to ensure that a nationwide system of representative ecosystems is formally identified for conservation and the rules of community management (and continued access to resources, where necessary) are collectively agreed with customary landowners.

## 5. Strategic Environmental Assessment

Vanuatu has numerous strategy and planning documents from the PAA to physical planning areas. There is also a plethora of laws and regulations and statements of government policy. Unfortunately there is no requirement to assess the economic, social, or environmental impacts of these policies, plans and programs, so that environmental implications are only considered at the project level (and for very few projects anyway). A formal requirement to consider the environmental impacts of these “upstream” documents might help to ensure that environmentally unsound proposals never see the light of day.

(a) **Regulatory impact assessment** – The United Kingdom has implemented a system of regulatory impact assessment whereby all new laws or regulation are required to have an assessment of the economic, social and environmental implications completed before the draft bill or draft regulation is submitted to Parliament. The responsible Minister has to sign off that he/she is satisfied that the implications are acceptable. Ministerial accountability of a similar nature could be implemented in Vanuatu.

(b) **SEA of policies, plans and programs** – In many other countries, SEA has been introduced to assess the environmental implications of all policies, plans and programs. As a starting point, it is suggested that all sectoral strategies in Vanuatu be required to have a section on the environmental implications of the strategy and how these implications can be best addressed.

## 6. Promotion of Environment Industry

Countries like Costa Rica and Bhutan have taken maximum advantage of their natural resource endowment and strongly promoted their near pristine environments. Eco-tourism and bio-prospecting are two spin-off industries that have benefited from this national marketing. Vanuatu has an emerging “organic” agriculture sector that could offer distinctive advantages in its free trade relationships with neighboring states,

although additional work is needed on certification and marketing. A study of Vanuatu's comparative advantages in setting up environmental industries would help to underpin a government assistance strategy to promote (and provide seed funding for) a range of possible environmental industries. The new World Bank/IFC project on supporting suppliers of renewable energy equipment could provide a model for promotion of other similar industries.

### **C. External Assistance in the Pipeline**

Official development assistance to Vanuatu exceeds \$50 million per year. The main donors are Australia, France, European Union (EU), Italy, Japan, New Zealand, People's Republic of China (PRC), the United States Millennium Challenge Corporation (MCC), Food and Agriculture Organization (FAO) and the Global Environment Facility (GEF) (UNDP is the main implementing agency).

Australia is the largest aid donor to Vanuatu. Over the past decade, Australia has provided about Vt 12 billion (A\$150 million) worth of assistance in health, education, economic governance, public sector reform, law and justice, rural development and natural resources. For 2007-2008, this assistance has been increased to A\$34 million (plus about A\$10 million from regional programs and contributions to multilateral institutions). The current Australian aid strategy has three objectives (i) improved governance; (ii) raising productive capacity; and (iii) improving service delivery (AusAID 2005).

NZAID has prepared its development program strategy for 2006-2010, focusing on education, governance and economic development. Additional assistance will be provided to the water sector, and health (through regional programs). Over the past few years, NZAID has also supported the REDI plans to ensure that funds reach the provincial level. NZAID has undertaken to coordinate the "heavily donor dependent water resources sector"<sup>39</sup> (NZAID 2006). NZAID has also agreed to co-finance the GEF small grants program in Vanuatu (matching the US\$250,000 per year with NZ\$250,000 per year), under coordination provided by the Vanuatu Association of Non-Government Organizations<sup>40</sup> (VANGO). NZAID hopes to increase its bilateral aid to Vt 1.2 billion (NZ\$16.5 million) in 2007/08, more than doubling the assistance levels in 2005 (NZAID 2006).

The EU has prepared an indicative program for its tenth economic development framework (EDF 10) for Vanuatu in accordance with the Cotonou Agreement. The main fund (A envelope) is estimated at Euro 21.6 million, mostly for support to economic growth and general budget support, while a smaller B envelope (Euro 1.6 million) is intended to cover unforeseen circumstances, such as emergency assistance. In addition to the national allocation, Vanuatu will also participate in the regional indicative program, contingent on signing the economic partnership agreement before the end of 2007. Under the best case scenario, funding of about Euro 95 million would become available regionally, covering trade in goods, fisheries and agriculture, and services. Part of the policy matrix being discussed with the Government of Vanuatu is to accelerate the creation of a properly funded and resourced Department of Environment and

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<sup>39</sup> NZAID is assisting with preparation of Vanuatu's national water resources strategy, expected to be completed by the end of 2007.

<sup>40</sup> VANGO comprises 49 registered NGO members and maintains a register of NGOs in Vanuatu.

Conservation. Several European countries, notably France, Italy, and the United Kingdom provide assistance to Vanuatu on a bilateral basis, separate from the EU assistance program. France provides assistance through the Agence Francaise Developpement (AFD) as well as through the French Embassy in Vanuatu.

UNDP assistance to Vanuatu focuses on (i) strengthening governance, participation and human rights; (ii) more equitable access to quality services and products; and (iii) improved resource management and environmental sustainability. Much of the GEF funding for Vanuatu is sourced through UNDP, including (i) the National Programme for Adaptation to Climate Change (\$200,000); (ii) Facilitating and Strengthening Local Resource Management Initiatives of Traditional Landholders and their Communities to Achieve Biodiversity Conservation Objectives (\$745,910 from GEF, \$709,934 from co-funding); and (iii) Second National Communication to the UN Framework Convention on Climate Change (\$15,000).

Ongoing external environmental assistance includes the following projects:

**(a) Protected area management**

- Securing Erromango Protected Area (NZAID)
- Maskelynes Mangrove Management Plan (SPREP)
- Vanuatu National Biodiversity, Phase 2 (GEF)
- Landholders Conservation Initiatives Project (UNDP/GEF)

**(b) Natural disaster management**

- Vulcanology and Seismology Risk Prevention (France)
- Observers and Forecasters (WMO)

**(c) Urban environmental management**

- Urban Squatter Settlement Survey (ESCAP/PIFS)
- Boufa Landfill Project (JICA)

**(d) Climate change**

- National Climate Change Capacity-Building Project (SPREP)
- Sea Level & Climate Monitoring—Regional (AusAID)
- Pacific Adaptation for Climate Change (AusAID)
- Second National Communication to UNFCCC (UNDP)
- National Adaptation Plan of Action (UNDP)
- National Capacity Self Assessment (GEF/UNDP)

