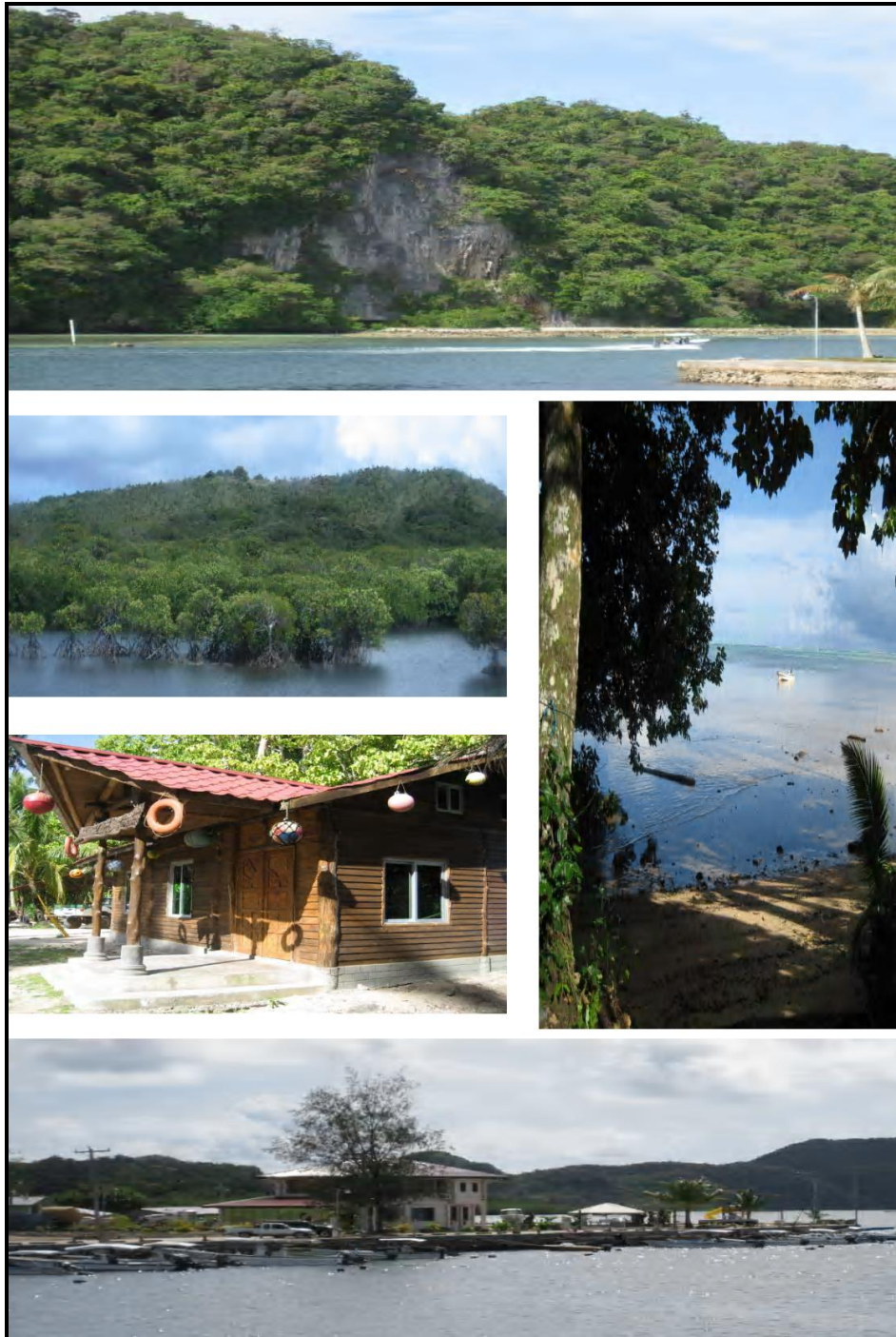


December 2007

Project Number: TA 4929-PAL

Facility for Economic & Infrastructure Management Project



Environmental Overview and Stock-take Report

Prepared for

**Government of Palau &
Asian Development Bank**

Prepared by

Polytechnics International New Zealand (PINZ)

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Abbreviations

ADB	Asian Development Bank
BOA	Bureau of Agriculture (within MRD)
BMP	Best Management Practices
BMR	Bureau of Marine Resources (within MRD)
BTA	Belau Tourism Association
BWA	Babeldaob Watershed Alliance
CITES	Convention on International Trade in Endangered Species
CIP	Capitol Improvement Program (office within MRD)
CRC	Compact Review Commission
CSP	Country Strategy and Program
DFWP	Division of Fish and Wildlife Protection (within MOJ)
EA	Environmental Assessment
EIS	Environmental Impact Statement
ENSO	El Niño Southern Oscillation
EQPA	Environmental Quality Protection Act
EQPB	Environmental Quality Protection Board
GDP	Gross domestic product
GEF	Global Environment Facility
IUCN	International Union for Conservation of Nature & Natural Resources
JICA	Japan International Cooperation Agency
MAP	(Presidential) Management Action Plan
MDGs	Millennium Development Goals
MCT	Ministry of Commerce and Trade
MOF	Ministry of Finance
MOJ	Ministry of Justice
MRD	Ministry of Resources and Development
MPA	Marine protected area
NBSAP	National Biodiversity Strategy and Action Plan
NEMS	National Environment Management Strategy
NEPC	National Environmental Protection Council
NGO	Non-governmental organization
NISC	National Invasive Species Committee (of NEPC)

OGTF	Oil and Gas Taskforce
PALARIS	Palau Automated Land and Resources Information System (within MRD)
PAN	Protected Area Network
PCS	Palau Conservation Society
PICs	Pacific Island Countries
PICRC	Palau International Coral Reef Center
PILN	Pacific Invasives Learning Network
PNRC	Palau Natural Resources Council
PPLA	Palau Public Lands Authority
PVA	Palau Visitors Authority
SLMP	Sustainable Land Management Project (UN/GEF)
SPLA	State Public Lands Authority
TA	Technical Assistance
TAPC	Tourism Action Plan Committee
TNC	The Nature Conservancy
ToR	Terms of Reference
TTA	Trust Territory Authority
WHS	World Heritage Site (under UNESCO program)
WWF	World Wildlife Fund
UN	United Nations
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNESCO	United Nations Education Scientific Cultural Organisation
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
US	United States (of America)

Executive Summary

A. Key Conclusions and Summary of Recommendations

1. The key conclusions of this overview and stock-take report are prioritized in terms of suggested importance and need for action in respect of developing a medium-term development strategy and five-year plan. It should be noted that some conclusions i.e. the need to complete an environmental management policy framework, have longer-term implications, but in order to prepare and implement a five-year plan that responds to the issues raised, a number of these will need to be addressed as soon as possible.

2. The conclusions in order of suggested priority are as follows:

i. The environmental management policy and regulatory framework is incomplete, policies are still required in key areas such as energy, mining, forestry and watershed management (climate change adaptation policy will be put before the House in December 2007);

ii. In order to meet immediate resource management and environmental protection needs, trying to work around the resistance of states to any initiatives that are seen to be nationally imposed is a priority. States accept the need for a framework of regulation and policy but want the flexibility to achieve the minimum standards set at national level in ways that their suit their own visions;

iii. Within the national policy framework and setting of minimum environmental standards, states should be supported and encouraged to prepare and implement management plans in ways that best fit their context and capacity. States require the assistance of one clearly identified agency within government to access information and technical assistance available through grants (including knowledge about grant availability, proposal writing, project/program implementation and reporting requirements);

iv. Within the approved project framework of the UN/GEF funded Sustainable Land Management Project (SLMP), the work program and deliverables can be focused to support ongoing initiatives that could achieve some of the anticipated outcomes of the SLMP, for example, the Babeldaob Watershed Alliance (BWA), whilst recognizing the limited institutional and implementation capacity of a small country;

v. On the basis of existing and future projected population, state administration staffing and capacity, states may choose which type of resource management planning document would best suit their needs, some states may opt for a land use plan while other states may opt for a watershed management plan. In addition to any protected areas management plans they may already have or propose, either a watershed management plan or a land use plan, along with zoning regulations and a building code will be sufficient for integrated resource management. The SLMP, while aiming to achieve a range of outcome, retains the flexibility for states to choose;

vi. More fully adopting integrated resource management would assist in simplifying the institutional structure and supporting the role of states in resource management;

vii. In respect of institutional arrangements, realignment of functions and responsibilities at the ministry and bureau level is required to ensure that environmental management is given sufficient attention in national decision making (ministry level) and to reduce over-management of resources and remove over-lapping jurisdictions (bureau level);

viii. A new bureau with an environmental planning and conservation mandate should be established. The functions of the Office of Environmental Response and Coordination (OERC) need to be institutionalized within the government structure, an appropriate place would be in a new bureau of environmental planning and conservation. This bureau could also include an office or division that provides assistance to states in terms of accessing grants and implementing projects and programs;

ix. The Environmental Quality Protection Act (EQPA) and various regulations require updating in terms of Palau's current political and environmental management context, previously unforeseen risks, such as climate change and bio-security, need to be addressed;

x. Addressing cumulative impacts and synergistic effects across legislation is important, especially in respect of development and intensifying use of watersheds, coastal zone and mangrove areas, and a developing aquaculture sector;

xi. New regulations are also required, e.g. vegetation clearance, and a range of minimum environmental standards, e.g. forest cover, need to be established;

xii. Once the policy framework is established, environmental management requirements can be more effectively mainstreamed in master planning documents and development strategies rather than be dealt with in a separate chapter; and

xiii. Currently the Environmental Quality Protection Board (EQPB) is not collecting all revenues, such as environmental impact fees, to which it is entitled under the EQPA and various regulations. Revenue generated by EQPB from permit applications goes into general National Treasury and is not ear-marked for the activities and operations of EQPB so currently there is no incentive to EQPB to collect all revenue to which it is entitled.

3. These suggested priorities and action points need to be considered by the Project Steering Committee (PSC) and their timing for implementation set out in a five-year plan as the medium-term development strategy is finalized.

4. The main recommendations in respect of these conclusions are:

Key recommendation – establish a clear and over-arching national policy framework for environmental protection and management

- Establish national environmental management policy framework - prepare environmental management policies for key sectors including those previously identified (i.e. forest policy and energy policy) and address gaps in existing policies viz-a-viz new challenges such as climate change and bio-security;
- Complete and/or prepare strategic action plans and management plans for sectors;
- Clearly define the role of, and support, states in resource and environmental management; and
- Within the approved project framework, provide focus to Sustainable Land Use Management Project in terms of identified priorities and future directions of state-led initiatives in respect of watershed management.

Key recommendation – streamline activities and roles matching environmental management framework and realign functions at ministry and bureau level

- Establish a dedicated ministry for environment and natural resources;
- Realign bureaus along lines of key functions and services (separating some conservation functions from service delivery functions);
- Create a new bureau with the core functions of environmental planning and conservation. A division or office within this new bureau would be responsible for supporting states to access grant funding for resource management projects;
- Institutionalize the functions of OERC within the government structure so key environmental planning and coordination functions are not lost; and
- Avoid stumbling blocks to effective resource management by devolving as much of management planning to states as possible. Support states to prepare and implement key management plans within the policy framework and minimum environmental standards set by national government.

Key recommendation – undertake a comprehensive review and revision of EQPA and Regulations

- EQPA and all regulations promulgated there-under updated and revised to better reflect Palau context and to incorporate climate change risk and adaptation requirements and bio-security aspects;
- Update and revise relevant regulations (EIS, Fresh and Marine Water Quality, Earthmoving) to incorporate the need for assessments to address cumulative impacts and synergistic effects;
- Address gaps in existing regulations e.g. exemption of agricultural activities under the Earthmoving Regulations;
- Support states to promulgate zoning rules and regulations and building codes; and
- Promulgate new vegetation clearance regulations specifying minimum environmental standards for forest cover (including mangroves) and requirement for permit.

Key recommendation – user charges principle to apply to EQPB activities and fees generated from EQPB activities should be retained for EQPB operations

- EQPB promulgate regulations that permit charging for water testing and monitoring;
- Fees accrued in respect of permit applications and EIS review be separated from National Treasury and used solely for the activities and operations of EQPB;
- EQPB exercise its duties under the EIS Regulations in respect of charging an environmental impact fee, and for reimbursement of charges incurred during inspections, monitoring, and miscellaneous expenses in respect of permit applications and EIS review.

B. Deliverables of Next Input

5. The outputs to be produced in the next input, at this stage scheduled for five weeks from mid-June 2008, are as follows:

- Review of the environmental impact of existing public infrastructure;
- Identification of the opportunities and constraints the environment offers for development; particularly estimating how much the environment can contribute to economic growth and the gains to be made from environmental improvement in specific infrastructure;
- Assessment of the impact of potential environmental problems due to major infrastructure on livelihoods, health, the vulnerability of poor communities, and vulnerable groups; and
- Preparation of an environmental and natural resource development (and action) plan for Palau to identify key environmental components and their relationship to projected development plans.

6. The deliverable of the second input will be (i) the environmental management strategy in respect of medium-term (five-year plan) development of the key sectors included in this TA i.e. tourism, infrastructure, agriculture, aquaculture and fisheries; and (ii) an environmental management action plan covering those sectors. In this regard, the environmental and natural resource development action plan will adopt the priorities established in the National Biodiversity Strategy and Action Plan, which has been adopted by the Government, as a starting point.

C. Key Actions Required from Government Counterparts

7. This report sets out a number of recommendations, these are translated into key actions in Table 1, which also identifies the agency with main responsibility and sets out the timeframe in which the suggested actions are required to be taken:

Table 1 – Key Actions Required

Action	Responsibility	Timing
Confirm the intended deliverables of the second input as described in Section B above	PSC	By April 2008
Distribution of this report to stakeholders as appropriate	Focal Point	January 2008
Consideration of, and agreement with, conclusion priorities as suggested in this report	PSC, stakeholders	By March 2008
Facilitate discussions with stakeholders to focus the work program of SLMP to reflect integrated resource management needs of small states and support the work of BWA in this regard	Focal Point (OERC)	By March 2008
Provide support to Bureau of Agriculture (BOA) for forest and watershed policy, new regulations for vegetation clearance and establishing minimum environmental standards in respect of forest cover (could be an activity funded under SLMP)	BOA-Forestry to lead; Supported by PSC and Focal Point (OERC)	Start January 2008
Facilitate dialogue on the proposal for a dedicated ministry for environment and natural resources, and realigning of functions in respect of (i) realigning core environmental management functions; (ii) creating a new bureau of environmental planning and conservation, and the need for an executive order to effect such etc	PSC, Focal Point, stakeholders	January – May 2008
Facilitate discussions on updating and revising EQPA and revising regulations	EQPB- Legal Counsel to lead; Supported by Attorney General's Office	January – May 2008
Facilitate discussions regarding ear-marking fees accrued from permit applications and EA/EIS review to be used exclusively for EQPB activities and operations	EQPB to lead, stakeholders	January – May 2008
Discuss and decide on the implementation of fees already permitted under EQPA and EIS Regulations	EQPB to lead, stakeholders	By April 2008
Advice is sought as to the nature and extent of vulnerable groups in Palau, and how their vulnerability might expose them to environmental impacts not experienced by the non-vulnerable.	PSC, Focal Point and other stakeholders	By May 2008

1. Introduction

1.1 Background to the Project

1. The Republic of Palau (Palau) is a Micronesian island state located on the western edge of Micronesia in the west central Pacific Ocean, as shown in Figure 1. It is about 1,000 kilometers (km) east of Manila, Philippines, and 1,300 km southeast of Guam. Palau comprises more than 340 islands over a length of 700 km in a northeast to southwest direction. Palau's most important islands are Angaur, Babeldaob, Koror, and Peleliu, the latter three lie together within the same barrier reef while Angaur is an Oceanic Island several miles to the south.

Figure 1 – Location Map



2. The population of Palau is 19,129, with 13,209 resident Palauans and 5,920 non-Palauan foreign residents.¹ Over the past 10 years, the annual growth rate has fluctuated between 2.3 to 2.6 percent, primarily due to immigration rather than an increase in the Palauan birth rate. Approximately 80 per cent of the total population resides on Koror Island, the provisional capitol of Palau. However, migration to Babeldaob is expected now that Compact Road has been completed. Babeldaob is the largest island in the Palau islands group and constitutes 73 per cent of the total land area of 458 km².

3. After three decades as a United Nations (UN) Trust Territory Authority (TTA) under United States (US) administration, Palau opted for independent status in 1978 rather than join the Federated States of Micronesia. Palau adopted its own constitution in 1980 and has been an independent country since 1994, the same year it entered into a Compact of Free Association (Compact) with the US. Under the Compact, the US agreed to pay approximately US\$450 million over the first fifteen years of the fifty-year Compact (1994 to 2009).

4. Economic and government activity is based on Koror, which is connected by bridge to Babeldaob and by causeway to Arakabesang and Malakal. The economy of Palau is a mix of traditional and formal economic systems. The formal economy is dominated by the public sector; the Government of Palau (the Government) employs a third of the total workforce and public expenditure accounts for 45 per cent of gross domestic product (GDP).² The remainder of the economy consists mainly of tourism, retail, subsistence agriculture, and fisheries.

5. The main economic challenge confronting Palau is to ensure the long-term viability of its economy by reducing its reliance on foreign assistance. Palau's economy has sizable fiscal deficits, including wide swings in the gap between expenditure and revenue ranging from three per cent and 28 per cent of GDP. Tax collections account for about 20 per cent of GDP, and the Government's expenditure gap is financed through payments by the Compact. The Compact is due to expire in September 2009 with negotiations for the renewal of the Compact expected in late 2007. A review process has been underway since February 2006, which included the establishment of the Compact Review Commission (CRC).³

6. During the 2006 Asian Development Bank (ADB) Country Programming Mission, the Government requested technical assistance (TA) to provide a fast-response facility to assist economic policy formulation, facilitate the budget process, strengthen private sector development, and foster infrastructure management. In response, ADB included support for such a facility in the 2007 TA pipeline.

7. The TA will assist the Government achieve its development aspirations of improved security, economic growth, a strong society, and protection of the environment through improved economic and infrastructure management. The TA comprises two components; Component 1 will facilitate economic policy formulation and implementation for sustainable budget management; and, Component 2 will develop a mid-term (five year) infrastructure development plan for affordable infrastructure development and ongoing infrastructure operations and management.

8. From the Government's side the TA is being coordinated by Ministry of Finance (MOF) and Ministry of Resources and Development (MRD).