**(e) Land management and soil conservation**

- Vanuatu Geodetic Control (PRC)
- World Geodetic System 84 (NZ cash grant)
- Nonda Community Rural Development—Natural Resources (NZ cash grant)
- Vanuatu Land Use Planning Project (AusAID)
- Aneityum Soil Erosion Control Project (NZ Government)

**(f) Forest resource management**

- Restocking of Vanuatu Natural Forest Areas (ITTO)
- Development of the National Forest Sector Plan (ITTO)
- Capacity Building for Forest Extension (AusAID)
- Forest Operator Accreditation Scheme Assessment (AusAID)
- Landowner Extension and Awareness—Reforestation (EU)
- Restocking of Vanuatu Natural Forest Areas (ITTO)
- South Pacific Regional Initiative on Forest Genetic Resources (AusAID)

**(g) Public environmental awareness**

- School Environment Newsletter (SPREP)

**(h) Coastal zone management**

- Community-Based Fishing Development Project (FFA)
- Seaweed (*Eucheuma cottonii*) farming project (FFA)

**(i) Chemicals management**

- Pacific Organic Pollutants Project—Regional (AusAID)
- Persistent Organic Pollutants Project (GEF/UNDP)

**(j) Renewable energy**

- Solar Rural Photovoltaic Project (AFD)
- Solar Home System (JAP/Government of Vanuatu)
- Rural Energy Development (Government of Vanuatu/AFD)

**(k) Water and sanitation**

- Strategic Water Resources Management Plan (2005-2008) (NZAID)
- Rural Sanitation Project (UN)

**D. Implications for ADB's Interventions**

**1. Overview**

From the foregoing assessment, there is abundant need for increased assistance in the environmental field in Vanuatu. Restrictions on borrowing, coupled with a strategy narrowly focused on private sector led growth, would suggest, however, that ADB interventions on environment, at least in the short term, are severely limited.

**2. GEF Funding**

As a *de facto* implementing agency for GEF, ADB is well placed to access additional resources for environmental interventions in Vanuatu. Of course, with its recently introduced country allocations policy (resource allocation framework), GEF funding for Vanuatu is also limited. Nevertheless, under GEF-4, the Pacific Alliance for Sustainability intends to put greater stress on country-driven projects rather than



regional projects and greater attention to investments rather than capacity building. Approximately \$100 million will be available to Pacific islands countries in the focal areas of biodiversity and climate change. The current lack of a full-time dedicated GEF focal point in the Government is also a constraint. However, the emergence of new funding windows such as the Climate Change Adaptation Fund and the Least Developed Countries Fund suggest that ADB assistance in the area of climate change adaptation may have the greatest impact. ADB has also been asked to take a lead role in the multi-country Coral Triangle Initiative started by the World Wide Fund for Nature and it is possible that Vanuatu may be included.

### **3. Technical Assistance**

ADB has limited capacity to support further projects through its TA funds. It is suggested that one advisory TA project per year (see Annex 4) dealing with the environmental consequences of the private sector led growth strategy should be considered as follows:

(a) 2008 – ADTA on Climate Change Adaptation in Vanuatu (\$300,000) – the objective of this TA is to prepare projects for the emerging funding opportunities starting in 2008.<sup>41</sup>

(b) 2009 – Advisory TA (ADTA) on Sustainable Financing of Environment in Vanuatu (\$200,000) – the objective of this TA is to make the environmental administration in Vanuatu (whatever form it may take in future) self-financing.

(c) 2010 – ADTA on Strategic Environmental Assessment in Vanuatu (\$200,000) – the objective of this TA is to put in place a formal system of examining policies, plans and programs for their environmental implications, prior to their approval.

### **E. Implications for the Government, Communities and People of Vanuatu**

While the clear focus of ADB interventions is a sensible response to the urgent need for private sector led growth, the main environmental implication of the CSPU is one of omission rather than commission. One is immediately struck by the realization that the Environment Unit, the main body responsible for environmental management in Vanuatu, is essentially defunct.<sup>42</sup> Despite passage of the Environmental Management and Conservation Act in 2002, with ADB assistance, there has been no effective follow up action on several key provisions of the Act, such as creation of a Department of Environment and Conservation.

If the private sector led growth strategy is as successful as it currently appears to be, then one can expect that increasing evidence of environmental damage will emerge over the next few years. ADB is often criticized in Vanuatu for its role in formulating the CRP, for promoting privatization, for down-sizing the civil service, and for undermining the resilience of customary landowners. If private sector led growth results in widespread environmental damage, then ADB will once again be singled out for taking a one-dimensional approach to development. Timely preventative intervention in addressing

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<sup>41</sup> ADB is currently preparing a \$3.6 million RETA on Promoting Climate Change Adaptation in the Asia-Pacific Region, co-financed by the UK, which could provide part or all of the funding for this proposed TA.

<sup>42</sup> At the time of preparing this CEA, there was only one staff (secretarial) in the Environment Unit.

plausible environmental concerns before they occur will have significant benefits for the Government, communities and people of Vanuatu.

## **V. CONCLUSIONS AND RECOMMENDATIONS**

### **A. Conclusions**

The Government of Vanuatu has demonstrated from its actions over the past few years that it has been generally comfortable with most funding for its environmental governance coming from bilateral or multilateral sources. Unfortunately this means that the national priority environmental administration needs are put on hold while the regional and global priorities receive the bulk of the funding. Routine environmental administration tasks such as reviewing sectoral plans and strategies, inspecting development sites, monitoring the implementation of environmental management plans contained in EIAs, and collecting environmental data are not possible due to staff shortages, while reporting to the COPs for the range of multilateral environment agreements signed by Vanuatu or contributing to the GEF-funded regional projects is given higher priority by the few staff available. There is a willingness within Government to redress this imbalance, although exactly how to move forward is not yet clear. The proposal to conduct an environmental summit or national forum is widely accepted as the best way to clarify the strategy to develop an environmental governance capacity that will meet current and future needs.

As ADB is not likely to provide loans to Vanuatu over the next 3-5 years and there is limited TA funding available, emphasis should be on assisting Vanuatu to access GEF (and UNFCCC Adaptation Fund) funding, specifically in the area of climate change adaptation. The best way to do this would through a small TA in 2008 focused on accessing global funds to implement the national adaptation program of action. This would provide a quick start to a renewed national effort, although the NACCC is coordinated by the Vanuatu Meteorological Service and this would not necessarily directly assist the environmental administration. This would need to be followed up with another TA in 2009 to focus on sustainable financing of the Environment Unit (or Department), with an objective to convince the Government that enhanced environmental administration is not a burden on government but can actually be self-financing. Once the Government is convinced that it can actually afford a significantly larger Department of Environment and Conservation and appoints a reasonable number of staff, then the focus should shift to improving the tools available and the staff capacity to ensure that some of the more routine functions of environmental governance are implemented. Of greatest priority is the capacity to make sure that other sector strategies and plans are environmentally sound. Prevention of environmental damage is always preferable to trying to repair the damage after it is done.

While it could be argued that the environmental agenda is not covered by ADB's current strategic priority focused on private sector led growth, the reality is that it is the success of the private sector that demands increased attention to environmental administration. If Vanuatu remained predominantly in a subsistence production, traditional mode of life, then increased attention to environmental management may not be so urgent. However, ADB runs the risk of being seen responsible not only for private sector growth being viewed as "foreigner" led growth, but also responsible for the environmental degradation associated with that growth.

## **B. Recommendations**

The following recommendations, contributed to by a participatory workshop (Annex 1) during the preparation of the CEA are directed at all stakeholders interested in improved environmental governance in Vanuatu and not only the ADB.

### **1. Immediate Priorities**

Conduct an environment summit or national forum to map out a revitalized approach to environmental governance in Vanuatu. Complete the national capacity self-assessment and use this as one of the key inputs to the proposed environmental summit or national forum.

Proceed with creation of the Department of Environment and Conservation as specified in the Environmental Management and Conservation Act 2002. Examine alternative approaches to make environmental administration in Vanuatu essentially self-financing, so that Government has no fiscal management excuse for maintaining sub-optimal staffing and funding. Fully implement the priorities identified in the “environment and disaster management” section of the PAA. Provide the necessary funding for implementation of the disaster prevention and disaster management priority actions included in the national action plan 2008-2010.

Prepare for the advent of significant funding for climate change adaptation once the first commitment period of the Kyoto Protocol commences in 2008. Small island developing states will be given preferential treatment for access to these funds.

Consider amending the duty statements of one or more existing staff in key sectoral agencies (agriculture, forestry, fisheries, public works, health, education, trade etc.) to make them responsible for environmental issues associated with their sector, including environmental input to sector strategies and plans, preliminary environmental assessments, and environmental monitoring, among others.

Transfer the GEF focal point for Vanuatu from the Ministry of Lands and Natural Resources to the Ministry of Finance and Economic Management.

### **2. Medium Term Priorities**

Introduce SEA as a strategic planning tool to ensure that the environmental implications of policies, plans and programs are considered before they are translated into specific projects. Prepare a national sustainable tourism strategy incorporating strategic environmental assessment.

Examine whether one of the existing national high level committees could be converted into a National Council for Sustainable Development and provide appropriate enabling regulations. After a few years of operating as a Department of Environment and Conservation, expand the department into a full Ministry of Environment.

Amend the current Strata Titles Act to ensure that it is no longer used for subdivision of land. Undertake a national inventory of soil degradation, including coastal erosion, to identify priority areas for soil conservation. Amend the VIPA Act to close loopholes and

strengthen capacity within VIPA to provide potential investors with accurate advice on how environmental issues should be handled in Vanuatu.

Formulate government policy to encourage growth of the environment industry in Vanuatu and promote more widely existing industries such as organic agriculture and eco-tourism.

Continue the process of documenting informal community conservation areas and compile instances of best practices and lessons learned for scaling up to nationwide implementation. Increase the role of the churches and the National Council of Women in facilitating community input to environmental decision making.

Complete the process of drafting environmental standards for Vanuatu and have these incorporated into national legislation. Pay greater attention to information clearinghouses, access to information, and dissemination of environmental information in local languages and in forms that draw from and build on indigenous knowledge and customary practices.

Finalize and implement a national oil spill contingency plan and ensure that VMA has the necessary control equipment available. As new works are undertaken at the nation's ports include pump out and treatment facilities for ships' wastes, especially for cruise ships. Consider imposition of an environmental fee for cruise ship tourists visiting Vanuatu, with the funds earmarked for management of coastal waters.

Harmonize the key national planning documents (PAA, CRP matrix, GIP, sector strategies, corporate plans, REDI, and physical planning area plans) and ensure that environment is treated as a cross-cutting issue in all plans. In future revisions of the PAA, set concrete goals and targets and indicators to measure progress towards achievement of those targets, including environmental performance indicators.

Increase the national early warning system for natural disasters to 24 hour operations and ensure that contact points on the outer islands remain contactable during an emergency even if power supplies fail.

Provide a parliamentarian capacity building program on basic environmental issues and consider providing a technically competent political advisor to the Minister responsible for the environment. Consider effective ways to minimize the powers of Ministers to enter into agreements with foreign investors without full departmental review and environmental assessment. Request an environmental research institute to undertake case studies of controversial project decisions where Vanuatu's environmental safeguards were either ignored or easily sidelined, with a view to strengthening current legislation and operating procedures.

It is expected that list of priority actions would be added to by the proposed environmental summit or national forum, which should be held either towards the end of 2007 or in early 2008.