¹ Government of Palau; *Census of Population and Housing 2000*, Office of Planning and Statistics, Koror (2000)

² ADB a; *Technical Assistance Report – Facility for Economic and Infrastructure Management*, Manila (May 2007)

³ Ibid

1.2 Terms of Reference and Scope of Report

9. The terms of reference for the TA were included in the TAR, in respect of environmental management issues they include:

- (1) Evaluation of the Government's environmental policies in terms of appropriateness and effectiveness of regulatory environment against National Master Development Plan (NMDP) objectives and recommend changes to the plan and the existing policies;
- (2) Identification of policy and institutional challenges for environmentally sustainable growth;
- (3) Review of the environmental impact of existing public infrastructure;
- (4) Identification of the opportunities and constraints the environment offers for development; particularly estimating how much the environment can contribute to economic growth and the gains to be made from environmental improvement in specific infrastructure;
- (5) Assessment of the impact of potential environmental problems due to major infrastructure on livelihoods, health, the vulnerability of poor communities, and vulnerable groups; and
- (6) Preparation of an environmental and natural resource development (and action) plan for Palau to identify key environmental components and their relationship to projected development plans.

10. This report is one of two deliverables required under the environmental management assessment component. This report covers TOR items (1) and (2), and is a stock-take of the environmental situation, an overview of environmental issues and policies (including preliminary identification of problems and institutional arrangements), and directions for reform. This report is based on a review of available documents and stakeholder consultation as listed in Appendix 1. The scope of this report is the first two items of the TOR and includes:

- Section 1 provides the background and introduction to the Project;
- Section 2 sets the context for environmental management in Palau by summarizing the key environmental threats and management issues and why they need to be addressed within an integrated system of resource management and infrastructure development;
- Section 3 provides an overview and preliminary assessment of the legal and policy framework for environmental management;
- Section 4 provides an overview of the institutional arrangements for environmental management and a preliminary assessment of the institutional challenges;
- Section 5 concludes the report and makes a series of recommendations in respect of environmental management and infrastructure development in order to set the context for the next input, this section also presents some key actions required of government counterparts.

11. The second deliverable (due mid-July 2008) will cover TOR items (3) to (6) and include a paper on environmental and natural resource issues in respect of environmental impact of existing public infrastructure, and medium-term action plan i.e. for five years (environmental and natural resource development plan) for incorporation into planning for updating NMDP and infrastructure plan.

2. Environmental Threats and Management Issues

2.1 Ecological Significance of Palau

12. To provide a context for the discussion of environmental risks and threats the following is a brief summary of the biodiversity status of Palau, details may be found in several key documents including: *Barbados Programme of Action National Assessment Report* (BPOAR), *National Biodiversity Strategy and Action Plan* (NBSAP), and *Country Environmental Assessment* (CEA).⁴

13. Protecting and managing Palau's biodiversity is not only essential for providing a base for sustainable development and maintaining traditional and subsistence livelihoods for Palauans, it is important in terms of its regional and global biological significance for the following reasons:

- There are at least 10,000 species of living organisms in Palau. Marine life consists of nearly 1,500 species of reef fishes, and 700 corals, and endemic marine fauna include two freshwater fishes. Due to the migratory nature of most marine fauna there is no reliable estimate for the composition of populations in Palau. However, in the Micronesian region there has been documented evidence of many species regularly present which includes up to 11 species of dolphins, 15 species of whales year-round, and 4 species of whales seasonally;
- Palau records the highest number of flora and fauna species in Micronesia, and a 25 per cent endemism rate, including the largest numbers of endemic and rare resident bird species in Micronesia. There are approximately 1,000 endemic organisms in Palau, the bulk of them terrestrial including 200 endemic plants (of which 60 are orchids), 300 gastropods, 500 insects, 10 birds, 12 amphibians and reptiles, and two species of bat.⁵
- Palau's terrestrial environment includes one of the largest undisturbed tropical rainforests in Micronesia, and the largest number of resident bird species in Micronesia (50 species), of which 43 permanently inhabit Babeldaob. The many streams contain at least 40 species of fish, one native frog, 20 species of lizards, five species of snakes, and saltwater crocodiles. There is a very high number of insects, approximately 5,000 species have been identified;
- The coastal zone and reef ecosystems include 1,150 km² of coral reef, two endemic sea-grass species and 13 of the 14 mangrove species found in Micronesia;
- Many of these environments contain corals, and while no corals are endemic to Palau, its coral diversity is comparable to the highest coral diversity areas (Philippines, Indonesia and Australia). Estimates of Palau's coral diversity are in the order of 385 - 425 species belonging to 66 - 78 genera;

⁴ Government of Palau; *Barbados Programme of Action - National Assessment Report*, MRD, Koror (January 2005); *National Biodiversity Strategy and Action Plan*, OERC, Koror (2004); ADB b; *Country Environmental Analysis*, TA: 6204-REG Manila (2007)

⁵ Government of Palau; *National Report to United Nations Convention on Combating Desertification*, OERC, Koror (April 2002)

- Provides habitat for the only populations of endangered saltwater crocodile and dugong in Micronesia, and the dugong population is known to be the most isolated in the world;
- Provides habitat for seven of the nine species of giant clams, and all seven species are identified on the International Union for Conservation of Nature and Natural Resources (IUCN) Red List.⁶ Two species of giant clam are endangered and four species are near threatened (the definitions of IUCN's classification system may be found in Appendix 2);
- In total some 230 species of flora and fauna are identified on IUCN's Red List; 53 species are near threatened, vulnerable, endangered or critically endangered, and some 64 species are listed as data deficient which means there is not enough information known about them to make a classification;⁷
- A species of fruit bat - Palau Flying-fox (*Pteropus pilosus*) - is now known to be extinct, this species was endemic to Palau;
- Lake Ngarodok is the largest natural freshwater lake, Ngermeduu Bay is the largest estuary lake in Micronesia, numerous marine lakes that provide habitat for the unique and non-stinging Mastigias and Moon Jellyfish. The high concentration of marine lakes is unique in the world;
- There are 33 protected areas in Palau (some protected under state legislation others managed as community marine conservation areas) covering an area in the order of 1,315 km²;⁸ and
- Currently five sites (two are being proposed under both cultural and natural categories) proposed for World Heritage Site status, have progressed to the Tentative List for UNESCO consideration.

14. The vulnerability of fragile ecosystems such as coral reefs, mangrove forest and coastal zones as well as rare or endangered species is further increased by climate variability, droughts, water pollution, soil erosion, poor land management and land degradation, and unsustainable development.

2.2 Overview of Environmental Issues and Threats

15. Pacific Island Countries (PICs) are highly dependent economically and culturally on their natural environment. A broad consensus has been reached over the past decade on the most significant environmental problems facing PICs and eight priority concerns consistently emerge: threats to freshwater resources, degradation of the marine and coastal environment, degradation of land and forest, urbanization and waste management issues, depletion of biological diversity, energy-related environmental concerns, adaptation to climate change, and weak environmental governance.⁹

⁶ The Red List is a global assessment undertaken to classify species at varying risk of global extinction.

⁷ A large number (52) of the data deficient species are gastropods (snails and slugs) that are endemic to Palau and could be requiring conservation efforts in order that they do not become near threatened or vulnerable, especially in view of the fact that the three species of gastropod that have been studied are classified as critically endangered.

⁸ Verheij & Aitaro; ' Marine Protected Areas within the Context of a Nationwide Protected Areas Network in Palau' in *Coral Reefs of Palau*, Palau International Coral Reef Centre/JICA, Koror (2007)

⁹ ADB c; *Pacific Annual Report*, Manila (2006)

16. Environmental issues in Palau are similar to other PICs, these include global threats such as climate change, and risks associated with national development activity such as inadequate facilities for disposal of solid waste; threats to the marine ecosystem from sand and coral dredging, illegal fishing practices, and over fishing, rapid population growth, urbanization and weak enforcement of existing laws, regulations and policies.

2.2.1 Environmental Risks Associated with National Development

17. The BPOAR highlighted a number of critical sustainable development issues subdivided along the three ‘pillars’ of environmental, social and economic concerns including; sustainable management of marine and terrestrial resources; climate change and sea level rise; pollution control; waste management; water supply and quality; coral bleaching and coastal erosion; and damage by invasive alien species.

18. In addition to the environmental concerns outlined in the BPOAR, various other documents have been consulted. The following is a summary of the environmental risks associated with development.

Table 2.2.1 – Environmental Risks Associated with Development

Risk	Nature of Risk and Consequence
Loss of traditional and subsistence livelihoods (incl. cultivation of 100 varieties of taro, 17 varieties of sweet potato, many varieties of cassava, bananas and other fruits for food, 44 species of trees used for timber and firewood, 82 plants used for traditional medicines); changes in resource consumption patterns	Land degradation and deforestation (incl. mangroves); Loss of endemic species including traditional medicines; Increasing shift to imported food, utensils and equipment resulting in loss of traditional hunting, fishing, building knowledge and other cultural associations; Increasing pressure on ecological resources (export, different and/or intensified use)
Population growth, development, and uneven population distribution	Additional infrastructure and services (environmental impacts) provided in absence of overall policy and management framework; Impacts of increasing foreign labor (including risk of exposure to STIs and HIV/AIDS); Pressure on agricultural land and impacts of slash-burn techniques; Increasing pollution, and uncoordinated and inadequate waste management
Forest loss and fragmentation, reduction in vegetation cover, filling of mangrove areas, habitat loss	Lack of land-use planning, poorly planned, piecemeal development; Threat of invasive species; ¹⁰ Increased fire risk; Completion of Compact Road providing easier access to previously remote forest resources and land; Erosion and silt run-off impacts on streams and coastal zone; Loss of critical habitats for various species
Capacity to manage solid and liquid waste, about 95% of sewage is untreated, ¹¹ main landfill in Koror reaching capacity	Pollution from untreated waste and leaching from inappropriately sited landfill (in coastal zone) entering waters; Marine organisms consuming raw sewage creating serious health risks (human consumption of contaminated marine species) and illness or death of marine organisms; Public health and safety issues; EQPB’s sampling/monitoring sites increasingly indicating thresholds breached

¹⁰ There are already examples of the invasive vine *Merremia peltata* having spread extensively because of the increased amount of land clearing and construction providing new opportunities for colonization.

¹¹ Government of Palau; *Environmental Vulnerability Index*, Koror (2001)

Table 2.2.1 – Environmental Risks Associated with Development...continued

Risk	Nature of Risk and Consequence
Trade in coral and live reef species	Trade in marine ornamental fish rapidly growing worldwide over past several years, popularity of home aquaria that mimic coral reef ecosystems has made live fish and marine invertebrate trade a profitable venture; Reef degradation by targeting important juvenile fish or species that are ecologically important
Characteristics that make Palau’s tourism sector such a large contributor to GDP are the same characteristics that are at risk from poor land use practices and environmental degradation (e.g. hotels and restaurants predominantly located in Koror, Palau Royal Resort located near to the bulk oil storage plant and in proximity to the commercial port, and the siting of the Landmark Hotel next to the Koror Landfill); tourism sector has developed largely around diving (need to manage watersheds and land use and protect coral reefs and marine resources)	Mixed uses threaten the viability of high-end tourism; Capacity of basic services (electricity, water, sewerage) inadequate for existing population and visitors, hotel and resort development placing additional burden on existing services; Selling of some goods at gift and souvenir shops contravene CITES; Congestion and over-crowding at dive sites causing damage to reef ecosystems (anchors, divers colliding with corals, fuel spills from boats, inappropriate moorings); Visitors not being advised to not touch corals, remove clams or other marine organisms; Spear-fishing leading to depletion of fish stocks at certain sites; Reduction in attractiveness of sites as a result of debris, garbage, sedimentation and silt-laden run-off impacting water quality and polluting sites
Invasive marine and terrestrial species	Threat to biodiversity, economy, human health, agriculture, and Palauan way of life; Cause serious damage to reefs, forest and savanna environments and habitats

2.2.2 Climate Variability and Change

19. A significant threat to Palau’s environmental stability is climate change, impacts from which can include extreme events such as storms and frequent drought, sea level rise, increased sea temperature, coastal erosion, and coral bleaching. The El Niño Southern Oscillation (ENSO) phenomenon is an ocean-atmosphere circulation that affects Palau significantly on a regular basis. During an El Niño year, Palau generally experiences drought conditions that can last from weeks to months, and the country must ration fresh water use. Recent climate change studies have projected that ENSO extremes are likely to become more frequent with increasing greenhouse gas concentrations.¹²

20. The 1997-1998 ENSO resulted in a wide range of impacts that serve as an indication of longer term physical, economic and social changes that could be imposed on Palau by climate change, and underscores the need to plan for, and develop within, a framework of climate change adaptation. The impacts have been identified as:¹³

- Induced drought causing the complete loss of the taro crops in several states. On low-lying coral islands, the water lens was displaced upward by the rise in sea level, causing flooding of taro patches by saltwater intrusion. These taro areas have not yet recovered;

¹² Government of Palau; *First Communication to the UN Framework Convention of Climate Change*, OERC, Koror (2002) Government of Palau;

¹³ Ibid; Government of Palau; *Current and Projected Impacts of Climate Change*, OERC, Koror (September 2001)

- Uncontrolled fires burned on a daily basis during March (1998) and destroyed 20 per cent of Palau’s forest, savannah and agricultural lands;
- A rise in sea temperature (August and September 1998) where sea surface temperatures exceeded 30°C. Impacts of the elevated water temperature were seen in habitats such as Jellyfish Lake which experienced a complete mortality of the medusa stage of *Mastigias spp*;
- Loss of an estimated 563km² of patch reef, barrier reef, outer reef and inner reef. Massive coral bleaching and mortality and six years after the event, the reefs in Palau have still not fully recovered. Approximately one-third of Palau’s corals died, with coral mortality as high as 90% in some areas, and devastated Acroporid corals;¹⁴
- A 3.3% reduction in GDP as a result of decline in tourism (associated with coral bleaching); and
- Economic impacts, measured largely in reduction in GDP, in the order of a \$100 million or 88% of the total 1998 GDP loss from the tourism sector, and agricultural loss was estimated at 0.75 million dollars or 0.7% of the GDP.

2.3 Development Constraints and Opportunities

21. The NMDP identified constraints and opportunities for development in Palau, and for context set out a number of common constraints faced by all Pacific Island countries including; a small domestic market compounded by geographical dispersion of islands within countries; high unit costs for infrastructure and industry services; a narrow resource base; heavy dependence on external trade and foreign assistance; adverse terms of trade in terms of price of exports relative to price of imports; and, vulnerability to external shocks and natural disasters.

22. In respect of Palau the constraints and opportunities identified in the NMDP have been summarized in Tables 2.3.1 and 2.3.2.

Table 2.3.1 – Development Constraints in Palau

Driver	Constraint
Historical and cultural forces	Decision making processes – difficulty to obtain agreement/consensus, agreement to act on Chief’s instruction, peaceful co-existence preferred to resolving issues in win/lose system, withholding consent against will of majority legitimate social practice; Redistribution vs. total welfare – dominance of individual and minority interests has enabled personal, clan and state rivalry to capture institutional practices and frustrate decision-making; Highly personal nature of Palauan society permeates public sector and decision making; Traditional authority structures make identifying and reducing corruption difficult; Inter-personal or inter-clan rivalries can retard economic activities and development
Lack of accountability and fragmentation of authority and leadership	Lack of concern for total welfare has led to hesitancy in implementation of public policy, non-compliance and non-enforcement; Concept of national welfare not as strong as clan and state welfare; Authority and leadership is a mix of traditional (hereditary title, chiefs) and elected officials which can influence decision making to different degrees

¹⁴ Golbuu & Fabricius; ‘Status of Palau’s Cotal Reefs in 2005 and their Recovery from 1998 Bleaching Event’ in *Coral Reefs of Palau*, Palau International Coral Reef Centre/JICA, Koror (2007)

Table 2.3.1 – Development Constraints in Palau...continued

Driver	Constraint
Lack of incentives	Few sanctions on low productivity or poor performance; High wages in public sector not linked with performance, performance reviews are not undertaken or taken seriously; High income and social support through village acts as disincentive for performance in public sector; Political support based on regional patronage; Foreign assistance has supported elevated consumption levels without need for improved work practice or productivity; Market failures do not justify immediate government intervention, regulations that distort the market acts as disincentives for performance, compliance and enforcement
Property rights	Ongoing tensions between state and national government as to land and resource ownership; Traditional structure (clan ownership) adds complexities to defining clear title to land and resources; Development capital difficult to obtain without collateral; Development opportunities with foreign investors limited by land title issues
Market size, labour and migration	Population of 19,000 market is very small, inability to obtain scales of economy commodity and service costs remain high; Social services subsidised to ensure needs of all citizens can be met; Artificially high standard of living buoyed by foreign assistance; Refusal of Palauans to enter some sectors of the economy; Unrestricted access to higher wage rates in US and other ex US territories; Loss of skills in Palau; Lower minimum wage rate for foreign labour
Attitude of dependency and costs of sovereignty	Subject to interests of narrow range of powerful national influences and foreign interests; Lack of capacity to handle own affairs for total welfare; Loss of skilled Palauans to overseas markets means reliance on foreign experts; Encourages opportunism and erodes determination to pursue difficult commitments; Trust has to date covered costs of many functions of national government; Federal programs reduced
Unfunded liabilities and existing debt	Major constraint on government budget is rescheduling of debt and need to increase contributions to civil service and social security pension funds

Source: National Development Master Plan (1996)

Table 2.3.2 – Development Opportunities in Palau

Driver	Opportunity
Compact of Free Association	National security provided by US; Access to US labor market and preferential trade arrangements offer advantages to Palauan-based manufacturers
Location in Asia-Pacific region	Proximity to rapidly growing and largely populated markets throughout Asia; Structure of business relationships and tourism industry increasingly moving towards Asia; Tap foreign labour markets especially for development of low-wage based industries
Natural resources	Unique and fragile environment; Offers some of best diving sites in the region, diving sector large part of tourism industry; Environmental protection is a key part of national political agenda; Extensive exclusive economic zone provides for potential in fisheries sector
Services and social conditions	Education and literacy levels high by Pacific standards; Large number of Palauans with international experience; Law and order problems minimal; Free of political instabilities ethnic-based tensions and terrorism

Source: National Development Master Plan (1996)

3. Legal and Policy Framework for Environmental Management

3.1 Environmental Quality Protection Act

23. All laws and regulations in Palau make up the National Code, which comprises, amongst other things, acts that ensure the protection of resources and environmentally sound development. The Environmental Quality Protection Act (EQPA) is very wide reaching in that it requires that, to the fullest extent possible, all other policies, regulations, and public laws be interpreted and administered in accordance with it. In addition to EQPA, Title 24 of the National Code contains a number of acts for environmental protection, as set out in Table 3.1.1.

Table 3.1.1 – Main Divisions of National Code for Environmental Protection

Division	Coverage	Includes
I	Environmental Quality Protection	Chapter 1 – Environmental Quality Protection Act Chapter 2 – Trust Territory Environmental Quality Protection Act Regulations: Earth moving, EIS, air pollution, fresh and marine water quality, solid waste management, wastewater disposal, public water systems, pesticides
II	Wildlife Protection	Chapter 10 - Endangered Species Chapter 12 - Protected Sea Life Chapter 13 - Illegal Methods of Capture Chapter 14 - Protected Land Life
III	Preserves & Protected Areas	Chapter 30 - Ngerukewid Island Wildlife Preserve Chapter 31 - Ngerumekaol Spawning Area

Source: National Code of Palau

24. The EQPA is divided into four sub-chapters: (i) general provisions; (ii) EQPB roles and functions; (iii) environmental studies and decisions (including environmental assessments (EAs) and EIS); and, (iv) implementation, enforcement, fines and penalties, and court action.