## Annexes

### Annex 1

### Indicators for Monitoring Environmental Performance

**Table 1 Progress toward the Millennium Development Goals and Targets**

Goals and Targets	1990	1995	Latest Data	Year
<b>Goal 1: Eradicate Extreme Poverty and Hunger</b>				
Target 1: Halve between 1990 and 2015, the proportion of people whose income is less than \$1 per day				
o Proportion of population below \$1/day (PPP values, %)	--	--	26.0	1998
o Poverty gap ratio (%)	--	--	30.5	1998
o Share of poorest quintile in national consumption (%)	--	--	2.1	1998
Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger				
o Prevalence of child malnutrition (% of children under 5)	19.7 (1983)	12.1 (1996)	23.0	1999
o Proportion of population below minimum level of dietary energy consumption (%)	--	--	--	
<b>Goal 2: Achieve Universal Primary Education</b>				
Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling				
o Net enrollment ratio in primary education (%)	70.6	89.8 (1998/99)	93.2	2001/02
o Proportion of pupils starting Grade 1 who reach Grade 5	90.0 (1991/92)	101.1 (1998/99)	95.1	2001/02
o Literacy rate of 15-24 year olds (%)	34.0 (1989)	--	90.0	1999
<b>Goal 3: Promote Gender Equality and Empower Women</b>				
Target 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and to all levels of education no later than 2015.				
o Ratio of girls to boys in: (%)				
Primary education	98.0	96.0 (1998)	99.0	2001/02
Secondary education	79.0	83.0 (1998)	103.0	2001/02
Tertiary education (USP enrollments)	--	40.0 (1995)	60.0	2003
o Ratio of young literate females to males (% of age group 15-24)	--	--	99.5	1999
o Share of women in wage employment in the non-agricultural sector	23.2 (1989)	--	40.3	1999
o Proportion of seats held by women in national parliament	4.3	--	3.8	2005
<b>Goal 4: Reduce Child Mortality</b>				
Target 5: Reduce by two-thirds, between 1990 and 2015, the under-5 mortality rate				
o Under-5 mortality rate (per 1,000 live births)	70.0	56.0	38.0	2003
o Infant mortality rate (per 1,000 live births)	52.0	43.0	31.0	2003
o Proportion of 1 year old children immunized against measles	66.0	60.0	48.0	2003
<b>Goal 5: Improve Maternal Health</b>				
Target 6: Reduce, by three quarters, between 1990 and 2015, the maternal mortality rate.				

<b>Goals and Targets</b>	<b>1990</b>	<b>1995</b>	<b>Latest Data</b>	<b>Year</b>
o Maternal mortality rate (per 100,000 live births)	68.0 (1993)	89.1	130.0	2000
o Births attended by skilled health staff (% of live births)	--	89.1	87.0	2003
<b>Goal 6: Combat HIV/AIDS, Malaria and Other Diseases</b>				
Target 7: Have halted by 2015, and begun to reverse, the spread of HIV/AIDS				
o HIV prevalence rate among adults (15-49)	--	--	0.1	2000
o Contraceptive prevalence rate (% of women aged 15-49)	15.0 (1991)	19.0 (1997)	15.0	2001
o Number of children orphaned by HIV/AIDS	--	--	--	
Target 8: Have halted by 2015, and begun to reverse, the incidence of malaria and other major diseases.				
o Malaria				
Prevalence rate (per 100,000 people)	8,471 (1992)	--	6,930	2002
Death rate (per 100,000 people)	16.4 (1992)	--	2.0	2002
o Proportion of population in malaria risk areas using effective malaria prevention and treatment measures	--	--	13.0	2002
o Tuberculosis				
Prevalence rate (per 100,000 people)	95.9	103.4 (1997)	71.0	2003
Death rate (per 100,000 people)	30.0	3.0 (1994)	8.0	2003
<b>Goal 7: Ensure Environmental Sustainability</b>				
Target 9: Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources.				
o Forest area (% of total land area)	36.2	--	36.7	2000
o Nationally protected areas (% of total land area)	--	0.0	0.0	2004
o GDP per unit of energy use (PPP \$ per kg oil equivalent)	--	--	--	
o Carbon dioxide emissions (per capita metric tons)	0.5	0.4	0.4	2002
Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water.				
o Access to an improved water source (% of population)				
Total	75.8 (1989)	75.3 (1999)	60.0	2002
Urban	96.3 (1989)	90.5 (1999)	85.0	2002
Rural	70.9 (1989)	70.8 (1999)	52.0	2002
Target 11: By 2020, achieve a significant improvement in the lives of at least 100 million slum dwellers.				
o Access to improved sanitation (% of population)				
Total	89.7 (1989)	95.2 (1999)	100.0	2000
Urban	97.0 (1989)	96.9 (1999)	100.0	2000
Rural	87.9 (1989)	94.7 (1999)	100.0	2000
o Access to secure tenure (slum population as % of urban population [secure tenure index])	37.0	--	37.0	2001

Sources: ADB (2006) Country Strategy and Program Update 2006–2009.

**Table 2 Indicators Included in Environmental Vulnerability Index**

<b>Indicator Number</b>	<b>Indicator</b>	<b>Status in Vanuatu</b>
3	Dry Periods	Precipitation data for 1996-2000
4	Wet Periods	Precipitation data for 1996-2000
5	Heat Spells	Heat spells (5°C higher than average) for 1996-2000
6	Cold Spells	Cold spells (5°C lower than average) for 1996-2000
7	Volcanoes with potential for eruption (VEI>4)	Data provided for 1997
8	Earthquakes	Data provided for 1994-1999
9	Tsunamis	Data provided for 1995-1999
10	Land Area	Data provided by EVI team
11	Fragmentation – ratio of shoreline to land area	Incomplete information
13	Relief	Data provided by Land Use Planning Office
15	Coastal vulnerability	Information provided for 1999
16	Endemic species	Data provided
20	Endangered species	Information provided for 1999, data collection incomplete
21	Species Extinctions	Information provided for 1999
22	Natural Vegetation	Information provided but data are incomplete
23	Intensive Farming	Information provided by Agriculture Dept.
24	Fisheries Over-exploited	Fish stock data provided for 1995-1999
25	Coastal settlements	Recent information provided
26	Population Density	Data provided for 1998
27	Population Growth	Population growth rate provided for 1994-1998
28	Loss of Natural Cover	Information provided for 1995-1999
29	Tourists	Information provided for 1994-1998
30	Wastewater	Information provided by UNELCO but incomplete
31	Production Wastes	Information for 1989-1998 provided by Port Vila Municipality
32	Waste Treatment	Information provided for 1989-1998
33	Oil Spills	Information provided for 1994-1998
34	Toxic Industries	Information provided for 1999
35	Vehicles	Information provided for 1995
37	Fertilizers	Information provided for 1994-1998
38	Pesticides	Information provided for 1994-1998
39	Fisheries Stocks	Information on new fisheries stocks provided for 1996-2000
40	Land Degradation	Information provided for 1999
41	Water	Information on water resources provided for 1999
44	Terrestrial Reserves	Information on area set aside for reserves was provided
45	Marine Reserves	Information provided for 1999
46	War (or civil strife)	Information provided for 1999
47	Legislation	Information on environmental legislation and regulations provided for 1999
	1, 2, 14, 17, 18, 19, 24, 36, 42, 43, 48-54	Not provided

Source: Pratt and Mitchell (2003).