25. The EQPA is the most comprehensive environmental law in Palau, and is the main vehicle through which the government meets its responsibilities to “use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate governmental plans, functions, programs and resources” in order that Palauans may:

- Fulfill the responsibility of each generation as trustee of the environment for succeeding generations;
- Assure for all Palauans safe, healthful, productive, and aesthetically and culturally pleasing environment;
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences; and
- Preserve important historical, cultural and natural aspects of Palauan heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice.

26. The EQPA defines the roles of national and state government in respect of its objectives as:

- Ensuring the integrated use of natural and social sciences, traditional wisdom and environmental design in planning and decision making which may have an impact on the environment;
- Developing ways of ensuring that environmental amenities and values are given appropriate consideration in decision-making along with economic and technical considerations;
- Including a detailed environmental impact statement (EIS) for government actions that have the potential to significantly affect the environment;
- Developing alternative courses of action for proposals involving conflicts over alternative uses of available resources;
- Recognizing the long-range character of environmental problems and providing support to initiatives and programs designed to maximize cooperation in anticipating and preventing decline in environmental quality;
- Making available to states, institutions and individuals advice and information on restoring, maintaining and enhancing the quality of the environment;
- Initiating and utilizing ecological information in the planning and development of resource oriented projects; and
- Assisting the Environmental Quality Protection Board (EQPB) in the exercise of its functions and responsibilities.

27. The above is a clear mandate for environmental protection and resource management requirements to be mainstreamed in all government driven policy, plans and development activities. The degree to which this has been achieved is discussed in Section 3.6 of this report.

3.2 Regulations under EQPA

28. Various regulations have been promulgated under the EQPA as described below.

Earth Moving Regulations

29. Chapter 2401-1 contains regulations which deal with coastal zone management; soil conservation/soil improvement; erosion; and authorization or permitting and regulation of earthmoving operations (including any construction or other activity which disturbs or alters the surface of the land, coral reef or bottom of lagoons). All earthmoving operations in Palau must be conducted in accordance with these regulations and in such a way as to prevent accelerated erosion or accelerated sedimentation.

30. The regulations require that for any earth moving activities, erosion and sedimentation control measures be set out in a plan prepared by qualified persons and presented by the applicant to the EQPB. Removed material shall be disposed of in accordance with discharge rules laid down in clauses 12 and 13. If a project involves the marine environment, additional requirements apply.

31. These regulations should be revised and updated as there is a blanket exclusion of earthmoving associated with "plowing or tilling for agricultural purposes" and for, or at the site of, a solid waste landfill site (under clause 14), and these activities are not required to apply for a permit.

Key recommendation – revise and update regulations, address blanket exclusion of earthmoving for agricultural purposes and at solid waste landfill sites. Link with proposed vegetation clearance regulations

Marine and Fresh Water Quality Regulations

32. Chapter 2401-11 covers pollution control in freshwater and marine water; freshwater quality, classification/declassification; effluent waste water and discharge to water and marine water; and water quality standards. The regulations set out the policy of Palau in respect of protection of water quality.

33. The purpose of these regulations is to protect the quality of freshwater (surface and groundwater) and marine water resources, and in this context, identify the uses for the various waters of Palau to be maintained and protected, and prescribe water quality standards for those waters. Clause 5 classifies coastal waters according to its various uses and prescribes general quality requirements for those waters. Clauses 6 to 8 classify freshwater, groundwater and groundwater areas. Basic criteria regarding water quality standards that apply to all waters are also established and clauses 10 to 18 establish specific water quality standards with respect to various polluting substances.

34. Clause 22 requires discharge operators to obtain a Pollutant Discharge Permit from the EQPB, while a water quality certification must be provided to EQPB prior to issuance of any other permits from EQPB or as required under US Clean Water Act and US Rivers and Harbors Act.

35. A number of amendments made in 1996 concern;

- The classification of coastal waters and in particular the use and designation of Class B waters which are extended to over-water commercial or residential structures for recreational or domestic use;
- Stipulation that no coastal mangrove fringe greater than 50 feet in width shall be classified as Class B waters; and
- The introduction of the requirement that all point and non-point discharges shall comply with the terms, conditions, provisions and management plans for any national, state or traditional conservation area, preserve, or other protected area as established by law.

Toilet Facilities and Wastewater System Disposal Regulations

36. Chapter 2401-13 deals with pollution control; waste disposal; waste domestic sources; effluent waste water/discharge; and sewerage. The purpose of these regulations is to establish standards and regulate the design, construction, installation and operation of sewage and other waste disposal systems. Clause 10 requires a permit for new constructions with wastewater disposal systems, and clauses 13 to 33 prescribe the technical standards for septic tank systems, seepage pits, disposal fields, subsurface absorption fields, cess-pools and other waste water disposal systems.

37. The regulations require a certificate from EQPB for any person engaging in the business of cleaning, and disposing of wastes from, sewage systems, while clause 35 prohibits the disposal of treated or semi-treated into any river, stream, pond, well or any other fresh-water body, marine water or ground without consent from EQPB.

38. A 1996 amendment to clause 10 requires construction of new buildings to be authorized by EQPB and to be in compliance with rules set out in the regulations, and introduced a requirement for all toilet facilities, individual wastewater disposal systems or public sewer connections to comply with the provisions and management plans for any national, state or traditional conservation area, preserve or other protected area as established by law.

Solid Waste Management Regulations

39. Chapter 2401-31 covers pollution control; waste disposal; waste management; solid waste; and authorization/permitting. These regulations establish minimum standards governing the design, construction, installation, operation and maintenance of solid waste storage, collection and disposal systems, so as to prevent pollution of drinking and other waters of Palau, prevent the spread of disease and creation of nuisance, protect public health and safety, and to contribute to conservation of natural resources and environment.

40. The regulations are divided into nine sections covering; general requirements; storage requirements; solid waste collection; solid waste management responsibility and facility standards (including standards for disposal of hazardous materials); solid waste permit system; variances; solid waste management plans required; enforcement; and, miscellaneous provisions. The establishment or operation of a solid waste disposal facility requires a permit from EQPB in accordance with the regulations.

Key recommendation – revise and update regulations linking with the waste management and reduction policies, strategies and programs proposed in climate change bill

Pesticide Regulations

41. Chapter 2401-33 in respect of cultivated plants deals with - pesticides; international trade; internal trade; access-to-information; and, in respect of waste and hazardous substances - pollution control; pesticides; internal trade; international trade; authorization/permit. These regulations establish and maintain a system of control over the importation, distribution, sale and use of pesticides.

42. These regulations are divided into the following sections; general provisions; administration of EQPB regulations; unlawful acts; certification of commercial and private applicators i.e. persons who use or supervise the use of restricted use pesticides; licensing of 'restricted use' pesticide dealers; records; importation; restricting and banning of certain pesticides; revocation of registration of a pesticide used to meet a special local need; enforcement; experimental use permits; penalties for violations; restricted and banned use pesticides; and, miscellaneous.

43. Under these regulations the EQPB is authorized to ban and/or restrict the use of certain pesticides. Every person engaged in sale or distribution of restricted pesticides or any person importing such pesticides other than a commercial applicator, must obtain a license from EQPB.

44. A 1996 amendment prohibited the use, storage and application of any pesticide inconsistent with the terms, conditions, provisions and management plans for any national, state or traditional conservation area, preserve or other protected area as established by law

45. A further amendment required all activities to which the regulations apply to comply with the terms, conditions, provisions and management plans for any national, state or traditional conservation area, preserve or other protected area as established by law.

Public Water Supply System Regulations

46. Chapter 2401-51 deals with water supply; authorization and permitting; groundwater; potable water; and public water supply standards.

47. The purpose of these regulations is to establish minimum standards and safety requirements for the public water supply system of Palau and drinking water supplied through that system. Clauses 4 to 10 set out conditions for the construction of, or significant modification to, public water supply systems, and the procedures for obtaining approval and permit from the EQPB. Clauses 11 to 39 concern the quality of drinking water including the general obligation of suppliers to assure supply of water that meets prescribed standards.

48. Other parts of the regulations specify levels of maximum permitted contamination of various substances and establish the rules for monitoring and measures for the control of pollution of publicly supplied water.

49. The regulations require that each public supply system be placed under the technical supervision of an operator certified by EQPB. Clauses 42 to 52 concern notices issued by owners or operators of supply systems to users each time that the water supplied fails to meet the prescribed standards, as well as a requirement that operators or owners keep records on operations. Clauses 75 to 84 establish the criteria under which filtration or disinfection is required as treatment technique for publicly supplied water. The remaining provisions concern enforcement.

Environmental Impact Statement Regulations

50. Chapter 2401-61 deals with general standards for environmental review; pollution control; activities for which EA and EIS are required; data collection and reporting; and access-to-information. Effectively these regulations give further meaning to provisions of the EQPA by providing agencies and persons with procedures, specifications of contents and other rules regarding the preparation, submission and distribution of EAs or EIS'.

51. The regulations require that a project is compatible with land use plans and policies and compatibility with the terms, conditions, provisions and management plans for any national, state or traditional conservation area, preserve or other protected area as established by law.

52. The activities for which EA is required is set out in clause 3 and include:

- Use of national or state lands;
- Use within any land which has been or maybe classified as a conservation area;
- Use of national or state funds unless the funds are to be used for feasibility or planning studies for future programs or projects provided that environmental factors are specifically considered in the feasibility and planning studies;
- Any use directly or indirectly impacting coastal waters and wetlands as defined in the Marine and Fresh Water Quality Regulations;

- Any use with any historic site as designated by the Palau Preservation Office;
- Any proposed action the EQPB determines may have a significant impact on the environment.

53. Clause 4 lists the activities which are exempt from preparation of EA on the grounds of minimal or no environmental impact including operations and repair of existing structures, single family residences and < 4 dwelling unit multi-unit structures, extensions of water, sewage, electrical, gas, telephone services associated with such structures, interior alterations, and demolition of structures other than those located on a historic site.

54. Clause 5 sets out the minimum requirements in terms of the scope of the EA. After consideration of the EA, the EQPB determines whether a more detailed EIS (in accordance with clauses 8 to 14) is required. Clauses 15 to 19 concern the filing and distribution of a draft EIS, and states that EQPB is responsible for notification of the draft and its distribution to reviewers.

55. A draft shall be accepted or rejected by the EQPB in accordance with criteria including the adequacy of the process of consultation and response; the adequacy of the content; and, the adequacy of responses issued during the review process and that such responses have been incorporated into the EIS.

Key recommendation – revise and update the EQPA and link with relevant legislation passed in recent years (e.g. PAN Act and Recycling Act) and rationalize with pending or proposed legislation (climate change, forest practice, bio-security, energy conservation); and include need to address cumulative impacts in assessments

Air Pollution Regulations

56. Chapter 2401-71 deals with air quality; control of air pollution; certification; registration; and, inspection.

57. These regulations make provision for air quality standards, permits to construct or operate a stationary source (i.e. all air contaminant sources except mobile sources); monitoring; records and reporting of air pollution; sampling and testing methods at boundaries of buffer zones; control of fugitive dust (i.e. any airborne solid matter emitted from any source other than stack or chimney); control of open burning; standards of performance of new stationary sources; control of particulate emission and the design and operation of incinerators; national emission standards for hazardous air pollutants and various other related matters.

58. A 1999 amendment revises clauses 7 and 8 and includes a new provision prescribing that all activities regulated by these regulations must comply with the terms, conditions, provisions and management plans for any national, state or traditional conservation area, preserve or protected area as established by law.

Key recommendation – revise and update regulations and link with emissions regulations proposed in climate change bill

3.3 Other Laws Concerning the Environment

Marine Protection Act

59. The Marine Protection Act (1994) regulates the taking of certain species of marine animals and plants (except birds), and bans or restricts certain fishing methods. Section 4 places various restrictions on fishing within fishery zones, identifies annual fish spawning periods, prohibits the buying or selling of certain fish species during spawning season, sets prohibitions by size for the buying and selling of crustaceans and certain species of fish stocks, including prohibition of fishing for undersized rock lobster, fishing with specified gear, fishing for specified species, and places restrictions on the trade in specified marine fishes and other aquatic species.

60. The Act provides for the promulgation of regulations for the better protection of species from over harvesting or for any other purposes of the Act. The Act, sets restrictions on a number of protected species, including tiau and temekai (groupers), berdebed and kemedukl (bumphead parrotfish), ngimer and maml (Napoleon wrasse), meyas (rabbitfish), cheraprukl (lobster), aquarium fish, many kinds of sea cucumber, ketat (coconut crab), chemang (mangrove crab), and giant clams. These species were given new protections that ranged from size restrictions, seasonal fishing closures, and export bans to restrictions on taking pregnant females. In addition, the new law finally made it illegal to fish with SCUBA gear, or to use undersized kesokes nets and undersized gill nets. The Act is administered by the Division of Fish and Wildlife Protection (DFWP) within the Ministry of Justice (MOJ).

61. Other provisions for protection of fauna and flora can be found in Division II of Title 24, comprise four main chapters including; Endangered Species Act; Protected Sea Life Act (sponges, mother-of-pearl oysters, dugongs, trochus, and turtles);¹⁵ Illegal Methods of Capture Act; and, Protection of Land Life Act (birds, and monkeys). These are summarized in Appendix 3.

Protected Areas Network Act

62. The Protected Areas Network Act (2003) replaced the Natural Heritage Reserve Act in order to fulfill a similar function but streamline the process and make it more attractive for state governments to implement. The Act establishes a nation-wide Protected Areas Network (PAN) which consists of areas which a state or states or national government has or have designated as reserves, protected areas or refuges for the purposes of protection of significant areas of biodiversity, significant habitats, and other valuable resources that are important to the future stability and health of Palau.

63. The PAN Act aims to support conservation and land and marine resource management efforts. The PAN was seen as a necessary tool to ensure that areas representative of the full range of biodiversity in Palau are preserved.

64. States can set the areas aside by passing laws through the state legislature, and then nominate their protected areas for inclusion in PAN. By linking the sites into a national network, the states are able to obtain greater support from the national government in the monitoring and management of marine protected areas (MPAs).

65. Regulations were approved in April 2007, the purpose of which is to implement the provisions of the PAN Act, and to establish a fair and efficient system governing the nomination, designation, and operation/management of PAN sites. The regulations provide for the establishment of the PAN Steering Committee comprising representatives of the 16 states, relevant government agencies and NGOs, and a Technical Committee.

¹⁵ It should be noted that the Endangered Species Program within Bureau of Marine Resources has been working with the legislature to pass an act providing for crocodile protection.

66. The Regulations establish the selection criteria by which an application for a site to be designated as part of PAN shall be considered. The criteria includes; (i) ecological criteria (biodiversity, critical habitats, integrity/intactness, buffering); (ii) resilience (resistant communities, bleaching resistant communities, representative habitats, viability, water quality, functional group representation); (iii) economic criteria (extractive, non-extractive, ecosystem services value); (iv) social criteria (subsistence resource usage, cultural, historical, recreation, aesthetics, research and education); (v) threats (invasive species, existing human impacts, potential development impacts, pathogens); (vi) feasibility (whether the area is an established protected area, has local support, has management capacity, funding, monitoring, enforcement, and partnership); and, Bio-geographic significance (local, national, regional and global significance).

67. For management purposes, the Regulations also define three broad categories of use which reflect traditional, local or national use of a PAN site, as well as six levels of protection based on International Union for Conservation of Nature & Natural Resources (IUCN) guidelines for protected area management (refer to Appendix 4).¹⁶

68. Currently before the Senate is the PAN Self-Sustaining Financing Bill which seeks to establish a PAN Corporation which will distribute funds for the management of PAN sites. The funding is proposed to be levied from visitors through an arrival fee of between US\$35 – US\$50 each, which will be placed into a fund to be split between site management (70 per cent) and PAN Office activities, operations and technical support (30 per cent). The PAN Corporation is also proposed as Palau's coordination and management agency for the Micronesia Challenge.¹⁷

69. The Act is administered by the PAN Office within MRD.

Plant and Animal Quarantine Act

70. The Plant and Animal Quarantine Act (1996) is found in Chapter 20 of Title 25 of the Palau National Code. This Act is concerned with livestock - animal health; international trade; inspection; and, cultivated plants - plant protection, pests, and diseases. The Act regulates certain aspects of the international trade in plants and animals in order to protect Palau against the introduction and further dissemination of injurious insects, pests (including weeds), and diseases into and within the Republic.

71. The Act provides for plant and animal quarantines to be issued and regulations relating to the administration and enforcement of controls established by the Act to be promulgated. Agricultural quarantine inspectors may be appointed to enforce the provisions of the plant and animal quarantines and any regulations.

72. The Act is administered by Bureau of Agriculture (BOA) within MRD.

Recycling Program Act

73. This Act was passed in October 2006. The aim of the Act is to create a self-supported, safe and efficient system for disposal and recycling of beverage containers (plastic, glass and aluminium cans). A Recycling Office is to be established within MRD, and currently the Attorney General's Office is preparing operation guidelines and regulations which will cover the number of staff required, their mandate and responsibilities, and the establishment of a revolving "Recycling Fund" which will be created to finance the program. This Act is administered by MRD.

¹⁶ Use categories include: (a) restricted non-extractive uses; (B) non-extractive uses; and, (c) sustainable uses.

¹⁷ A Palau-driven initiative which, by 2020, requires five Micronesian countries to establish 30% of near-shore and 20% of terrestrial areas under effective conservation and management.

3.4 Pending Legislation

Climate Change

74. A bill concerned with climate change and adaptation mechanisms will be presented to the House in December. The bill proposes a new chapter be included in Title 24 of the National Code which is a framework for addressing climate change in order to protect the regional environment and a national policy concerning climate change and reduction measures.