## Key Environmental Institutions in the Country

### 1. List of Environmental Related Laws and Policies

#### Constitution

Constitution of the Republic of Vanuatu 1980

#### Legislation

Alienated Lands Act Chapter 143 (No. 12 of 1982)  
Animal Importation and Quarantine Act [CAP.201] (Act No.7 of 1988)  
Animal Importation and Quarantine Regulations (Order No.14 of 1994)  
Convention on Biological Diversity (Ratification) (Act No. 23 of 1992)  
Customary Land Tribunal Act 2001 (No.7 of 2001)  
Environmental Management and Conservation Act 2002 (No. 12 of 2002)  
Fisheries Act Cap 158 (No. 37 of 1982)  
Fisheries Amendment Act (No. 2 of 1989)  
Forestry Act 2001 (No. 26 of 2001)  
Forestry Rights Registration and Timber Rights Harvest Guarantee Act ( No.28 of 2000)  
International Trade (Flora and Fauna) (Act No. 56 of 1989)  
Land Acquisition Act 1992 (No. 5 of 1992)  
Land Leases Act Cap 163 (Act No. 4 of 1983, No. 10 of 1987)  
Land Reform Act Chapter 123 (Joint Regulation 31 of 1980 – Act No. 32 of 1985)  
Land Valuers Registration Act 2002 (No. 23 of 2002)  
Maritime (Amendment) Act 1989 (No. 8 of 1989)  
Maritime (Amendment) Act 1990 (No. 3 of 1990)  
Maritime (Amendment) Act 1996 (No. 13 of 1996)  
Maritime (Amendment) Act 1998 (No. 31 of 1998)  
Maritime (Conventions) (Amendment) Act 1988 (No. 17 of 1988)  
Maritime (Conventions) Act Chapter 155 (No. 29 of 1982 & No. 29 of 1984)  
Maritime Act Chapter 131 (No. 8 of 1981 & No. 36 of 1982)  
Maritime Zones Act Chapter 138 (No. 23 of 1981)  
Mines and Minerals [CAP.190] (Act No.11 of 1986)  
National Parks Act, 1993  
Plant Protection Act 1997 (No. 14 of 1997)  
Ports (Amendment) Act 1998 (No. 32 of 1998)  
Ports (Amendment) Act 999 (No. 11 of 1999)  
Ports Act Chapter 26 (Joint Regulation 12 of 1957 – Act No. 6 of 1985)  
Shipping Act Chapter 53 (Queens Regulation 1 of 1968 – Act no. 7 of 1985)  
Strata Titles Act 2000 (No. 29 of 2000)  
Valuation of Land Act 2002 (No. 22 of 2002)  
Vanuatu Maritime Authority (Amendment) Act 2001 (No. 23 of 2001)  
Vanuatu Maritime Authority (Amendment) Act 2002 (No. 29 of 2002)  
Vanuatu Maritime Authority Act 1998 (No. 29 of 1998)  
Water Resources Management Act 2002 (No. 9 of 2002)  
Wild Bird Protection Act Chapter 30 (Joint Regulation 5 of 1962 – JR 13 of 1971)

#### Policies and Programs

Code of Logging Practice

National Biodiversity Conservation Strategy



National Biosafety Framework Project  
National Conservation Strategy  
National Waste Management Strategy  
Persistent Organic Pollutants  
Tuna Management Plan

Source: Desmond Tom' Tavalala, Yoli and Marie Tina Hakwa (2004) Review of Environmental Legislation and Policies in Vanuatu. IWP-Pacific Technical Report (International Waters Project) No. 7. SPREP, Apia, Samoa.

## **2. Environmental Institutions**

The responsibility for environmental and natural resources management is concentrated in about 7 ministries and 15 departments and agencies. The Environment Unit of the Ministry of Lands, Survey, Energy, Minerals and Water Resources is the national Environment institution for Vanuatu. However, as environmental provisions are scattered the following ministries and departments also exercise natural resource management responsibilities:

- Ministry of Agriculture, Forestry and Fisheries
- Ministry of Internal Affairs
- Ministry of Health
- Ministry of Infrastructure & Public Utility
- Ministry of Trade, Industry and Commerce
- Ministry of Finance & Economic Management
- Department of Agriculture & Rural Development
- Department of Forestry
- Department of Fisheries
- Department of Quarantine & Inspection Services
- Department of Provincial Affairs – Physical Planning Unit
- Department of Public Health
- Department of Meteorology
- Department of Trade & Industry
- Department of Public Utilities
- Department of Economic & Sector Planning
- Department of Land Management
- Department of Geology, Mines and Water Resources
- Department of Ports & Harbours
- Energy Unit

Apart from the government ministries and departments, non-government organizations also contribute to the protection and conservation of the environment in Vanuatu.

### **Environmental standards, regulations, enforcement mechanisms and instruments**

The laws of Vanuatu related to conservation and protection of natural resources is through legislation enacted specifically for a particular economic development activity or focused on conserving a particular type of species. Consequently, each relevant government agency has developed its own legal tools to promote environmental awareness and enforce environmental regulations.

Most of the legislation related to conservation and protection of the environment and natural resources does not have standards under which environment protection can be assessed or regulations to ensure that environment protection and conservation is effectively enforced. Enforcement in Vanuatu is seen as a basic element of environmental programs. However, enforcement is not given significant policy interest or priority. Since independence, the enforcement of existing laws and regulations dealing with environment has proven to be very weak. There are many reasons for the weak enforcement of environmental related laws, and they differ from sector to sector. However, there are a number of common reasons for the lack of enforcement, including:

- Old laws. Much of environmental related legislation in Vanuatu dates from pre-independence days. Industrial and development at that time had limited environmental consequences;
- Environmental laws are many and varied;
- Fragmented legislation;
- Fragmented responsibilities; and
- Lack of training and resources

Responsibility for enforcing legislation covering the environment falls on the different line ministries. For example, the Department of Fisheries is responsible for the control of fisheries resources. While such enforcement in certain areas is undertaken, in others it is being neglected due to a lack of an effective mechanism in place.

### **Appropriateness and effectiveness of the regulatory environment**

Limited capacity, reduced staffing, outdated legislation and limited enforcement powers at provincial and national level have resulted in the lack of effective enforcement of Vanuatu's environmental legislation. There is also a lack of understanding of the different pieces of legislation by the ministries and departments concerned with implementation of specific laws making it impossible to assess the appropriateness and effectiveness of the regulatory environment.

### **Capacity and capability assessment of environmental agencies and other organizations involved in environmental permitting, assessment, monitoring, and enforcement**

The present capacity and institutional arrangements are not adequate for ensuring environmental permitting, assessment, monitoring and enforcement. Despite the enactment of laws related to conservation and protection of natural resources (including the Environmental Management and Conservation Act 2002), few achievements have been made in tackling existing environmental problems and abuses of the law. Environmental responsibilities are left to sectoral ministries and departments which are preoccupied with productivity, revenue and costs, rather than conservation and protection of the environment and natural resources for which they are responsible.

The major institutional problem encountered in Vanuatu is the enforcement of laws and regulations due to:

- Lack of awareness by the general public, understanding of the legislation and knowledge of the detailed provisions of laws and regulations;
- Lack of funding to finance supervisory functions and enforce regulations; and

- Lack of coordination between the different environment related legislation, resulting in legal and administrative overlaps, gaps and sometimes conflicts.

### **Effectiveness of formal or informal mechanisms for cross-sectoral coordination of policies and actions**

Environmental management in Vanuatu is seen in isolation from the development and policy sectors from which the issues emanate. Environmental management and planning cut across virtually every sector and discipline. Under the current system, environmental considerations are marginalized in the decision-making process. One of the reasons is a lack of participation by most stakeholders. While the coordination between ministries regarding economic development is relatively good, the coordination between ministries involved with the environment is well below standard. Horizontal coordination between the technical staff has mostly been carried out on an informal level. Although an informal system has the advantage of containing some degree of efficiency, it precludes careful analysis of whether policies and programs of ministries and government agencies conflict with each other. Vertical coordination is much more serious issue, as the Environment Unit does not have sufficient high-level status to be taken seriously by other ministries.

### **Extent and nature of public consultation in decision-making**

Government policy is to encourage dialogue with the private sector and the civil society on matters which are of priority interest to Vanuatu. For example, the Comprehensive Reform Programme Summit, the Business Forum and the Education Summit held over the past years have embraced the participation of representatives from NGOs, business and the public sector corporations. Although the summits have made it possible to exchange views on economic and social issues and government policies, they have had limited influence in policy formulation.

With respect to environmental issues, public consultations have been less successful than for other development issues. The public and government stakeholders in Vanuatu have yet to acquire an adequate understanding of the environmental consequences of certain developments in order to make sound policy decisions for the protection and conservation of the environment.

### **National environmental policies and strategies**

Government policy on environment and conservation is to provide an affordable framework of environmental protection and compliance. This is realized through the enactment of the Environmental Management and Conservation Act No. 12 of 2002. This is the only specific legislation governing environmental protection of all natural resources in Vanuatu.

Policy development on environment and conservation has been weak over the 27 years since independence. There has been no clear statement of a new environment policy ever since independence while the basic policy commitments made at that time have been undermined. Perhaps the main underlying reasons for the lack of commitment and loss of direction were:

- Uncertainty over the Government's role in relation to environmental issues,
- No clear policy directives, and
- Lack of government commitment towards environmental issues

This is clearly indicated when the responsibility for environment, conservation and natural resources is scattered across the Ministry of Agriculture, Forestry and Fisheries, Ministry of Lands, Survey, Energy, Environment, Minerals and Water Resources (now Lands and Natural Resources), Ministry of Internal Affairs and Ministry of Health. Some scattered environmental and natural resource responsibilities are also exercised by other ministries. The numerous translocations of the Environment Unit between Ministries since its establishment have not been conducive to the smooth management of the agency and its responsibilities. It is relatively small (1 fulltime staff during the preparation of this report), absorbing a share of total Government recurrent budget of less than 0.08% annually.

In a country where the Constitution entrenches responsibility to safeguard the environment, too often the environment has been forgotten in the name of economic development.

**List of People Consulted and Workshop Agenda**

Mr. Simeon Athy	Director General, Ministry of Finance and Economic Management (MFEM)
Mr. Thomas Bangalini	Sector Analyst, Department of Economic and Sector Planning, MFEM
Mr. Benjamin Shing	Director, Department of Finance, MFEM
Mr. Kunar Patel	Department of Finance and Economic Management
Ms. Antonneth Arnhambat	Department of Finance and Economic Management
Mr. Timothy Sisi	Principal Trade and Marketing Focal Point, Department of Trade, Commerce and Industry
Mr. McCarthney Aga	Department of Trade, Commerce and Industry
Mr. Benuel Tarilongi	Director, Department of Livestock and Quarantine, Ministry of Agriculture, Quarantine, Forestry and Fisheries (MAQFF)
Mr. Tekon Tumukon	Principal Plant Protection Officer, Department of Livestock and Quarantine, MAQFF
Ms. Doresthy Kenneth	Director, Department of Agriculture, MAQFF
Mr. Robert Jimmy	Principal Fisheries Biologist, Department of Fisheries
Mr. Russel Nari	Director General, Ministry of Lands and Natural Resources
Mr. Jean Marc Pierre	Director, Department of Lands, Survey and Registry
Mr. Leo Moli	Energy Unit, Ministry of Lands and Natural Resources
Mr. Erickson Sami	Department of Geology, Mines and Water
Mr. Job Esau	National Disaster Management Office
Mr. Jotham Napata	Department of Meteorology
Mr. Brian Philips	Department of Meteorology
Mr. Salesa Kaniaha	Department of Meteorology
Mr. Victor Rory	Department of Foreign Affairs
Mr. Mackenzie Tari	Vanuatu Investment Promotion Authority
Mr. Francis Hickey	Vanuatu Cultural Center
Mr. Henry Vira	Secretary General, VANGO
Mr. George Petro	Wan Smol Bag Theatre
Fr. Joseph Tagaro	Mission to Seafarers
Mr. Jeff Stubbs	Country Director, Millennium Challenge Corporation (MCC)
Mr. Darius Teter	Managing Director, Asia and the Pacific, MCC
Ms. Nancy Convard	Environment Specialist, MCC
Ms. Celeste Tarricone	Program Officer, Monitoring and Evaluation, MCC
Ms. Angela Hassan-Sharp	First Secretary, NZAID
Mr. James Toa	Development Program Coordinator, NZAID
Mr. Yoshinori Ebata	Resident Representative, JICA
Mr. Nicolas Martinez	Chargé d'Affaires, European Union
Mr. Charles Vatu	Program Officer, AusAID
Ms. Anna Naupa	Program Officer, AusAID

8 August 2007

Dear Sir/Madam

**Consultative Workshop regarding Support to Vanuatu's Environment Sector**

You may be aware that a country environmental analysis (CEA) is being prepared as an input to the Asian Development Bank's (ADB) country partnership and strategy (CPS) exercise. The CEA provides background information on the Republic of Vanuatu's environmental constraints, needs, and opportunities. It describes the environmental issues that are most important to Vanuatu's sustainable development strategy and ADB's possible role in helping to address the critical environmental constraints. The CEA is formulated in a participatory process with inputs from a wide range of stakeholders. The CEA also provides a basis for monitoring country environmental performance as an input to ADB's Performance Based Allocation for Vanuatu.