75. The bill requires a number of government agencies to respond to climate change as set out in Table 3.4.1.

Table 3.4.1 – Government Agency Responses Proposed in Climate Change Bill

Agency	Responses Proposed in Bill
Bureau of Public Works and Palau Public utilities Corporation (PPUC)	<p>Coordinate to formulate and adopt policies and programs relating to the energy sector including:</p> <ul style="list-style-type: none"> - reducing overall energy consumption by 10% by 2020; - increasing current use of renewable energy by 20% by 2020; - initiating and promoting policies to increase charges for excessive energy consumption, and undertake energy audits of consumers; - promulgating regulations that require all national government buildings to increase the proportion of renewable energy to reach 30% of all energy used by 2010 and 50% of all energy used by 2020; - offering incentives for energy conservation, utilizing energy efficient building practices, purchasing of energy efficient appliances
Bureau of Public Safety	<p>Coordinate with Ministry of Commerce & Trade to formulate and adopt policies and programs relating to the transport sector including:</p> <ul style="list-style-type: none"> - adopting emissions regulations that require vehicles to pass an emissions inspection prior to registration; - adopting data collection processes that encompass year, make and model of all vehicles registered in Palau; - adopting strategies and policies that promote use of fuel efficiency and reduce emissions throughout the transport sector (motor vehicles, boats and aeroplanes)
Bureau of Commercial Development	<p>Responsible for formulating and adopting policies and programs relating to the industry sector including:</p> <ul style="list-style-type: none"> - adopting programs and policies that use environmentally sustainable building practices and energy efficient techniques; - promoting the development of a national building code that employs energy efficient and environmentally sustainable building practices
Bureau of Agriculture	<p>Responsible for formulating and adopting policies and programs relating to the forestry and agriculture sector including:</p> <ul style="list-style-type: none"> - promoting local agricultural and agro-forestry efforts to reduce Palau's dependence on imported agricultural products and increase food security; - adopting policies and strategies that promote sustainable and efficient agriculture; - monitoring of forest health; - undertaking tree planting programs; <p>Implementing policies that promote the monitoring and preservation of existing carbon sinks</p>
EQPB	<p>Amend the requirements of the EIS Regulations to integrate elements of climate change including:</p> <ul style="list-style-type: none"> - energy efficiency standards and requirements including renewable energy sources - land use practices that prevent destruction of carbon sinks and valuable forest areas

Table 3.4.1 – Government Agency Responses Proposed in Climate Change Bill...continued

Agency	Responses Proposed in Bill
Minister of MRD (or designee)	Responsible for formulating and adopting policies and programs relating to the waste management sector including: <ul style="list-style-type: none"> - phasing out Palau’s use of incineration as a waste management mechanism; - developing an ecologically sound and energy efficient sewerage and sewage treatment system; - promoting public awareness of environmentally sound waste management practices (recycling, reduction in use of plastics, programs for disposal of hazardous waste)
Division of Environmental Health	Promulgate regulations and implement policies that will: <ul style="list-style-type: none"> - provide for emergency management procedures that may become necessary during or following severe weather events connected to climate change; - mitigate and prevent environmental health impacts related to climate change (including spread of vector borne diseases)
PALARIS	Implement policies that: <ul style="list-style-type: none"> - map land use; - record and map forest cover over time, noting any and all changes; - record and map shoreline changes over time
Ministry of Education	Implement policies and practices that integrate climate change into school curricula including: <ul style="list-style-type: none"> - tree planting programs; - climate change and environmental awareness workshops and seminars
National Emergency Management Office (MOJ)	Integrate the National Disaster Management Plan adaptation measures relating to the impacts of climate change, including floods, drought and other effects of climate change related extreme weather events

76. The bill proposes that MRD hire a climate change coordinator and a National Climate Change Advisory Board is established (largely taking over the responsibilities of the National Climate Change Steering Committee).

77. A climate change mitigation fund is proposed which will finance activities required to respond to climate change and mitigate the impacts of climate change.

Energy Conservation

78. The Palau Energy Conservation Strategy (PECS) is a rider to the proposed climate change bill. The PECS seeks to implement Executive Order 234 (2005) which required Government to reduce electricity and fuel use in its operation and activities, undertake energy audits of government buildings, and determine the feasibility of replacing and/or installing energy efficient measures such as florescent lighting, solar-powered water heaters, and other devices in the buildings.

79. The PECS includes a strategy and action plan covering all aspects of government operations.

80. It should be noted that the EDP specified installation of electricity consumption meters in private and public buildings that were connected to the national grid. A cost of \$120,000 was estimated for this. This is yet to be actioned.

Palau Forest Practice

81. The Bill for the Palau Forest Practice Act was developed in 1992 but is still pending Senate approval. The Bill identifies forest and mangrove conservation areas throughout Palau and would be administered by BOA-Forestry Unit within MRD.

Palau Petroleum Act

82. Commenced in 2004, this proposed Act to create a framework for petroleum operations in Palau has been put on hold pending the findings of the report being prepared by the Oil and Gas Taskforce and World Bank (refer to Section 4.6.3).

3.5 The Planning Framework

3.5.1 Economic Development Plan

83. Palau's Economic Development Plan: Fiscal Years 1995-1999 (EDP) includes a sector analysis and a detailed capital infrastructure program. The purpose of the EDP was to establish the basic performance objectives of the nation and how they could best be achieved.

84. The national objectives, as set out in the EDP included:

- To lay the foundations for achieving economic self-reliance based on a free and vibrant market economy;
- To develop Palau's human, natural and technological resources in a framework of environmental and cultural protection; and
- To achieve measurable and certain progress toward balanced and sustainable development of the various States.

85. Within these overall objectives the EDP clearly states that the small size and fragility of Palau's environment places a high premium on the use of its natural resources, and that in respect of the development of private industry, while it is based on the fullest utilization of human and physical resources, this will be done within a policy of protecting national resources and cultural heritage. As a consequence the 'conservation of environmental and cultural assets' was defined as one of the six categories under which the development plan was framed. Chapter 19 of the EDP covers environment and pollution control. The chapter notes that protecting Palauans depends on the natural environment as the primary foundation for growth and development, and that fishing, tourism and agriculture are all closely linked with the environment.

86. The EDP lists environmental areas of major concern that need to be addressed through the development process; (i) water supply issues – frequent problems with contamination of public water supplies. The need for training programs for operator certification was identified; (ii) solid waste disposal – including lack of facilities to deal with potential hazardous materials dumped at the landfill; (iii) water quality – ongoing and proposed construction along with industrial activities pose risks for the quality of fresh and marine waters and associated flora and fauna; and, (iv) safe use, transport and storage of hazardous materials and pesticides – including the use of unregistered and potentially dangerous materials and pesticides.

87. In addition to the above the EDP also identified a number of impediments to successful implementation of an environmental protection and management program. These are identified in the table below along with progress made on addressing the impediments.

Table 3.5.1 – Impediments to Environmental Management Identified in EDP

Impediment Identified	Actions Taken & Remaining Issues
Need for improved inter-agency review and coordination in respect of projects with potential environmental impacts; Adequate public input into environmental review	EQPB Office requests review and comments on EIS by relevant agencies, comments compiled for EQPB; EIS Regulations require consultation with affected and interested public as part of EIS process; EIS is publicly notified and public can provide comments, prior to filing of EIS with EQPB, proponent responds to comments
Difficulties of hiring staff and undertaking evaluation, review, monitoring, compliance, and enforcement activities	Initial reliance on US EPA for technical assistance; Funding from national government inadequate; Other sources of funding include permit application fees, fines, water quality testing charges
Limited testing for environmental contaminants	EQPB laboratory equipped to undertake water quality testing
Need for stronger enforcement program	Regulations include fines and sanctions; Flexibility in range of fines, large fines imposed upon repeat offenders; Payment of fines incurred by government agencies remains an issue
Need for increased public education in resource and environmental issues	EQPB and NGOs active in environmental awareness raising; Particular issues (i.e. pesticides, filling of mangrove areas) still requires awareness
Need for additional regulations: (i) control point source and non-point source pollution; (ii) discharge of contaminants to waters; and (iii) hazardous waste	Amendments to Air Pollution regulations include point and non-point sources of pollution; No other action has been taken, additional regulations still required

88. There is not a great deal of mainstreaming of the foregoing into the other sectors covered by the EDP, for example, the EDP reports a “limited potential for alternative renewable energy technologies” without sufficient assessment and also without the benefit of an agency tasked with exploring the role of renewable energy within a coherent energy policy. Key deficiencies in respect of the energy sector include:

- Of the 10 energy objectives, none relate to the preparation of an energy policy which can frame research, development, and provision of services in the sector;
- Objective 8 requires the incorporation of energy conservation policy measures into building codes (in respect of new homes and offices) but does not identify the key agencies tasked with this responsibility. This objective also requires PPUC to address the effectiveness of the operations of the national power system; and
- Objective 9 requires that in cases where fuel for conventional power plant is too expensive and/or difficult to transport, supplementing diesel power generation by means of appropriate, alternate and renewable energy will be considered, but there is no energy policy providing for development of renewable energy and there is no definition of who is responsible for considering it.

89. The EDP’s policies and strategies in the energy sector include improving various grids and expansion of electricity through traditional generation and distribution systems but do not require investigation of options for contribution by non-renewable sources. The fifth policy and strategy covers the introduction of energy conservation measures.

90. Such measures require the Government, through the implementation of a building code, require the metering of all facilities (public and private), proper insulations of facilities to be equipped with air conditioners, and the use of solar water heaters instead of electric or gas water heaters for households.

91. The EDP states that the economics of introducing a coal-fired base-load power station to utilize Indonesian coal will be studied.

Key recommendation – any study of introducing a coal-fired base-load power station should also require the environmental impacts be fully investigated along with any implications for Palau being a Party to UNFCCC and the policies, strategies and programs proposed in the climate change bill

3.5.2 National Master Development Plan

92. The 2020 NMDP was developed in 1996 and adopted by the Senate in 1997. The NMDP provides a master plan for the sustainable economic, physical and social development of Palau, including identification of development potential for the 16 States.

93. The NMDP is premised on the overall development vision of substantially enhancing the life of Palauans and future generations of Palauans, and includes three goals to achieve this:

- Increasing real economic growth per capita on a sustained basis;
- Sharing the benefits of economic growth on an equitable basis, but in ways that still reward enterprise; and
- Enriching and enhancing the confidence in Palauan culture, raising national consciousness, and protecting the natural environment of Palau.

94. The NMDP establishes 21 development strategies that will help achieve the goals which can be divided into four broad categories; (i) economic – fiscal policy, macro-economic environment, labour market, foreign investment, taxation and charging, and financial sector; (ii) development sector – infrastructure institutions, public sector investment program, tourism, agriculture, forestry, and industries and services; (iii) service sector – public administration, human resource development, education and training, and health; and (iv) environmental management – land use planning, marine resources, and natural environment.

95. Table 3.4.2 sets out the environmental management aspects of the various development strategies identified in the NMDP.

Table 3.4.2 – Environmental Management Aspects of NMDP Development Strategies

Development Strategy	Environmental Management Considerations
Foreign investment	Take account of natural environment and cultural impact
Infrastructure institutions	Provide infrastructure and services on a sustainable basis
Land use planning	Land management improved through inter alia environmental controls and baseline knowledge
Tourism	Ensuring sector developed within framework of controls and charging systems established to protect the environment and cultural interests
Agriculture	Increase yield and productivity taking into account conservation practices
Forestry	Emphasise watershed production and rehabilitation of degraded land, with lesser emphasis on commercial production

Table 3.4.2 – Environmental Management Aspects of NMDP Development Strategies...continued

Development Strategy	Environmental Management Considerations
Marine Resources	Achieve greater returns on a sustainable basis while maintaining adequate extraction levels for subsistence and the protection of the natural marine environment for tourism and cultural purposes
Natural environment	Improve protection of the environment, or at least measure and make transparent the costs of degradation, through formalizing and streamlining environmental requirements and processes, integrating these into the decision making process, and improving management and education of environmental issues

96. In Chapter 12, the NMDP recommends a number of strategies to protect Palau’s environment through the development or strengthening of policy mechanisms, legislative frameworks, institutional capacity building programs, education, research and data collection.

97. The chapter dealing with environmental planning and management was premised on support for the Comprehensive Conservation Strategy (1992) created by the Division of Conservation and Entomology.¹⁸ The whole chapter needs significant updating and revision to reflect the many changes in both legislation and institutional arrangements that have occurred since 1996. However, a number of the resource management issues and risks identified are still pertinent:

- Need for integrated erosion control and rehabilitation of degraded watersheds on Babeldaob through gully erosion control head-works, re-vegetation programs, and fire control;
- Dredging of coral;
- Destruction of wildlife, and lack of a flora and fauna survey to provide systematic information on botanical, ecological and wildlife resources (including endangered species) to assist environmental planning and management;
- Heritage protection, particularly archaeological sites in the face of increasing tourism;
- Solid and liquid waste disposal;
- Lack of clearly defined roles and responsibilities of National and State Government in respect of resource and environmental management with nationally set legislation and regulations mirrored at state level; and
- Lack of a water ‘master plan’ (including groundwater, surface, mangrove areas, near-shore area, and watersheds).

98. Section 12.4 of the NMDP is titled “Framework for Ecologically Sustainable Development” and endorses the general statements and position of the EDP. The NMDP states that the objectives of the EDP are appropriate for Palau, and to achieve them in an efficient manner, environmental considerations need to be intermeshed into both national and state level decision making. However, the NDMP does not set out the process or mechanism (in terms of policy framework or institutional arrangements) by which this might be achieved.

¹⁸ At that time this division was part of the Bureau of Natural Resources and Development, but was later subsumed by DFWP within MOJ.

99. For example, the NMDP's chapter on infrastructure does not reflect the need to take account of environmental considerations in either the anticipated impacts of poorly maintained infrastructure (strategy and program outputs 6.5 – infrastructure performance) nor does it address environmental impact and management aspects of air, road or sea transportation or supply of electricity, water and sanitation.

100. Like the EDP before it, the NMDP sets out a number of projects and programs to be pursued (including a number of infrastructure projects) and while stating that it is likely that most of the projects would require EIS, they are promoted in the absence of a framework for sustainable development and coordinated environmental management policy. Good examples of this include (i) discussion of power distribution and electricity projects in the absence of an energy policy; and (ii) discussion of two projects in the mining sector without any discussion of role of mining in general, agencies with responsibility for exploration or development of minerals or the need for a mining policy of code.¹⁹

101. Sections 12.5 and 12.6 of the NMDP list a number of proposals and program outputs for management and protection of the natural environment. These are identified in the table below along with the status of each. It should be noted that the proposed UNDP/GEF Sustainable Land Use Management Project is aiming to address a number of the items set out in the table (refer to Section 3.5.9 of this report).

Table 3.4.3 – Status of NMDP Environmental Management Proposals

Proposal	Status & Remaining Issues
Environmental considerations integrated in decision making process for public and private sector projects and programs	Lack of overall management policy framework; EIS requirements project based and not applied to policy or development programs; PSIP not developed within proposed evaluation mechanism that requires inclusion of environmental considerations
Environmental institutions upgraded and rationalised; Merging responsibility for terrestrial and marine resource conservation into single ministry including policing and surveillance	Additional staffing resources identified for EQPB and MRD not engaged; Proposed in the 2008 Budget Bill; Issues of overlapping jurisdiction between bureaus still not addressed
Watershed rehabilitation - land use planning based on watersheds extending from headwaters to outer edge of reef (including streams, wetlands, mangroves and lagoons) covering erosion control, reforestation and fire control	No overall or 'master' water plan identifying links between land use planning, resource management (agriculture, forestry, infrastructure etc); Land use plans only produced for two states; Agriculture Strategic Action Plan 2006 addresses watershed rehabilitation
Watershed management with focus on reforestation and erosion control	No forest policy and comprehensive forest management plan still awaiting preparation; Agriculture Strategic Action Plan 2006 includes restoration and rehabilitation of degraded lands and watersheds as an activity including support for community initiatives; Obligations under UNCCD are partially being met
Research priorities established including identification of gaps and establishment of GIS	Action matrix, MAP and other work of OERC; PALARIS established
Protected area systems – system of protected area categories, designation and management of protected areas	33 protected areas under state legislation; PAN Act passed along with regulations, and currently proposed regulations for financing of PAN Corporation; PAN Office established within MRD

¹⁹ According to Executive Order No. 203, MRD is responsible for (inter alia) exploitation and development of natural resources including minerals but there is no bureau or office within MRD that has been given this specific mandate.

Table 3.4.3 – Status of NMDP Environmental Management Proposals...continued

Proposal	Status & Remaining Issues
Accession to CITES implemented	Completed in 2005
Hunting and fishing controls introduced	Effective through traditional management practice (buls); Management of protected areas; Covered under various legislation; Enforcement difficulties
Waste management and pollution; sewage works upgraded; solid waste management upgraded	JICA funded improvement project being implemented Upgrades still required (pumps and plants inadequately maintained and overflow, EQPB has imposed fines and sanctions that have not been paid); Increase in fees and user charges proposed in 2008 Budget Bill
Recycling schemes introduced	Recycling Program Act passed in 2006; Recycling Office will be established in MRD and Recycling Fund created
'Umbrella' legislation for environment to replace a number of individual acts and regulations	Amendments to various laws and regulations have been proposed and approved, others still pending; Number of important regulations still not promulgated; Need to update EQPA and regulations there-under still required; Umbrella legislation too large to be practicable

102. The NMDP also notes that a number of organizations either have, or assume, responsibility for various aspects of environmental management resulting in considerable overlap, duplication of effort in some areas, and neglect of matters in other areas. This is discussed further in Section 4 of this report.

3.5.3 Study for Promotion of Economic Development

103. The two-volume *Study for Promotion of Economic Development* was prepared by JICA in 2000, this report was intended to serve as a supplementary guide to national planning and the NMDP.

104. The Study included environmental management aspects in two chapters; Chapter 3 – Environmental Management Plan and Chapter 7 – Natural Environment, and addressed some of the issues raised in the EDP and NMDP in more detail. While the environmental chapters discussed the need for integrated watershed management, strengthened pollution controls and coordinated waste management, the critical points were not integrated into the chapters of the Study that dealt with other aspects of the same issues.

3.5.4 Presidential Management Action Plan

105. The Management Action Plan (MAP) was an initiative of the President to provide a cohesive planning structure within the Executive Branch and to ensure the effective implementation of the NMDP.

106. The goal of the MAP is to improve the quality of life of the people of Palau, and in order to progress toward this goal the MAP included a number of objectives, some of which have a direct bearing on environmental management, including; to establish institutions and policies for Palau that will guide it toward achieving economic sustainability; to continue to upgrade and develop Palau's infrastructure to act as a catalyst for a strong private sector growth and foreign direct investment; to integrate environmental planning in all developmental planning efforts; and, to diversify economic opportunities.

107. The MAP noted that in the NMDP, Palau has a very comprehensive planning document that should be integrated into the planning process of all government agencies, but concluded that the NMDP had been and was being unevenly applied.

108. Appendix 5 presents the objectives, activities and issues matrix which includes a detailed assessment of MAP's requirements of the key sectors of public works, agriculture and forestry, and fisheries in respect of environmental management issues.

109. In light of the previous comments made in this report on the EDP and NMDP in respect of energy, the MAP stated that PPUC needs to develop an effective energy conservation program which would facilitate consumer understanding of pricing procedures and promote conservation practices, and required that PPUC, inter alia, undertake the following:

- In conjunction with the MRD strengthen coordination with government agencies with regard to major capitol improvement projects in order to properly address additional energy demands;
- Institute an effective energy conservation program;
- Determine the viability of alternate energy sources and provide recommendations for implementation, including recommended pilot projects; and
- Review operating expenses in view of the high cost of services and make appropriate recommendations for improved efficiency.

110. However, the PPUC was not required to coordinate with MRD's Energy Office in respect of developing a comprehensive energy policy that addressed renewable or alternative energy as well as energy conservation, and the requirements overlooked the need to coordinate with states in supporting their preparation of building codes that would include the need for adoption of energy conservation measures in all buildings and facilities. Addressing additional energy demands and need to implement energy conservation measures should not be limited to capitol improvement projects.

3.5.5 Public Sector Investment Program

111. The EDP was replaced by the Public Sector Investment Program (PSIP) in 2003, which covered a four period. The PSIP sets out the economic and infrastructure development agenda to 2007 and as this document was prepared well after the NMDP and MAP, and even cross-references the MAP as a start-point, it is surprising that it does not set out the priority areas for investment and infrastructure requirements in the context of environmental problems caused by existing infrastructure (especially inadequate maintenance e.g. pumping stations resulting in sewage over-flows) or the need for coordinated and integrated environmental management identified in the several planning documents that were prepared in preceding years.

112. The NMDP stated the objectives of the PSIP are to, inter alia, provide a framework that can account for environmental impacts and effects on Palauan culture, and required that projects included in the PSIP be evaluated through four stages, while all four stages should include some aspect of environmental evaluation.

113. The NMDP does require that during the planning stage project appraisal should include an overall assessment of key economic, political, social, environmental, institutional and financial aspects. The PSIP did not include such an assessment.

114. As noted in Section 2.1, the EQPA requires that in proposing projects and programs, government agencies are required to develop ways of ensuring that environmental amenities and values are given appropriate consideration in decision-making along with economic and technical considerations, and that all such programs include a detailed EIS. Furthermore, the PSIP did not even note the need for EA or EIS for any of the investment projects identified and prioritized in Chapter VI.

3.5.6 Sustainable Tourism Development Plan

115. The 2001 Sustainable Tourism Policies and Action Plan (STPAP) was developed to implement 24 key issues identified in the 1997 Sustainable Development Policies and Action Plan. The recommendations include product diversification, capacity building mechanisms, development of a high-end tourism product, diversification of tour attractions on Babeldaob Island, and effective management of natural and cultural resources. By the end of 2002, a Sustainable Tourism Unit was supposed to be established within the Office of the President to implement the STPAP, however this did not happen.

116. To review the relevance of the actions and issues identified in the STPAP and prepare an action plan for developing the tourism sector, three key stakeholders in the sector – Palau Visitors Authority (PVA), Belau Tourism Association (BTA) and Chamber of Commerce – have created the Tourism Action Plan Committee (TAPC).

117. The mission statement of the TAPC is “to position Palau as the island of choice for environmentally conscious visitors while ensuring visitor experience and Palau’s financial return on a sustainable basis.”

118. The TAPC have undertaken a SWOT analysis which has identified a number of environmental concerns as threats including; pollution; declining marine life; enforcement and environmental policing limitations; lack of incentives for waste minimization; global warming issues; and over-fishing.

3.5.7 Environmental Management Plans

National Environmental Management Strategy

119. The National Environmental Management Strategy (NEMS) was developed in 1993 with assistance from United Nations Development Program (UNDP) and South Pacific Regional Environment Program (SPREP).

120. The NEMS highlights strategies for the development of policy and planning mechanisms for sustainable development, human resource management, pollution control, education and information, preservation of cultural, archaeological and historical resources, and recommendations for long-term sustainable management plans for tourism development, marine resources protection, and agriculture.

National Drought Mitigation Action Plan

121. The 2001 National Drought Mitigation Action Plan was developed to coordinate both public and private sector activities to mitigate and/or adapt to the changing global climate. This Action Plan (i) assessed the country’s water resources, and potential infrastructure development options to manage and expand water storage capabilities; (ii) included assessment of agricultural practices and identification of salinity resistant crops along with potential agricultural sites to sustain nationwide food security during ENSO events; (iii) identified public health capabilities to manage anticipated health effects expected from ENSO events.

122. Several documents prepared since 2001 mention the requirement for priority funding to fully implement this Action Plan.

National Biodiversity Strategy and Action Plan

123. The NBSAP represented the first document to synthesize environmental impacts and the status of their management since the NEMS and represented Palau's initial step to meet its obligations under the UN Convention on Biological Diversity (UNCBD).

124. The themes and actions recommended in the NBSAP are the result of a comprehensive process of consultation. The NBSAP presents guiding principles developed for the successful long-term preservation, conservation, and sustainable utilization and management of Palau's biodiversity along the lines of eight strategic themes which include:

- Protected/managed areas;
- Species protection;
- Bio-security, invasive species and bio-safety;
- Sharing benefits of genetic resources;
- Sustainable economic development;
- Prevention and minimization of waste;
- Agricultural biodiversity; and
- Mainstreaming of biodiversity conservation.

125. The implementation framework for NBSAP will be developed in cooperation with the 16 State governments, traditional leaders, and other relevant stakeholders.

126. The priorities of the NBSAP will be adopted as the starting point for the medium-term development strategy and five-year plan to be prepared under the TA.

Forest Management Plans

127. A Forest Management Plan was prepared in 1995, this provides direction for the long-term sustainable management of Palau's forest systems. The Plan identifies Palau's various forest habitats and establishes guidelines for resource preservation for all forest areas in Palau. The Plan requires updating and translating into a comprehensive management plan as part of a National Forest Program, as per one of the activities of the Bureau of Agriculture (BOA) Strategic Action Plan (2006), which includes the following objectives:

- Objective 1.2 to develop a comprehensive forest management plan;
- Objective 1.4 to finalize land management guidelines for agro-forestry and agricultural management practices; and
- Objective 1.5 to undertake and analyze a comparison of forest cover between 1978 and 2007 and to continue to monitor changes.

128. As part of the Forest Inventory and Analysis (FIA) Program a systematic inventory was undertaken in 2003 and reported in *Palau's Forest Resources*.²⁰ The FIA estimated the forest area, biomass, carbon storage, tree damage, and proportion cover of under-story vegetation species.

²⁰ USDA, US Forest Service & Pacific Northwest Research Station; *Palau's Forest Resources 2003*, Portland, Oregon (2003)

129. The Mangrove Management Plan was prepared in 2000, and provides for a framework for the sustainable management of Palau's mangrove forests.²¹

130. The management direction of the plan was derived from NMDP which identified mangroves as being amongst the most important of Palau's resources, while the goal of the plan was to provide a flexible management program for wisely using and protecting mangroves, and identified specific actions proposed for a five-year planning period. The purpose of the plan included long-term ecosystem management for the sustained yield and productivity of marine and coastal natural resources within, and dependent upon, the mangroves of Palau.

131. The plan has yet to be implemented, and now requires significant revision and updating.

3.5.8 International Conventions and Agreements

132. To further sustainable development initiatives within the country, the Government is a Party to the following international conventions and agreements:

United Nations Framework Convention on Climate Change and Kyoto Protocol

133. Palau ratified the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol in 1999, received its enabling activity funds and also prepared its first National Report to UNFCCC Change in 2001.

134. As outlined in Section 3.4 of this report, with the proposed Climate Change Bill Palau is seeking to incorporate climate change mitigation and adaptation into the national planning process.

135. By mitigating and/or adapting to climate change, Palau hopes to alleviate the social, economic, and environmental stresses caused by global warming by incorporating safety measures to sustain resources, reduce global greenhouse gas emissions by promoting the use of alternative energy, and creating public awareness on the benefits of energy conservation. Palau is also developing its ozone depleting substances phase-out schedule to meeting the international phase-out deadline of 2010.

136. Palau completed its first National Greenhouse Inventory, Environmental Vulnerability Assessment, and conducted its first Greenhouse Gas Inventory Capacity Building Workshop Vulnerability and Adaptation Workshop in 2001. The Greenhouse Gas Inventory and Environmental Vulnerability Index have been incorporated into Palau's annual reporting process.

137. Palau was ranked 73rd out of 235 countries in terms of its environmental vulnerability (1st being most vulnerable). The areas of most vulnerability identified included county fragmentation, isolation, introduced and invasive species, endangered species and extinctions, and weak legislation.²²

United Nations Convention to Combat Desertification and Land Degradation

138. Palau ratified the United Nations Convention to Combat Desertification (UNCCD) in 1998 and completed and submitted its National Action Plan to combat desertification and land degradation in 2004. The Plan highlights Palau's growing concerns over climate induced phenomena such as drought and associated soil erosion and habitat loss.

²¹ Institute of Pacific islands Forestry & US Forest Service; *The Palau Mangrove Management Plan, Volumes I and II*, Koror (September 2000)

²² SOPAC; *Environmental Vulnerability Index Report*, (April 2003)

139. Realizing that prevention of desertification through land degradation mitigation and sustainable land management practices is critical, the UNCCD expanded the scope of its program to encompass activities to combat land degradation. The Second Assembly of the Global Environmental Facility (GEF) designated land degradation, primarily desertification and deforestation, as a focal area as a means to support the implementation of UNCCD in 2002. The GEF approved a specific framework for intervention on sustainable land management (SLM) in 2003.

140. The main objective of the SLM framework, as outlined in GEF is “to mitigate the causes and negative impacts of land degradation on the structure and functional integrity of ecosystems through sustainable land management practices as a contribution to improving people’s livelihoods and economic well being”.²³

141. The National Action Plan addresses the underlying causes of land degradation and drought and identifies measures to prevent and rehabilitate degraded land areas. In line with the scope of the UNCCD, the Plan is directed at solving land degradation challenges, developing strategies for drought mitigation and relief, and encouraging partnership with local communities to combat land degradation in the areas most affected. As a means of addressing land degradation challenges, within the UNCCD framework, the Plan identifies the following strategies:

- Strengthening government and community capacities in SLM, and mainstream SLM into development strategies and programs as well as on-the-ground interventions;
- Developing partnerships for an effective implementation of land degradation prevention;
- Developing the capacity to better consolidate, manage and deploy existing financial resources and strengthen the capacity to negotiate with international and national agencies for increased financial support;
- Coordinating implementation of UNCCD with other appropriate action programs to maximize synergies, align and balance the required supports and resources, and strengthen cooperation with related regional and international institutions and Thematic Program Networks;
- Establishing priorities and developing action plans through active involvement in the decision-making by local communities for implementation, monitoring and evaluation;
- Using best practice knowledge and robust technologies including traditional knowledge and wisdom to formulate planning and monitoring strategies;
- Implementing public awareness campaigns that target improving knowledge of sustainable land management and sustainable agriculture development; and
- Developing local capacity to establish baseline information and conduct benchmark studies on degraded land and SLM implemented activities.

United Nations Convention on Biological Diversity

142. Palau ratified the UNCBD in 1998. The provisions of the UNCBD are set out in 42 Articles, Article 1 identifies the three objectives of the Convention as; (i) the conservation of biological diversity; (ii) the sustainable use of its components; and (iii) the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

²³ GEF; Operational Program 15 (OP 15)

143. Article 6 of UNCBD includes a requirement for each Contracting Party, “in accordance with its particular conditions and capabilities, to develop national strategies, plans or programs for the conservation and sustainable use of biological diversity....” And the NBSAP was prepared in this regard. The NBSAP assessed past and present resource use, including institutional frameworks, and provided sustainable development options and recommendations for Palau.

Convention on International Trade in Endangered Species

144. Palau became a signatory to Convention on International Trade in Endangered Species (CITES) in 2005, which is an international agreement to regulate international trade (import, export and re-export) of listed wildlife species. The aim of CITES is to protect wildlife by ensuring trade does not threaten the survival of a species in the wild, prevent further decline in wildlife populations, and ensure that international trade is based on sustainable use.

145. CITES provides for three levels of trade control depending on the conservation status of the species, and each level of protection has different permit requirements. The provisions of CITES apply to species of fauna and flora, whether dead or alive, and also parts or products derived from these species (e.g. shell of a giant clam). The provisions include:

- Appendix I - identifies immediately endangered species and all international trade in these species is totally prohibited;
- Appendix II - lists species that risk becoming endangered within a short period of time. International trade for these species is strictly regulated through licenses or permits; and
- Appendix III - lists species that are endangered on the territory of one or more countries and are regulated by specific measures that aim to prevent or reduce their exploitation.

146. There are several hundred species listed in Appendix I and over 20,000 species listed on Appendix II. Currently there is a large number of marine ornamental species, both cultured and wild collected that are traded within this industry that are registered in Appendix II. These species can be traded commercially, but require an exporting permit from the host nation stating that trade in the species is legal and is not detrimental to species survival.

147. Each CITES member country is required under the convention to possess a scientific and management authority which is responsible for (i) reviewing all export permits, (ii) undertaking an assessment to determine if the export is non-detrimental to species survival, and (iii) determining the volume of a species that can be traded on a sustainable basis. It is understood that Bureau of Marine Resources (BMR) has the scientific and management authority to issue the export permits but it is unclear as to the scientific capacity of BMR in respect of undertaking the foregoing assessments.

Other Conventions and Protocols

148. In addition to the foregoing Palau is also a Party or Signatory to:

- Convention on Law of the Sea;
- Convention on the Protection of the Ozone Layer, and Vienna Protocol on Substances that Deplete the Ozone Layer;
- Montreal Protocol on Bio-safety; and
- Convention on Persistent Organic Pollutants (POPs).

3.5.9 Sustainable Land Use Management Project

149. UNDP and GEF, with co-financing from Palau Conservation Society (PCS), are providing funding assistance to the four-year \$1.4 million Sustainable Land Use Management Project (SLMP). The frame of the project is that without a formalized and implemented planning and regulatory mechanism, uncontrolled development will lead to land degradation due to unsustainable land use practices. Only a few states have developed land use plans, and these have varying focuses and requirements, and no state has established comprehensive land use and development policies or necessary legislative framework for their implementation.

150. The objectives of the SLMP are set out in Table 3.5.4.

Table 3.5.4 – Objectives of SLMP

GEF Objectives	National Objectives
Strengthen Palau's institutional and human resource capacity to improve equitable SLM planning and implementation	Strengthen institutional and community capacities, including Mechesil Belau, in SLM planning and mainstream SLM into development strategies and programs as well as on the ground interventions that include women
Strengthen Palau's regulatory, policy and economic framework to facilitate equitable and wider adoption and implementation of SLM practices across sectors	Develop partnerships with local institutions, community, and NGOs, including women's groups, in order to effectively implement land degradation prevention measures
Improve the economic productivity of land through SLM and strengthen the preservation and/or restoration of ecosystem stability, functions, and services with equitable participation of vulnerable communities including women	Develop SLM plans, as well as regulatory and policy plans, that equitably engage stakeholders at all levels. These plans will be based on the principle of upholding the biological productivity of the land, with all its ecological and socio-economic value, for present and future generations

151. The major outcomes anticipated of the SLMP include:

- Strengthening institutional mechanisms and capacity for equitable and integrated land use planning and SLM to improve harmonization and implementation at national, state, community and cross-sectoral levels;
- Strengthening of information management systems on integrated land use planning and SLM to support decision making at the national and state levels (including establishment of a library to be housed in PALARIS);
- Development of Best Management Practices (BMPs) and Guidelines for key land use sectors and applications (i.e. agriculture, aquaculture, agro-forestry, residential development, community based eco-tourism, foreign investment);
- Development and implementation of community training and model programs associated with BMPs on integrated land use planning and SLM;
- Strengthening the management infrastructure regarding land degradation and land use planning (following a capacity and training needs assessment, deployment/recruitment of staff and engagement of land use planning advisers);
- Raising public awareness regarding land degradation and land use planning; and

- Strengthening and development of regulations, incentive structures, and policies for integrated land use planning and SLM at the state and national level including establishment of master land use plans (resource availability and demand, land use opportunities and constraints, population growth, land use designation, appropriate densities, and design standards), a National Building Code (plot size, housing size, location, soil suitability, buffer zones) and drafting of a land use law.

152. On the basis of existing and future projected population, state administration staffing and capacity, states may choose which type of resource management planning document would best suit their needs, some states may opt for a land use plan while other states may opt for a watershed management plan. In addition to any protected areas management plans they may already have or propose, either a watershed management plan or a land use plan, along with zoning regulations and a building code will be sufficient for integrated resource management. The SLMP, while aiming to achieve a range of outcome, retains the flexibility for states to choose.

153. Within the approved project framework of the SLMP, the work program and deliverables can be focused to support ongoing initiatives that could achieve some of the anticipated outcomes of the SLMP whilst recognizing the limited institutional and implementation capacity of a small country. The work of the Babeldaob Watershed Alliance is very important in this regard, and is further discussed in Section 4.7.4 of this report.

Key recommendation – the SLMP to consult with states in respect of the type of resource management planning document that best matches their vision, and support the Babeldaob Watershed Alliance to prepare and implement watershed management plans (zoning regulations and building code to comply with watershed management plans).

3.5.10 GEF Pacific Alliance for Sustainability

154. The National Report prepared for the World Bank and GEF Pacific Alliance for Sustainability (GEF-PAS) was based on consultation and negotiated consensus to determine a prioritized list of national projects and regional actions for sustainable development in Palau.²⁴

155. The priorities were reached through discussions at two stakeholder meetings which covered GEF thematic areas and the GEF-PAS requirements of a programmatic approach and where currently proposed projects linked with GEF focal areas and national plans or programs.

156. The projects and their priority, as agreed through the process outlined above, are set out in Table 3.5.5.

²⁴ Government of Palau; *GEF Pacific Alliance Sustainability National Report*, OERC, Koror (November 2007)

Table 3.5.5 – Priority National & Regional Projects

Priority	National Project	Linkage	GEF Financing (US\$000)
1	Capacity Building for SLM (refer 3.4.9)	NMDP, Action Plans for UNCCD/UNFCCC	500
2	Strengthen Effective Management of Solid Waste to Enhance Public and Environmental Health	NMDP, NBSAP, JICA funded Improvement of Solid Waste Management ²⁵ , National Environmental Health Management Plan	979
3	Integrated Wastewater Management for Improvement of Public and Environmental Health	NMDP, NBSAP, Wastewater Management and Environmental Health Program, EQPB's Water Safety Plan, Babeldaob Watershed Alliance	704
4	Sustainable Use of Natural Resources through Effective Watershed Management	NMDP, NEMS/NBSAP, Action Pan for UNFCCC, PCS Ecosystem-Based Management Program	726
5	Integrated Prevention and Management of Invasive Species	NMDP, NBSAP, NEMS, National Invasive Species Strategy, Division of Environmental Health's Vector Control Program, PCS Rodent Eradication Program	610
6	Sustainable Economic Development through Renewable Energy Applications	NMDP, Action Plan for UNCCD, European Union/European Development Fund renewable energy projects, PPUC initiatives	1,000
7	Natural Disaster Preparedness, Response and Recovery	NMDP, National Drought Mitigation Plan, Disaster Mitigation Plan, Action Plan for UNCCD	517
8	Sustainable Use and Management of Locally Important Species	NMDP, NEMS, NBSAP, Action Plan for UNCCD, Coral Reef Research Foundation	836
Priority	Regional Project	Linkage	Internat. Financing (US\$000)
1	Micronesia Challenge – Sustainable Finance Systems for Island Protected Areas Management	NMDP, NBSAP, Action Plan for UNCCD, PAN Act and Regulations, proposed PAN Self-Sustaining Financing Bill	7,550
2	Sustainable Integrated Water Resources and Wastewater Management in PICs	NMDP, NBSAP, Wastewater Management and Environmental Health Program, EQPB's Water Safety Plan, Babeldaob Watershed Alliance	2, 358

3.6 Assessment of Environmental Management Framework

157. Appendix 5 presents the objectives, activities and issues matrix which includes a detailed assessment of the requirements of key sectors in respect of environmental management issues as identified in the various reports and plans discussed in the preceding sections of this report.