ADB has recruited two highly qualified environment specialists to assist in this task. Dr. Peter King is former Director, Pacific Department of the ADB and one the region's most experienced environmental specialists. Mr. Ernest Bani is the former Director, Environment Unit in Vanuatu and is now operating as the Executive Director, Bani's Environmental Consultant. Dr. Edy Brotoisworo of ADB's Pacific Department is in charge of the work, in consultation with MFEM.

You are invited to join a consultative workshop and brainstorming session to offer your suggestions on priority actions that need to be taken to maintain and improve Vanuatu's environmental quality—its most important asset. The preliminary Agenda is as follows:

8.30-9.00 am	Opening ceremonies and prayer
9.00-9.30 am	Principal driving forces and current trends
9.30-10.00 am	Current state of Vanuatu's environment
10.00-10.30 am	Coffee break
10.30-11.00 am	Priority responses – policies, plans and programs
11.00-11.30 am	Institutional options
11.30-12.00 am	Sustainable financing of the environment sector
12.00-12.30 pm	Summing up and conclusions

The time and venue of the workshop are as follows:

8.30 am – 12.30 pm  
Friday, August 24, 2007  
Oasis Room  
Melanesian Hotel

For further information and confirmation of your attendance please contact my secretary.

Simeon Athy  
Director General  
Ministry of Finance and Economic Management

## Technical Assistance Profiles

## PROJECT/TA CONCEPT PROFILE

<b>1. Project Name:</b>	Climate Change Adaptation in Vanuatu
<b>2. Loan or TA:</b>	Advisory TA
<b>3. Project Location:</b>	Vanuatu
<b>4. Country Involved:</b>	Vanuatu
<b>5. Sector/Subsector:</b>	Environment
<b>6. Background and Rationale:</b>	As Vanuatu has limited capacity to respond to environmental damage once it occurs and it is one of the planet's most vulnerable nations to natural disasters, increased attention must be paid to preventive measures. Of these preventive measures, adaptation to climate change is of paramount importance. A National Advisory Committee on Climate Change (NACCC) has been mobilized, coordinated by the Vanuatu Meteorological Service (VMS), primarily to prepare the National Adaptation Programme of Action (NAPA). The NAPA has identified five \$1 million medium sized projects for funding under the Least Developed Countries Fund (in the areas of agriculture and food security, water management, sustainable tourism, community-based marine resource management, and sustainable forest management). Adaptation related to infrastructure development has been left to a proposed GEF-funded regional project (Pacific Adaptation to Climate Change) which is still under preparation. None of the adaptation projects considered by the NACCC to date has targeted accessing the CDM related Adaptation Fund (created by reserving 2% of the carbon emission reduction (CER) credits of approved CDM projects). In addition, the National Capacity Self Assessment project (related to biodiversity, climate change and land degradation thematic areas of GEF) has found very limited capacity in Vanuatu to adequately deal with these two areas. The TA would address these two weaknesses – inadequate attention to the Adaptation Fund and limited institutional capacity.
<b>7. Objectives:</b>	The primary objective of the TA would be to prepare a 5-10 year integrated program to address adaptation to climate change across all sectors. A secondary objective would be to build the institutional capacity to identify adaptation priorities, prepare projects suitable for the CDM Executive Board's Adaptation Fund (and other funding sources), and to provide effective management during implementation.
<b>8. Scope:</b>	The TA scope includes (i) documenting previous efforts to prepare adaptation projects for funding and their current status; (ii) examining the lessons learned from adaptation projects to date; (iii) conducting vulnerability assessments to identify the areas, sectors and communities most at risk from climate change; (iv) identifying "no regrets" projects suitable for funding by the Adaptation Fund; (v) conducting pre-feasibility level analysis of the priority projects; (vi) proposing an integrated program of adaptation measures for 5-10 years, including sample projects taken to pre-feasibility level; (vii) identifying capacity strengthening needs within Vanuatu and providing on-the-job training; and (viii) providing input to Vanuatu's national submissions on implementation arrangements and monetizing of CERs in the Adaptation Fund.
<b>9. Estimated Cost:</b>	\$0.3 million
<b>10. Financing Plan and Financing Arrangement (Public/Private):</b>	In kind contribution from Vanuatu government, through the NACCC. Intended to assist Vanuatu to obtain additional funding from the CDM Executive Board's Adaptation Fund.
<b>11. Financing Status:</b>	Proposed for funding from TASF ((part or all of this funding may be sourced from a new ADB RETA on promoting climate change adaptation in the Asia-

	Pacific region).
<b>12. Proposed Implementation Period/Schedule:</b>	2008-2009
<b>13. Executing/Implementation Agency and Contact Persons:</b>	National Advisory Committee on Climate Change.  <b>ADB Contact Division/Person:</b> Edy Brotoisworo, Senior Safeguards Specialist, PARD
<b>14. Estimated Benefits and Beneficiaries:</b>	The main benefits of the TA would be that Vanuatu is able to access a significant share of the CDM Executive Board's Adaptation Fund, which is likely to be available on a first come, first served basis.
<b>15. Social and Environmental Issues:</b>	None
<b>16. Priority of Project/TA (H/M/L):</b>	High
<b>17. Project Status (Proposed/Ongoing/Completed):</b>	Proposed
<b>18. Status of Project/TA preparation:</b>	Proposed
<b>19. Pre-feasibility Study (Completed/Required):</b>	Part of TA
<b>20. Follow-up Actions Required:</b>	Include in Country Partnership Strategy
<b>21. Issues/Constraints:</b>	None