3.6.1 Issues Related to Legal Framework

158. In general, although Palau's legislative mechanisms are supportive of protecting the environment and promoting sustainable resource management, strengthening is required. As the EQPA was adopted during the TTA period and was largely adapted from the US's National Environmental Protection Act (NEPA) it needs to be revised to better reflect the Palau political, administrative and socio-economic environment, and be updated to include risks that were not applicable or identified when the EQPA was approved.

²⁵ JICA is implementing the US\$3 million Improvement of Solid Waste Management Project which includes upgrading the M-dock National Landfill and on-going waste management initiatives.

159. Aspects that need to be revised in existing legislation or addressed by new regulations include;

- Revise and update the EQPA and link with relevant legislation passed in recent years (e.g. PAN Act, Recycling Program Act) and rationalize with pending or proposed legislation (Climate Change, Forest Practice, Bio-security, Energy Conservation etc); include risk of climate change and adaptation mechanisms; fully address hazardous materials (including permitting); and address issues of cumulative impacts (discussion below refers);
- Solid Waste Management Regulations linked with initiatives promoted under the Recycling Program Act;
- EIS Regulations revised to address contribution of projects/developments on factors of climate change as well as the possible impact of climate change on the proposed development and attendant mitigations required; and address issues of cumulative impacts;
- Fresh and Marine Water Quality Regulations revised to better reflect inter-related nature of land use development and impacts on coastal zone and coral reef areas in respect of sedimentation and turbidity; minimum quality standards need to be based on biological as well as chemical parameters; effects of cumulative stressors need to be addressed i.e. individual levels for various parameters may be met (on a chemical or biological basis) but the combined and cumulative effect may be significantly adverse on water quality and/or flora and fauna;
- Air Pollution Regulations – revised to address the major risks in Palau (i.e. unlikely to need to address coal-fired power plants or large scale industrial factories) and point source and non-point source polluters (including emissions from motor vehicles), and link with proposals in climate change bill in respect of emissions regulations; and
- Promulgation of zoning rules and regulations (largely driven by states) linking with watershed and forest management plans viz-a-viz development and use of coastal zone, land in watershed areas or drainage basins, and development of the aquaculture sector; building codes linking with energy policy in respect of conservation initiatives.

160. Addressing cumulative impacts and synergistic effects across legislation is important, especially in respect of development and intensifying use of watersheds, coastal zone and mangrove areas, and a developing aquaculture sector. For example, while conversion of a small area of mangrove for aquaculture or community use might be acceptable, the cumulative effect of conversion of several small areas within one watershed or catchment might be unacceptable. This will need to be linked with the preparation of watershed management plans and/or forest and mangrove management plans which define the carrying capacity of each area covered by the plan as well as zoning rules and regulations.

161. Minimum environmental standards for forest cover (including mangroves), as well as water quality, are required and along with forest/mangrove management plans would be best addressed through vegetation clearance regulations which are paralleled with the earthmoving regulations and zoning rules/regulations.

Key recommendation – undertake a comprehensive review and revision of EQPA and Regulations

- EQPA and all regulations promulgated there-under updated and revised to better reflect Palau context and to incorporate climate change risk and adaptation requirements and bio-security aspects;
- Update and revise relevant regulations (EIS, Fresh and Marine Water Quality, Earthmoving) to incorporate the need for assessments to address cumulative impacts and synergistic effects;
- Address gaps in existing regulations e.g. exemption of agricultural activities under the Earthmoving Regulations;
- Support states to promulgate zoning rules and regulations and building codes; and
- Promulgate new vegetation clearance regulations specifying minimum environmental standards for forest cover (including mangroves) and requirement for permit.

3.6.2 Issues Related to Policy Framework

162. Most of the important planning documents prepared since the EDP have included a chapter or section on the “environment” but have largely failed to address environmental management on a sector by sector basis. Environmental management considerations are required to be integrated into each sector rather than constitute a separate chapter or section. This has been achieved to varying degrees. While key planning documents have included a chapter on environmental management, the important observations and guidelines identified in these chapters have not been translated into the other chapters, thereby omitting the “how” for integrating environmental management considerations into sector and infrastructure development.

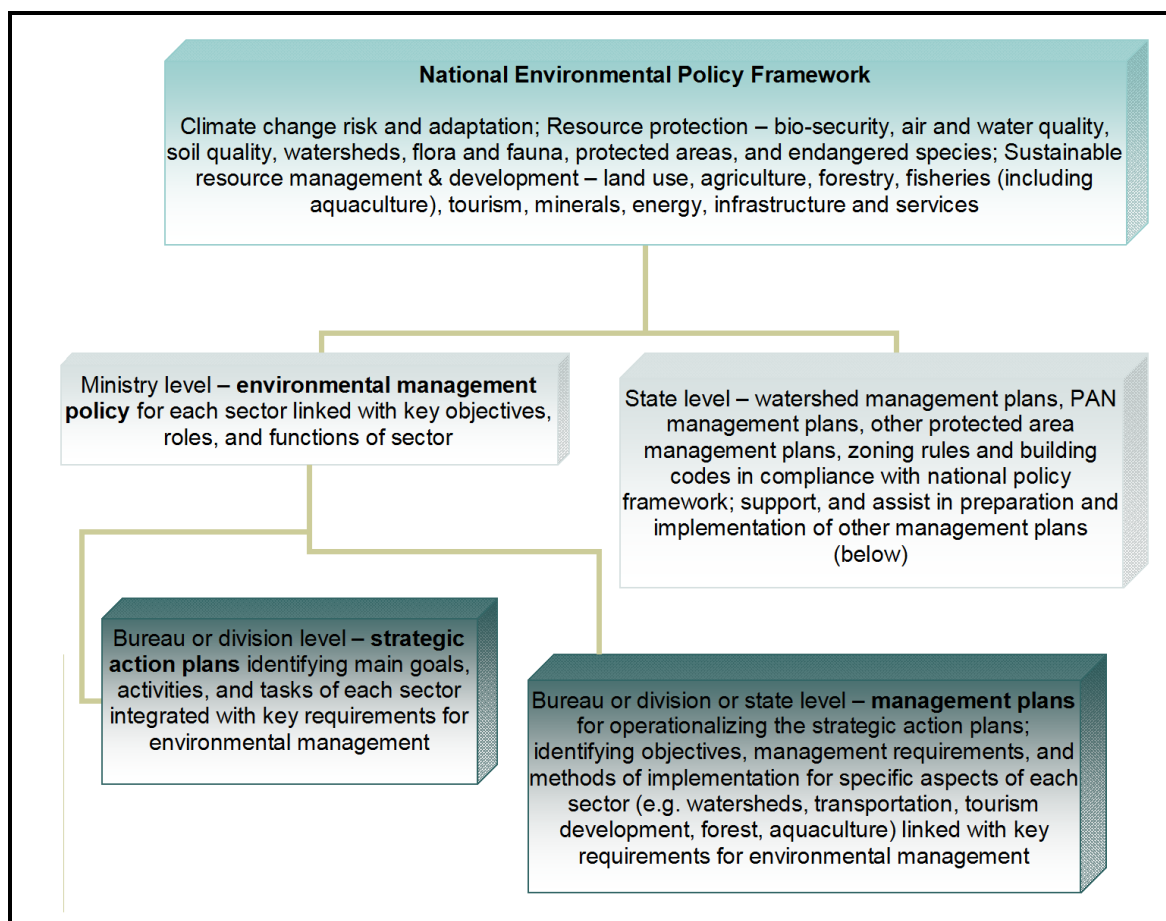
163. The key issue in respect of environmental management is the lack of any overarching policy framework to (i) meet the basic resource management needs (i.e. of Palau for Palau); (ii) fulfill obligations under various international agreements (i.e. of Palau for regional and global community); and (iii) achieve the defined vision and goals as identified in the NMDP and guide future planning and development activities.

164. Currently Palau is endeavoring to meet its international obligations under various conventions and agreements in the absence of a national environmental policy framework, e.g. watershed, land-use and forest policies are required for Palau to be able to ensure an integrated and consistent response to these issues and to meet its obligations under the UNCDD.

165. The NMDP clearly set out a tiered approach to master planning starting with the definition of a national vision and national goals which are to be supported by national strategies, policies, programs and activities. However, these latter mechanisms have been lacking and result in the absence of a cohesive development framework.

166. In order to fill the gaps in the existing framework envisaged in the NMDP, policies in each of the key sectors establishing how different levels of government, including civil society organizations, fit into the framework are required. National policies will provide the objective statement, guidelines and minimum standards in terms of resource protection and resource management; sectoral environmental management policies at ministry level will focus the national objective statements and guidelines; strategic action plans will set out the key activities and tasks of each sector and management plans will provide the mechanisms for 'operationalization' of the strategic action plans. An overview of a possible framework is presented in Figure 2.

Figure 2 – Proposed Environmental Management Policy Framework



167. Future master development plans as well as sector strategic action plans need to mainstream environmental management aspects in line with national policy. Once the national policy framework is clearly established there should not be the need for a separate chapter on environment in plans as environmental management requirements viz-a-viz each of the key policy areas will be addressed in turn by each of the sectors. This will ensure integration of environmental management across sectors. To achieve this, policies are required in a number of key areas;

- Forest, including mangrove, and coastal zone policy linking with watershed management and SLM;
- Energy, including renewable energy. As a priority an energy policy is required that will link with proposed climate change policy and proposed PECS. Coordination is required between MRD's Energy Office and PPUC initiatives, and energy conservation (including metering of government facilities and buildings, and expansion of energy audits);

- Minerals policy covering surface and seabed/ocean minerals (including oil and gas) to resolve issues related to ownership, use rights and royalties. While minerals fall under the purview of MRD there is no division or office within the structure tasked with facilitating mineral exploration and/or development. Some aspects fall to EQPB (environmental considerations for sand mining, rock quarrying, sand and coral dredging activities). Surveying and exploration work in terms of extent of mineral deposits and commercial viability of the same are required; and
- Linked with above is the need to prepare aggregate extraction guidelines addressing sources for construction materials, and sustainable extraction and location of quarry sites etc (i.e. not adjacent to coast).

Key recommendation – establish a clear and over-arching national policy framework for environmental protection and management

- Establish national environmental management policy framework - prepare environmental management policies for key sectors including those previously identified (i.e. forest policy and energy policy) and address gaps in existing policies viz-a-viz new challenges such as climate change and bio-security;
- Complete and/or prepare strategic action plans and management plans for sectors;
- Clearly define the role of, and support, states in resource and environmental management; and
- Within the approved project framework, provide focus to Sustainable Land Use Management Project in terms of identified priorities and future directions of state-led initiatives in respect of watershed management.

168. Such an over-arching framework will provide a mechanism for integrated resource management, for e.g. watershed planning linked with land-use practices and forestry management while also recognizing the complexities of managing the coastal zone, and energy planning linked with climate change adaptation, land-use, and building codes. The SLMP is a big step forward and can contribute to establishing a policy framework within a context suitable for Palau (see discussion in Section 4.5).

4. Institutional Arrangements for Environmental Management

169. As noted in Section 3.1, the EQPA requires all government agencies (national and state) to address environmental protection, resource management and sustainable development issues at some level.

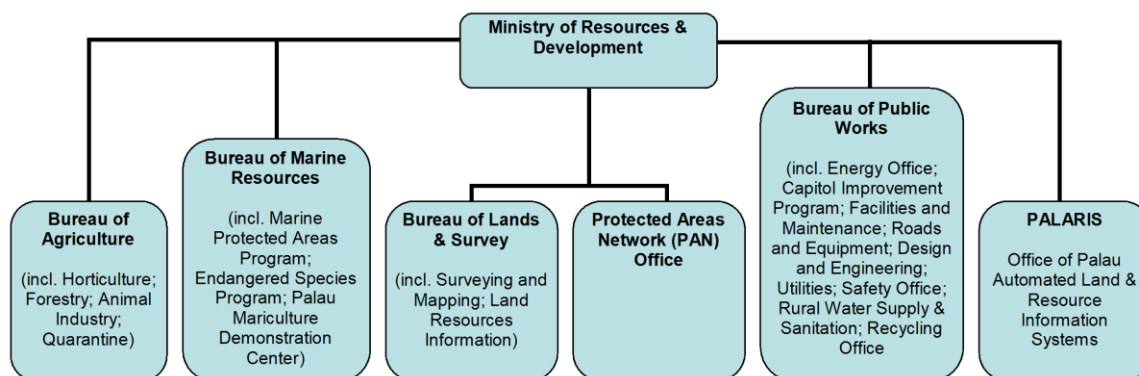
170. At national government level, the ministries most closely associated with sustainability issues as they relate to economic development are the MRD and Ministry of Commerce and Trade (MCT). Both are mandated to source sustainable economic development opportunities that emphasize minimal negative environmental and social impacts to Palau's people and natural habitats. The MCT's concentration is primarily focused on large-scale economic development while the Ministry of Resources and Development focuses on community-based economic opportunities.

4.1 Ministry of Resources and Development

171. The MRD has a very wide, and somewhat contradictory, mandate covering the promotion, exploitation, development and conservation of natural resources of Palau including agriculture, forestry, marine resources and fisheries, mineral and other land-based and ocean resources. MRD's responsibilities also include the maintenance of public/government buildings and facilities, public works, capital improvement projects, and some programs and activities related to land management. MRD has overlapping jurisdiction with each of Palau's 16 state governments for all resources that are located within 12 nautical miles of the high-tide watermark.

172. The MRD comprises a number of bureaus and offices, as shown in Figure 3.

Figure 3 – Existing Structure of Ministry of Resources and Development



173. The PAN Office includes the PAN Coordinator to facilitate the implementation of the PAN Act and Regulations. With technical assistance from The Nature Conservancy in the form of a Protected Area Network counterpart, the state governments will have access to technical expertise and financial resources that are often lacking at the local level to properly develop MPAs.

174. The BOA and BMR are tasked with management and development of their respective sectors as well as conservation, as shown in Table 4.1.1.

Table 4.1.1 - Roles and Responsibilities of BOA and BMR

Bureau	Management & Development Functions	Conservation Functions
Agriculture	Matters involving animal husbandry, quarantine inspections and enforcement; Enforce the Export Meat Inspection Act	Prepare management plans and directions for forestry management activities for native forests, plants, watersheds and mangrove forests, including programs to establish, maintain, enhance, improve and rehabilitate such areas; Oversee programs that address problems or threats from plant diseases, wild-fire, noxious weeds and erosion; Oversee forestry extension programs and forestry activities to manage wildlife with an emphasis given to birds and fruit bats; Conduct environmental education programs directed at preserving forests; Plan for, oversee, and conduct community forestry programs
Marine Resources	Develop inshore fisheries for the purpose of enhancing subsistence and commercial fishing; Promote and develop commercialization of fisheries (incl. pilot programs); Assist in development of state fisheries infrastructure and programs; Assess and evaluate commercial viability of various reef and deep water fish and marine species; Assist in development and implementation of fisheries policy; Provide technical assistance and services to local fishing cooperatives; Maintain and operate the Palau Mariculture Demonstration Centre	Establish programs to hatch and rear identified species to be returned to their natural habitats as a means of preventing depletion; Assist in formulation and implementation of guidelines and conservation measures against over-exploitation and over-harvesting of marine resources

175. As noted in the Agriculture Report prepared for this TA, the functions of BOA are too heavily focused on conservation. This is clear from the table above which shows that of the stated functions of BOA, only two relate to management and development of the agriculture sector, and even these are focused on livestock and do not cover crop production. It should also be noted that the conservation functions of BMR and activities of Endangered Species Program (BMR) overlap with those of the DFWP, and the Marine Protected Areas Program (BMR) has overlapping functions with the PAN Office.

176. Through the Bureau of Public Works (BPW), MRD is tasked with the construction, operation and maintenance of roads, water supply and sanitation systems, sewerage systems, and all government facilities and buildings.

177. An Energy Office is established in MRD to implement the Palau Energy Program. The Energy Office is mandated to prepare and implement strategies and actions covering energy planning, energy conservation, energy efficiency, and renewable energy. The Energy Office will work with the Climate Change Coordinator to formulate an energy policy. Currently the Energy Office is only staffed with two people, but with funding from various European Union grants and programs it is hoped to expand the office to seven staff by 2010.

178. A Recycling Office is to be established within MRD to implement the objective of the Recycling Program Act passed in October 2006. Currently regulations are being prepared which will govern the use of the Recycling Fund, and will describe the responsibilities of staff to be employed in the Office.

179. Under House Bill 7-176-11 HD9 and House Bill 7=189-325 which proposes the Fiscal Year 2008 Annual National Budget Authorization and Appropriation Act (the Budget Bill) MRD is authorized to promulgate regulations to provide for the charging of fees for services provided at landfill operations, while MOF is tasked with creating a special revolving fund – Landfill Operations Fund – into which fees collected from services provided through landfill operations will be deposited and used by MRD for the management and operation of landfills.

180. It should be noted that the MAP concluded that the organizational structure of the then Bureau of Natural Resources must be reviewed to give clear functional direction to each division, and to restructure existing divisions, where appropriate. This directive is endorsed and discussed further in Section 4.8.1 of this report.

4.2 Environmental Quality Protection Board

181. The EQPB is a semi-autonomous agency of the Executive Branch, and is responsible for implementing the mechanisms required to achieve the objectives of the EQPA. The EQPB is established in the Office of the President and consists of seven members (Chair, Vice Chair and five ordinary members) appointed by the President and approved by Senate.

182. EQPB oversees regulations regarding earthmoving, marine and freshwater quality, pesticides, EIS, and air pollution control and is the clearing-house for all physical development activities within Palau. As described in Section 3.1, development projects are required to conduct an EA, and depending on the scale of the project, a full EIS may be required. The EQPB also administers a permit system for the discharge of pollutants, and is required to adopt and implement plans for the certification of applicators of pesticides and for the issuance of experimental use permits for pesticides.

183. The EQPB prepared a Five Year Work Plan 1998-2002 in 1997. This plan set out the program of activities required for environmental protection and specified tasks in four key areas of permitting, inspections and enforcement; program development and planning; environmental monitoring; and, public awareness and education. The Plan has not been updated. Each year EQPB submits to the President an annual performance report.

184. The EQPB conducts monthly water quality monitoring at various sites around Palau, with marine water sites being selected because they are either a popular recreational site or in close proximity to a drinking water station. Turbidity, pH, salinity, dissolved oxygen, fecal coli form, and temperature are collected monthly, and the sampling results from the monitoring program are compiled in a database established in the early 1980s. EQPB issues an 'unsafe for swimming' warning when the fecal coli form count at a site exceeds 20 bacteria per 100 ml.