## PROJECT/TA CONCEPT PROFILE

<b>1.</b>	<b>Project Name: Sustainable Financing of Environment in Vanuatu</b>
<b>2.</b>	<b>Loan or TA:</b> Advisory TA
<b>3.</b>	<b>Project Location:</b> Vanuatu
<b>4.</b>	<b>Country Involved:</b> Vanuatu
<b>5.</b>	<b>Sector/Subsector:</b> Environment
<b>6.</b>	<b>Background and Rationale:</b> In the past, the Vanuatu Government has relied too heavily on foreign funding for its environmental functions and allowed the nationally funded administration to run down to an alarming level. One way to counteract this trend is to demonstrate that self-financing is not only possible but also that Vanuatu has been missing out on several potential sources of funding. If the Ministry of Finance and Economic Management and the Public Service Commission can be convinced that Vanuatu's lead environment agency can be a net revenue source rather than a service cost center, then it may be possible for a department (or ministry) of environment to be established at the level of resources needed for such a diverse country.
<b>7.</b>	<b>Objectives:</b> The primary objective of the TA is to demonstrate that it is both possible and desirable to establish a self-financing environmental administration in Vanuatu. Under the TA, funding for the first 3 years of an expanded environmental agency will be raised.
<b>8.</b>	<b>Scope:</b> The TA will document how environmental administrations in other countries have managed to transform their environmental administration from a cost center to a revenue center. It will evaluate these options in the context of fiscal and economic management in Vanuatu and the constraints imposed by the Public Service Commission and the Ministerial Budget Committee. The TA will assess the viability of an environment agency (department, ministry, commission, or public enterprise) moving towards a self-financing status and then demonstrate proof of concept by assisting the Government to raise funding for the first 3 years of expansion.
<b>9.</b>	<b>Estimated Cost:</b> \$0.2 million
<b>10.</b>	<b>Financing Plan and Financing Arrangement (Public/Private):</b> In kind contribution from Vanuatu government. The TA is expected to raise funds for the first three years of an expanding environmental agency.
<b>11.</b>	<b>Financing Status:</b> TA to be financed from TASF or alternative trust funds.
<b>12.</b>	<b>Proposed Implementation Period/Schedule:</b> 2009

<b>13. Executing/Implementation Agency and Contact Persons:</b>	Ministry of Finance and Economic Management – Mr. Simeon Athy, Director General  ADB Contact Division/Person: Mr. Edy Brotoisworo, Senior Safeguards Specialist, PARD
<b>14. Estimated Benefits and Beneficiaries:</b>	The main benefit of the TA is a rapidly expanding environment agency.
<b>15. Social and Environmental Issues:</b>	None
<b>16. Priority of Project/TA (H/M/L):</b>	High
<b>17. Project Status (Proposed/Ongoing/Completed):</b>	Proposed
<b>18. Status of Project/TA preparation:</b>	Project profile
<b>19. Pre-feasibility Study (Completed/Required):</b>	Not required.
<b>20. Follow-up Actions Required:</b>	Include the TA in the updated Country Partnership Strategy.
<b>21. Issues/Constraints:</b>	None

## PROJECT/TA CONCEPT PROFILE

<b>1.</b>	<b>Project Name: Strategic Environmental Assessment in Vanuatu</b>
<b>2.</b>	<b>Loan or TA:</b> Advisory TA
<b>3.</b>	<b>Project Location:</b> Vanuatu
<b>4.</b>	<b>Country Involved:</b> Vanuatu
<b>5.</b>	<b>Sector/Subsector:</b> Environment
<b>6.</b>	<b>Background and Rationale:</b> Previous ADB TAs have assisted Vanuatu to prepare a Medium-term Strategic Framework comprising a Priorities and Action Agenda, medium term expenditure framework, sector strategies, corporate plans, rural economic development initiative plans, and physical planning area plans. Government policies and implementing legislation and regulations are also frequently passed through the Development Committee of Officials and Council of Ministers, before being passed by Parliament. The environmental implications of these policies, plans and programs are not considered, however, until they emerge as specific projects, for which considerable time and effort has already been expended. A very select few of these projects undergo a full environmental impact assessment, as required by the Environmental Management and Conservation Act. Considerable wasted effort and subsequent environmental damage could be avoided if environmental considerations were interjected at the upstream level of policies, plans and programs. Strategic environmental assessment (SEA) is a commonly used tool to address these upstream issues, but to date it has not been used in Vanuatu.
<b>7.</b>	<b>Objectives:</b> The objective of the TA is to demonstrate the utility of SEA as a good governance tool in Vanuatu, with a view to amending the Environmental Management and Conservation Act to make it mandatory for all new policies, plans and programs.
<b>8.</b>	<b>Scope:</b> The TA would (i) run a series of awareness raising workshops with government officials, directors general, and parliamentarians on the basic concepts of SEA; (ii) conduct 2-3 pilot SEAs on current policies, plans or programs that are under preparation; and (iii) prepare an online library of training materials for subsequent use by practitioners in Vanuatu. Depending on government views on the applicability of SEAs in Vanuatu, a draft amendment to the Environmental Management and Conservation Act may be prepared.
<b>9.</b>	<b>Estimated Cost:</b> \$0.2 million
<b>10.</b>	<b>Financing Plan and Financing Arrangement (Public/Private):</b> In kind contribution from Vanuatu government.
<b>11.</b>	<b>Financing Status:</b> Proposed for funding from TASF.
<b>12.</b>	<b>Proposed Implementation Period/Schedule:</b> 2010
<b>13.</b>	<b>Executing/Implementation Agency and Contact Persons:</b> Department of Environment and Conservation – Director.  <b>ADB Contact Division/Person:</b> Edy Brotoisworo, Senior Safeguards Specialist, PARD
<b>14.</b>	<b>Estimated Benefits and Beneficiaries:</b> The main benefits are to avoid needless wasted effort and subsequent environmental damage by addressing environmental concerns at the upstream level of policies, plans and programs.
<b>15.</b>	<b>Social and Environmental Issues:</b> None
<b>16.</b>	<b>Priority of Project/TA (H/M/L):</b>

	High
<b>17. Project Status (Proposed/Ongoing/Completed):</b>	Completed.
<b>18. Status of Project/TA preparation:</b>	Project concept profile
<b>19. Pre-feasibility Study (Completed/Required):</b>	Not required
<b>20. Follow-up Actions Required:</b>	Include the TA in the updated Country Partnership Strategy and seek the necessary TA funds.
<b>21. Issues/Constraints:</b>	None

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