185. The EQPB is supported by the EQPB Office of 20 staff including; Executive Director and Assistant Executive Director; administration and support services (6 staff); environmental education and outreach programs (1 staff position allocated and filled); laboratory (4 staff positions allocated, one position vacant); environmental engineering (3 staff positions allocated and filled); compliance and monitoring, including solid waste management (3 staff positions allocated, one position vacant); hazardous materials (HazMat), pesticides and pollution (2 staff positions allocated and filled); and, legal counsel (1 staff position allocated, to be filled in February 2008).²⁶ The core functions of the EQPB Office are set out in Table 4.2.1.

²⁶ EQPB; *Annual Performance Report*, Koror (2007)

Table 4.2.1 – Core Functions of EQPB Office

Section	Function	Methods of Implementation
Laboratory	Regulating and monitoring the quality of water supply systems, marine waters and rainwater catchments for schools	14 water supply sites tested monthly (Koror/Airai) 16 sites tested monthly (rural water supply) 35 marine sites tested monthly ²⁷ 12 river sites (to support watershed management) Responding to complaints in respect of contaminants ²⁸ Public education and awareness programs Pre-permit approval site inspections
Compliance & Monitoring	Conducting all preliminary survey and inspections for developments; Ensuring that landfill sites comply with EQPA regulations regarding solid waste management practices	Pre-permit approval site inspections Construction and post-construction site inspections Drafting of permit conditions Landfill and dump site compliance Compliance with permit conditions Responding to complaints
Environmental Engineering	Overseeing developments, reviewing permit applications, reviewing EA and EIS, drafting conditions for permit and EIS approval, addressing long-standing problems with infrastructure and solid waste management	Pre-permit approval site inspections Proposed development (EIS) site inspections Drafting of permit and EIS approval conditions Monitoring of Compact Road construction activities ²⁹ Providing technical advice to national and state government agencies regarding improvements in infrastructure and waste management
HazMat, Pesticides & Pollution	Reducing and mitigating the effects of hazardous material spills, conducting educational drives to reduce the presence of hazardous materials in Palau; Regulating pesticide use	Implementation of mitigation measures for hazardous materials incidents Educational programs and campaigns Farm and dealer pesticide inspections Pesticides applicator training and compiling pesticides tracking system Regulating phase-out of ozone depleting substances Responding to requests in respect of invasive species Responding to complaints
Legal Counsel	Conducting enforcement actions for non-compliance; Issuing Notice of Violation Orders and Cease and Desist Orders; Initiating legal proceedings against non-compliers; Assisting EQPB with drafting and/or revising regulations	Minimizing legal actions taken against EQPB Using regulatory enforcement process and imposing fines to ensure compliance and reduce future violations Assisting government committees and agencies with environmental legislation related requests Responding to requests in respect of drafting and/or revising regulations
Environmental Education	Raising public awareness of environmental issues to better protect the environment and public health through increased compliance	Conducting community outreach and awareness programs Conducting workshops and seminars on environmental protection issues Conducting public relations campaign on EQPA regulations Attending and supporting public hearings for EA and EIS review

186. To address the growing health and sanitation issues associated with climate change events i.e. unsafe water supplies, salt-water intrusion of water supplies, emergency health requirements in response to impacts from extreme weather events, and spread of vector borne diseases, the EQPB and the Division of Environmental Health administer the Action Plan for Environmental Health and conducting a public awareness campaign.

²⁷ To assist with implementation of the Integrated Solid Waste Management Project this includes 3 sites in the vicinity of M-Dock Landfill.

²⁸ The EQPB's Annual Performance Report notes that most complaints are related to either petroleum (fuel or oil) contamination of marine waters or fecal contamination of freshwater from raw or partially treated sewage flowing from failed leach fields or sewage pump stations.

²⁹ Grant funds for Compact Road monitoring activities ceased on October 31 2007.

187. The public awareness campaigns consist of practical community workshops that provide hands-on knowledge on the proper techniques for preparation, treatment, and storage of residential drinking water. Additionally, the campaigns utilize the media to reach all audiences with on-going public announcements regarding health and sanitation issues relating to climate change events.

4.3 Office of Environmental Response and Coordination

188. The Office of Environmental Response and Coordination (OERC) is created by Executive Order 189 in 2001. The OERC was established to coordinate and implement the UNFCCC, UNCBD and UNCCD, and to develop a broad and coordinated planning approach to issues of environmental response. As per the Executive Order the OERC is mandated to:

- Provide coordinated planning for the response to issues of global climate change, biodiversity, desertification, land degradation and other internationally identified and funded environmental initiatives;
- Develop a broad and coordinated planning approach to issues of environmental response within Palau;
- Integrate governmental environmental programs into Executive Branch environmental response planning;
- Establish a coordinated grant writing capacity on environmental issues that are identified priorities within Palau;
- Assist environmental support agencies in the development of funding assistance for environmental programs in Palau; and
- Permit economies of scale in the government's staffing of environmental programs funded by international agencies.

189. The OERC has a staff of seven whose operations and activities are wholly funded by grants and foreign assistance.

190. The OERC is also Secretariat for US Coral Reef Taskforce, International Coral Reef Initiative, National Environmental Protection Council (NEPC), and Oil and Gas Taskforce (OGTF).

Climate Change Coordination

191. The OERC prepared the *First National Communication to the UNFCCC* in 2002, the Second Communication is currently being prepared and is due for completion in November 2008. The National Communications include; a greenhouse gas inventory; a mitigation plan to reduce greenhouse gas emissions; a renewable energy plan; a vulnerability assessment; and proposed adaptation measures to respond to the future implications of climate change.³⁰

192. A statement of policy, commitments, obligations and goals for climate change has recently been completed, is being widely consulted upon, and will be presented to the House as a bill for an act in December. This has been discussed in Section 3.4 of this report.

³⁰ It should be noted that ADB is currently preparing a Climate Risk Profile for countries in the Pacific which will provide key information for climate change projection specific to a country, and will provide a consolidated database to assist in planning for climate change adaptation.

Invasive Species Coordination

193. In response to at least 12 of the 100 worst invasive alien species in the world taking hold in Palau,³¹ a ten member National Invasive Species Committee (NISC) under NEPC was established to address this issue in 2004. A policy and strategy was developed and adopted in 2005.

194. In cooperation with a number of other agencies and organizations and a \$100,000 grant from Taiwan, NISC developed Operation Counter-Invasion. The program included: creation and staffing of a National Invasive Species Coordinator position within OERC (August 2006); strengthening Plant Protection and Quarantine Service (BOA); funding a public awareness program focusing on two key invasive species [the invasive vine kebeas (*Merremia peltata*) and macaque monkeys (*Macaca fascicularis*)]; strengthening the invasive weed eradication program; partial funding for a baseline survey of marine invasive species; and funding eradication of three high priority invasive species projects.³²

195. Palau was one of founding members of the partnership to create the Pacific Invasives Learning Network (PILN), which was officially launched in November 2005. In May 2006, Palau hosted the first meeting of the PILN, where teams from six island countries and territories shared information and developed project plans. Teams from Palau, American Samoa, Guam, Niue, Pohnpei, and Samoa participated in the inaugural session.

196. Most recently OERC has cooperated on the drafting of a framework for bio-security compliance with World Trade Organization requirements.

197. A key issue to be addressed with priority is the status of OERC. As it is an Office of the President and not part of the government structure it can be disbanded by any future president and important planning and national coordination functions in respect of environmental management would be lost.

Key recommendation – the environmental planning and coordination functions of OERC in respect of environmental response and fulfilling international obligations be formalized within the government structure

4.4 Palau Public Lands Authority

198. Under Article I, Section 2 of the Constitution each state has “exclusive ownership of all living and non-living resources, except highly migratory fish, from the land to twelve nautical miles seaward of the baseline”. Article X, Section 5 of the Constitution states that National Government holds the right to regulate ownership, exploration, and exploitation of natural resources and to regulate the use of navigable waters. These two articles, and the definition or intent of the words “from” and “baseline”, have been interpreted differently by National and State Governments, leading to a tension over ownership and management of land and resources upon the land.

199. Title 35 (Public Lands Act) of the National Code establishes the Palau Public Lands Authority (PPLA) to hold title to, administer, and manage public land for all the people of Palau. In respect of public lands, the PPLA is mandated to:

- Identify, survey, inventory and maintain records of such lands;

³¹ Invasive species compete with native plants and animals, displace them, consume them, act as parasites, cut survival rates, and can even cause the extinction of a species.

³² NEPC-NISC; *Annual Report*, Koror (2006)

- Where title is uncertain, take all necessary steps to administratively and legally secure clear title to such lands;
- Effect positive and beneficial public use of such lands;
- Safeguard the public nature of such lands to the extent advisable by preventing private use, except where such private use is secured through a valid lease or other agreement;
- Assure that all use of such lands comport with applicable land use and zoning laws, permits, and applicable legal requirements an laws;
- Assure that all uses of such lands comport with applicable environmental laws and that the objective of environmental protection of such lands is accorded appropriate weight in public land use decisions;
- Assure that all uses of such lands comport with all applicable national historical preservation laws and policies; and
- Utilize such lands so as to provide for the creation and maintenance of areas for present and future public uses, including recreational uses, public parks and beaches, historical and ecological preservation purposes, marine and wetland areas, and other designated public uses.

200. The PPLA is also to establish the guidelines and procedures for the operation of state authorities in respect of public lands, while Article 215 of the Act provides for states to establish a State Public Lands Authority (SPLA) to receive public lands from PPLA, and for which the PPLA may delegate powers and duties to SPLA in respect of transferred public lands.³³ The PPLA administers and regulates SPLAs, and is required to monitor their activities and compliance with applicable laws and regulations.

201. The Public Lands Act provides for PPLA to establish rules and regulations and propose legislation pertaining to its obligations, powers, duties and programs. Regulations Affecting the PPLA and SPLAs were approved in 1999, these regulations detail duties, operations, process for leasing public land, and the homesteading program. There have been no land-use planning guidelines or zoning regulations promulgated by PPLA.

4.5 The Role of States

202. Despite any tension between National and State Governments in respect of land ownership noted above, the states have a crucial role in effective resource management. States have established, and manage, protected areas, and have established SPLAs, although the SPLA is not functioning adequately in all states. Monitoring and enforcement, as at national level, is patchy, with some states performing well, such as Koror State which has established Koror State Rangers and State Department of Conservation and Law Enforcement, while other states do not even have a conservation officer.³⁴

203. Even without the constraints of a limited fiscal envelope, resource management efforts need to be rationalized, particularly in a small country like Palau. At the time of the 2006 Housing Income and Expenditure Survey it was estimated there were less than 5,000 occupied households in Palau, of these, nearly two-thirds were located in Koror, followed by Airai State accounting for 14%.

³³ This refers to all of PPLA's functions with the exception of exercising the right of eminent domain which can not be delegated to states or to any other body.

³⁴ Koror State has also enacted over 30 pieces of state legislation in respect of environmental protection and resource management.

Table 4.5.1 – Distribution of Households and Population

Area	Occupied Households	Total Population	% of Population
Koror	2,958	11,668	63.6
Airai	651	2,506	13.6
East Babeldaob	463	1,490	8.1
West Babeldaob	311	1,413	7.7
Peleliu	182	646	3.5
Kayangal/Angaur	178	600	3.2
Total	4,744	18,324	

Source: 2006 Household Income and Expenditure Survey

204. On the basis of existing and future projected population, state administration staffing and capacity, states may choose which type of resource management planning document would best suit their needs, some states may opt for a land use plan while other states may opt for a watershed management plan. In addition to any protected areas management plans they may already have or propose, either a watershed management plan or a land use plan, along with zoning regulations and a building code will be sufficient for integrated resource management. The SLMP, while aiming to achieve a range of outcome, retains the flexibility for states to choose. Requiring that every state, regardless of its population size, prepare a land use plan is administratively cumbersome. Given that Babeldaob comprises ten states and a population of only around 6,000, a more holistic approach would be to prepare plans that aim to manage resources along watershed/water catchment lines, this would also mean that states that share watersheds can share the planning and management of resources. The Babeldaob Watershed Alliance (BWA) has been established, by states themselves, for this very purpose, this is discussed in further detail in Section 4.7.4.

205. Designated PAN sites each require their own management plans, these would need be cross-referenced in watershed management or land-use plans and zoning rules.

206. The MAP required that BPW develop a zoning and building code for government buildings. However, zoning regulations and building codes are under the purview of states, and one set of zoning rules and building codes should be applicable across all buildings in any one state whether government owned or not. Therefore, states should consult with BPW (as well as MRD's Energy Office) on specific requirements for government buildings, but BPW should not develop separate zoning regulations or building code.

207. As long as management of resources complies with national policy and law, a state is able to enforce more stringent or additional measures if it chooses, as Koror has done. This would mean that minimum environmental standards are set by national government by way of regulations and/or policy, and states (with support from bureau level) prepare and implement key resource management plans such as watershed management plans and protected area management plans.

Key recommendation – states be provided with support to prepare and implement either land-use plans or watershed management plans, zoning regulations and building codes within an environmental management framework

208. In order to fully support states, clearly identifying the mechanism to help states deliver resource management strategies and plans is required. Currently, there is no clearly defined agency with responsibility to assist states. The Bureau of Domestic Affairs within Ministry of State is tasked with assisting states in terms of state legislation and regulations while the different bureaus within MRD assist states in terms of various resource management directives.

209. States require the assistance of one clearly identified agency within government to access information and technical assistance available through grants (including knowledge about grant availability, proposal writing, project/program implementation and reporting requirements).

Key recommendation – establish one agency (division or office) within government that is tasked with assisting states to access grant funds for resource management

210. States are also required to coordinate with National Government in respect of infrastructure provisioning. As noted in Section 4.1, the Budget Bill provides for MRD to promulgate regulations in respect of landfill charging fees, under the Budget Bill MRD is tasked with working with concerned states in the implementation of such regulations.

4.6 Advisory Councils and Taskforces

4.6.1 National Environmental Protection Council

211. The NEPC was established in 2002 under Executive Order 205, and is a management-level advisory council comprised of stakeholders from every government ministry, agency, and NGO that has environmental components and concerns in Palau. The NEPC is mandated to serve as the focal coordinating group for all environmental initiatives at the national and international levels. The NEPC also contributes to the review, revision, and proposal of new legislation that applies to Palau's environmental priorities and issues. The Republic's top environmental priorities: to stop and reverse land degradation; reverse coastal sedimentation; stop poor resource use practices; improve environmental monitoring; and stop large scale biodiversity loss through the management and protection of habitats and endangered species.

212. The duties and functions of NEPC are to:

- Identify and prioritize national environment issues within the context of sustainable development within Palau;
- Propose a comprehensive sustainable management plan highlighting the Republic's national priorities and policies;
- Establish clear, concise, documented and endorsed national guidelines for environmental programs and projects pursuant to established priorities;
- Comment on all proposed public and private development projects to ensure environmental sustainability and integrity;
- Propose legislation to protect the environment; and
- Serve as the focal coordinating group for all environmental initiatives at the national level.

213. The NEPC is the National Steering Committee for the UNFCCC, UNCBD, UNCCD, Bio-safety Protocol, and the Vienna Convention for the Protection of the Ozone Layer.

214. The NEPC will act as the National Steering Committee for all future international environment and sustainable development initiatives within the country. As noted previously, the NEPC also establishes committees, such as NISC, for specific concerns.

4.6.2 Palau Natural Resources Council

215. The Palau Natural Resources Council (PNRC) was established in 2001 by Executive Order 231. The PNRC is an officer-level advisory council with a mandate to provide comprehensive analysis, planning, and implementation on methods of preventing soil erosion, improving water quality, and protecting other natural resources. Members include all relevant stakeholders from national and state governments, NGOs, and traditional and community leaders.

216. The duties of PNRC are defined as:

- To promote and coordinate the implementation of national policy regarding soil, water, and related terrestrial resource conservation;
- To recommend measures to strengthen national policy regarding soil, water, and related terrestrial resource conservation;
- To identify local conservation needs and develop, implement and evaluate programs and projects to meet those needs;
- To help educate and inform landowners, operators and lessees, the general public and local, state and national legislators on conservation issues and programs;
- To provide for and encourage surveys, investigations and research relating to terrestrial resource conservation;
- To support and encourage demonstrations relative to the control and prevention of soil erosion and the promotion of conservation for enhancement of terrestrial resources; and
- To create sub-committees as deemed appropriate.

217. Palau is one of several entities that make up the Pacific Asia Biodiversity Transect Network (PABRITA) and the involvement of Palau is coordinated through PNRC.³⁵ PABRITA is a network of conservation management organizations (including the University of Guam, University of Hawaii and University of South Pacific) and ecologists that work cooperatively to achieve the conservation of coastal and marine environments and the sustainable use of marine resources. A major activity of PABRITA is to undertake transect research in each region of the Pacific, and is seeking to standardize assessments and survey methodologies in order that comparisons between the different regions can be made. Palau has been selected as the transect site for Micronesia.

4.6.3 Oil and Gas Taskforce

218. The 11-member Oil and Gas Taskforce (OGTF) was established by Executive Order 241 in 2007. The first meeting of the OGTF was held in June.

³⁵ Previously known as Marine Resources Pacific Consortium (MAREPAC)

219. The members of the OGTF include two members appointed by the President, one member appointed by the Senate and one appointed by the House, a representative of EQPB, two representatives of Chamber of Commerce, and two representatives of the Governors Association.

220. The main duties of the OGTF are to (i) assess the viability and the environmental and socio-economic impact of the development of the petroleum sector; (ii) propose the necessary legislation, contract and fiscal policies, and associated regulatory framework; and, (iii) propose institutional arrangements for the management and oversight of the sector at national and state level.

221. The activities of the OGTF are funded through special allocations from the national budget, and from grants provided by international donors. A Multi-Donor Trust Fund administered by the World Bank has been established to support the design of the legislation and regulatory framework for development of the sector. A Grant Agreement between the Government and World Bank (April 2007) covers the following activities; development of a hydro-carbon code and model agreement; development of petroleum operations regulations; development of environmental regulations for petroleum operations; development of hydro-carbon tax regulations; and, performance of project financial audits.

222. In order to consolidate public opinion over hydro-carbon resource exploitation and allocation of revenue between states and national government, it was agreed that the OGTF, with assistance from the World Bank, would oversee and direct the analysis and preparation of a report to be presented to the House and Senate and to civil society for comments. The report will cover the following areas:

- Ownership of hydro-carbons with particular emphasis on its implications in terms of granting of exploration and production rights, management and oversight of the sector, and revenue allocation between the states and national government;
- Capacity constraints and implications for the creation of local business opportunity and employment;
- Advantages and disadvantages of alternative institutional set ups for the management of the petroleum sector;
- Fiscal terms generally applicable to oil and gas exploration and production and their effects on investment decisions and government revenues; and
- Absorption capacity and inter-temporal distribution of revenue.

4.6.4 Tourism Action Plan Committee

223. As discussed in Section 3.5.6 of this report, the TAPC is made up of three key stakeholders in the sector (PVA, BTA and Chamber of Commerce). The TAPC was formed in response to a lack of progress in the development of sustainable tourism, and is currently preparing a five-year Action Plan.

224. The TAPC is also and working with Koror State to update its land use plan and zoning regulations to ensure the development of tourism facilities in appropriate zones/areas and remove or reduce conflicts between tourism and other uses.³⁶

³⁶ Examples cited were the location of a four-star hotel next to the bulk oil storage plant and in close proximity to the commercial port.

4.7 Non-Government Organizations

225. NGOs have played an active role in protecting Palau's biologically significant habitats.

4.7.1 Palau Conservation Society

226. The Palau Conservation Society (PCS) is a community based NGO formed in 1994 with a membership in the order of 200 and governed by a Board of Directors. The vision statement of PCS is "healthy communities, healthy ecosystems" and its main constituency are communities and states.

227. The 23 staff of PCS are structured in teams which have core functions which support and inter-link with each other; terrestrial resources; marine resources; ecosystem-based resource management; community education; research; community visioning; and, finance and administration. Funding is derived from grants, corporate sponsorships, consultancy fees, events, and an endowment.

228. The PCS implements activities based on its Ten-Year Goals developed in 1995 and three-year strategies that are re-visited and updated on an annual basis. The work of PCS focuses on three primary areas; working with communities to manage protected areas; natural resource management planning; and, education awareness and community capacity building.

229. Two important components of PCS' natural resource management activities are the Community Visioning Project which seeks to assist communities in identifying what their needs and visions are in respect of resource management and how they can fit into the overall national policy framework, and the Ecosystem-Based Management Project (targeted at integrated resource management on Babeldaob).

4.7.2 The Nature Conservancy

230. The Nature Conservancy (TNC) is a large international NGO which has been active in Palau for about 12 years. The TNC Palau office includes six staff who implement activities identified in the Five-Year Strategic Plan, which is currently being updated to be more closely aligned with the Micronesia Challenge.

231. The current Director is also the Advisor for TNC's Protected Areas Network Micronesia Program. Through technical and other assistance the TNC supports the PAN Office and BWA.

232. The two major programs of TNC are (i) watershed protection with the objective of protecting water quality, quantity and preventing or reducing siltation – focusing on anticipated impacts of completion of the Compact Road, reforestation, supporting the BWA, and addressing the institutional issues of watershed management. TNC is funding seedlings production through expansion of BOA nurseries in the order of \$10,000; and, (ii) identification of state specific priority areas as part of the Protected Areas Initiative Program with the two objectives of protecting Palau's biodiversity, and assisting states to manage their natural resources.

4.7.3 Palau International Coral Reef Center

233. The Palau International Coral Reef Center (PICRC) was established by law in 1998 as a self-sustaining, non-profit coral reef center and marine park to provide a forum for coral reef studies, research and education. PICRC carries out education, training and research programs and provides information and technical support to Palau's traditional chiefs for managing the reefs and implementing traditional conservation practices.

234. In 2001 PICRC launched a nationwide coral reef monitoring program, the objectives of which are to: (i) establish permanent monitoring sites; (ii) determine the status of Palau's reefs; (iii) assess changes to the benthic and fish communities at each site over time; and, (iv) examine the recovery process from the 1997-1998 bleaching event at each site. The program consists of a rapid assessment of reef habitats using the spot check method and a detailed monitoring survey of benthic organisms, fish size and abundance, and coral recruitment.

235. PICRC conducts research to assess the efficacy of several MPAs in Palau. MPAs will be selected based on the level of management, geographic distribution, size, the protection timeframe, and willingness of managers and community members to be evaluated. The main objective is to improve the management of MPAs in Palau, thereby making MPAs more effective in meeting their goals and objectives.

4.7.4 Babeldaob Watershed Alliance

236. The BWA was established in December 2006 and is a community driven initiative aiming to protect and manage watersheds on Babeldaob, the initiative is spear-headed by the understanding that watersheds cross political boundaries, and activities and developments in the watersheds can create problems in the coastal zone and mangrove areas. On December 15th 2006, the traditional and elected leaders of Ngeremlengui and Melekeok states convened to formalize establishment of the BWA as an alliance to engage in cooperative fundraising, build public and political support, and build capacity of BWA members in the protection of their watershed areas. The BWA was joined by Ngiwal state in November 2007.

237. The mission of the BWA is to protect, conserve and restore the water resources of Babeldaob through collaborative outreach, education, networking, science, information sharing, and technical assistance by and for the communities of the island. It adopts a 3-prong approach of managing the upper watershed, the major drainage basins, and mangroves.

238. The guiding purposes of the BWA are clearly articulated in the Master Cooperative Agreement, and can be summarized as; watershed areas are a primary source of water for Babeldaob and active management is needed to maintain healthy forested watersheds to sustain the future quality and quantity of the island's water supply. Active management of these forested watersheds also benefits Babeldaob's native flora and fauna which face many of threats from unmanaged development.

239. The aim of the BWA is that by 2010 it will work with public and private partners in to achieve five shared goals:

- Goal 1 - to increase involvement of local leadership and public awareness of watershed management and water resource issues in the Babeldaob watersheds;
- Goal 2 - develop sound financial and technical support for the BWA;
- Goal 3 - integrate watershed management practices with planning activities and policies in the Babeldaob watersheds;
- Goal 4 - implement water monitoring activities in Babeldaob watersheds; and
- Goal 5 - expand the BWA to include all states in Babeldaob.

240. Currently the BWA is assisted, through provision of support and technical assistance, by TNC and PCS.

Key recommendation – recognize the importance of the work of BWA in terms of integrated resource management that fills gaps currently left by an under-resourced national government, and support BWA to receive assistance through the SLMP

4.8 Assessment of Institutional Arrangements for Environmental Management

4.8.1 Identification of Institutional Challenges

241. In respect of the institutional arrangements for environmental management, the key areas that need to be addressed include:

- Lack of singular institutional arrangements – at both ministry and bureau level - for environmental protection and resource management because of the over-lapping mandates and jurisdictions of many government agencies and advisory councils;
- Lack of capacity (staff, skills, and resources); and
- Funding issues.

242. Following on from the key point made in Section 3.6, the lack of an overall policy framework is a stumbling block for the different agencies and stakeholders that can make contributions to resource and environmental management. Once the key policy areas are addressed, the national policy framework will facilitate much simplified institutional arrangements. The activities of ministries, bureaus and states can then be focused to key activities, such as management plans, that will comply with minimum environmental standards.

243. A concern in respect of the existing structure is that there is no dedicated ministry for environment and natural resources, and that given the emphasis of MRD (in terms of numbers of staff and budget allocations) is on infrastructure and government facilities, environmental management is implemented in an ad hoc manner. In addition to resource management responsibilities, MRD also has responsibility for public works and services, and thus has multi-competing demands for limited staff and resources within unclear institutional arrangements. Furthermore, MRD has overlapping jurisdiction with states and other government and quasi-government agencies which also have mandate for some aspects of land based and ocean resources management, which leads to both over-management and confusion of roles and responsibilities.

244. There are two issues related to MRD's mandate in respect of resource management (i) it is confused and conflicting which results in a mismatch between the drive (and therefore activities) to exploit and develop on the one hand and to conserve on the other, and (ii) there is a disconnect between the service delivery requirements of the agriculture, forestry and fishery sectors and over-arching environmental management needs such as forest policy and management, watershed management, sustainable land use development, and degraded land rehabilitation.

245. An example of the confusion and over-management is coral reef resources management, as shown in Table 4.8.1 which provides a summary of the organizations with a mandate for, or interest in, coral reef management.

Table 4.8.1 – Coral Reef Management Responsibilities

Agency	Planning & Management	Research	Monitoring	Education	Training	Enforcement
MRD-BMR (Marine Protected Areas Prog)	●	●	●			
MOJ-DFWP	●	●	●			
MOJ-DMLE						●
Env. Quality Protection Board			●	●		●
PAN Office	●	●	●	●	●	
State Dept Cons & Law Enforcement	●	●	●	●	●	●
State Rangers						●
Communities/clans	●	●	●			●
Palau Conservation Society			●	●		
Palau International Coral Reef Centre		●	●	●	●	
Coral Reef Research Foundation		●	●			
The Nature Conservancy	●	●		●	●	

Source: Based on Golbuu & Bauman - *The State of Coral Reef Ecosystems in Palau (2004)*

246. The above situation – confused management responsibilities and over-lapping jurisdictions - is compounded when all resources and aspects of their management are considered, and even further exacerbated in a small-state context where resource management capacities are stretched.

247. As shown in Table 4.8.2, some resources have as many as seven government agencies with mandates for some aspect of their management and this does not include advisory agencies such as NEPC, PNRC or NGOs who are also involved. Addressing the problems of over-management and over-lapping jurisdictions is discussed in Section 4.8.2 of this report.




4.8.2 Proposals for Streamlining Environmental Management

248. A proposal to reorganize government has been tabled for some time, and has gone through several revisions. Under Section 21 of the Budget Bill, a reorganization of the Executive Branch is proposed by which MRD is split between a new Ministry of Infrastructure, Industry and Commerce (MIIC) which also subsumes Ministry of Commerce and Trade, and a new Ministry of Environment, Tourism and Natural Resources (METNR).

249. The functions of MIIC are proposed as maintenance, operation, engineering and design of government-owned facilities and equipment, including public utilities, public works, capital improvement projects, land surveys, land, sea and airport transportation including ports, communications, and other related matters.

250. The functions of METNR are proposed as the promotion, exploration, exploitation, development, and management of natural resources including marine and fisheries, agriculture, aquaculture, forests, mineral and other land-based and ocean-based resources; as well as the promotion and development of tourism, and the protection and management of the environment, and other related purposes. METNR would be required to provide monetary and technical assistance to state governments to further the goals of METNR.

Table 4.8.2 – Overlapping Resource Management Responsibilities and Functions

Resources	Management Aspect	Management Responsibility
 Air quality	Climate change Air pollution Energy policy and development	OERC EQPB, OERC PPUC, OERC, OGTF, MRD-Energy Office
 Land and coastal zone resources	Protected land areas and national parks Protected coastal zone/near-shore areas Biodiversity, endangered species, CITES Land use, zoning, and management Rehabilitation of degraded land Watershed management, Ramsar Soil classification and protection Minerals Forest management (incl. wetlands) Agriculture, hort. & livestock (incl. bio-security) Wildlife management Pesticide use (incl. POPs) Vegetation clearance and earth moving Zoning and building regulations/code	PAN Office, PPLA, MOJ-DFWP, States, MCCA-DPR PAN Office, PPLA, BMR-MPAP, States PAN Office, BMR-ESP, MOJ-FWP, OERC PPLA, OERC, State PLAs, PALARIS, BLS, BOA-For, MCCA-DPR BOA-Hort, BOA-Forestry, PAN Office, OERC BOA-Forestry, PPLA, PAN Office, OERC, States BOA-Hort, BOA-Forestry, EQPB, States MRD-BOA, States, OGTF BOA-Forestry, PPLA, PAN Office, States, OERC BOA-Hort, BOA-Animal Industry, BOA-Quarantine, OERC BOA, BMR, MOJ-FWP EQPB, BOA-Hort, OERC BOA-Forestry, EQPB, States PPLA, MRD-Energy Office, BPW, States
 Marine resources	Biodiversity Sea level rise Protected marine areas Marine environmental protection enforcement Endangered species, CITES Fisheries conservation & development Fisheries management (incl. Tuna Plan) Seabed mineral resources Coral reefs (incl. monitoring & research)	PAN Office, BMR-Endangered Species Program, OERC OERC, States PAN Office, BMR-Marine Protected Areas Program, States MOJ-DMLE, States (Rangers; Conservation & Law Enforcement) BMR-Endangered Species Program, MOJ-FWP, OERC BMR, PFAC, States BMR, MOJ-DFWP, PFAC, MOJ-DMLE BMR, OGTF BMR, OERC, States

251. Apart from the statement that METNR would be responsible for BMR, the Budget Bill does not detail the alignment of bureaus and divisions within the two new ministries so this can only be inferred from the responsibilities, in which case it is understood that Bureau of Lands and Survey is transferred to MIIC while BOA is transferred to METNR. There is no mention of which ministry has responsibility for PFAC, Energy Office, Recycling Program, PALARIS or PAN Office.

252. The proposal included in the Budget Bill does not necessarily address two key issues already identified (i) the absence of an overarching policy framework to guide development within an environmental management context; and, (ii) the overlapping functions between bureaus and divisions in terms of resource management. Further, the proposal as it stands omits resource conservation as a key task of METNR, which is problematic because 'management' of natural resources does not necessarily infer conservation, especially in light of the stated responsibilities to promote, explore, exploit and develop which clearly emphasize use rather than sustainable development along with conservation. The addition of "explore" to the mandate, over and above the responsibilities given to MRD under Executive Order 203, is also a concern in the absence of a mining policy or code.

253. If sufficient priority was given and sufficient resources were made available, it may be possible to address the problems of over-lapping jurisdiction at bureau level, however, there was strong consensus during the consultation undertaken for the preparation of this report that such priorities would not be given unless a separate ministry responsible for environment and natural resources was created. Recognizing this consensus, the concept of a dedicated ministry for environment is supported and endorsed in this report.

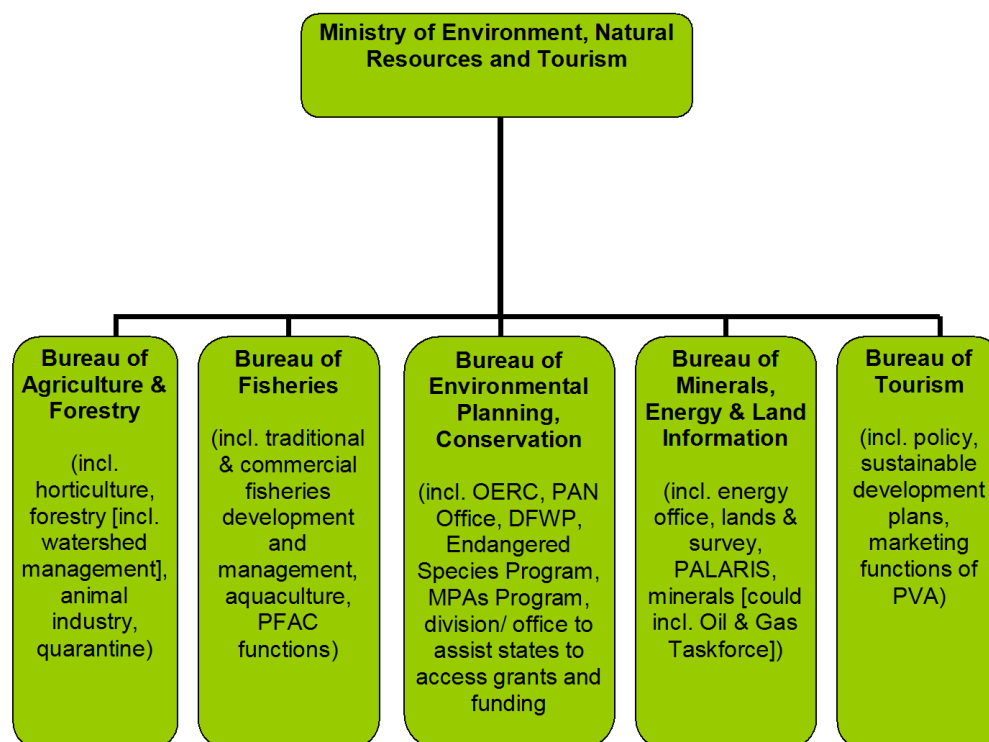
254. It is clear that rationalizing the functions of bureaus and divisions is necessary in order to avoid shifting existing inefficiencies and mis-matches in functions to a new ministry, as this would conflict with one of the objectives of the MAP to streamline internal administration, eliminating duplication wherever possible.

255. Both the Agriculture and Aquaculture and Fisheries reports prepared for this TA conclude there is a need to separate the conservation functions of BOA and BMR from their development and management functions, and this conclusion is fully supported in this report. Given that a dedicated ministry for environment and natural resources is supported, the reorganization of bureaus and divisions that would be required to achieve this would be the ideal time to address the foregoing issues in respect of key resource management and environmental protection tasks, it is recommended that bureau roles and responsibility be rationalized along the lines proposed in Figure 4.

256. As can be seen in Figure 4, the proposal is for the new ministry to comprise five bureaus; agriculture and forestry; fisheries; environmental planning and conservation; tourism; and minerals, energy and land information. The bureau of environmental planning and conservation would include the role and functions currently undertaken by OERC and also include a division or office that coordinated with states in terms of available grants and funding sources for resource management projects and programs.

257. Given that climate change adaptation is a stated priority within the national agenda it is considered that including the energy office within the ministry of environment rather than a ministry of infrastructure and industry is appropriate as there are numerous links between energy policy and adaptation for climate change, and links between energy planning and minerals development in respect of the petroleum sector. It has been noted elsewhere in this report that the energy and minerals sectors are two key areas where policy is currently lacking but crucial to an overall environmental management framework.

Figure 4 – Proposed Realignment of Functions at Ministry and Bureau Level



4.8.3 Clearly Establishing the Role of States

258. Recognizing that the tension between National and State Governments in respect of land ownership and management can be detrimental to effective resource management, supporting any initiative that is driven by the states themselves is much more likely to meet with success than nationally imposed initiatives, irrespective of how sensible or necessary the national initiatives might be. An example is the Mangrove Management Plan, which was considered to be a comprehensive and important plan, but was met with resistance from the states in terms of its implementation as it was also viewed as an attempt by National Government to control the way states manage their resources.

259. In order to meet immediate resource management and environmental protection needs, trying to work around the resistance of states to any initiatives that are seen to be nationally imposed is a priority. States accept the need for a framework of regulation and policy but want the flexibility to achieve the minimum standards set at national level in ways that their suit their own visions, contexts and capacities.

Key recommendation – avoid stumbling blocks to effective resource management by devolving as much of management planning to states as possible. Support states to prepare and implement key management plans within the policy framework established by national government

4.8.4 Issues Related to Funding of Environmental Protection Activities

260. The NMDP discusses the need for user-charges and taxation in respect of financing environmental management activities. This discussion in the NMDP is premised on tourism, agriculture, forestry, and fisheries providing economic benefits but also entailing environmental impacts. The benefits of development and growth in these sectors benefit the whole of Palau and as such the costs of resource management policy, administration, and enforcement should be borne by the community. The funding of these environmental management activities needs to be addressed in the work on financing of development being undertaken as part of this TA.

261. The costs of development projects, with the exception of infrastructure and services that are public works, that will accrue individual or specific-group benefits, are expected to be borne by the project proponent.³⁷ This should include the costs of application (including EIS preparation and filing), all permit applications, construction bond, mitigation of impacts and full compliance with conditions of approval, and monitoring.

262. The NMDP did not support the imposition of an environmental tax of two per cent of total cost for projects above \$0.5 million.

263. EQPB only receives about two-thirds of its required operating budget on an annual basis. Currently the EQPB does not collect all revenues to which it is entitled under the EQPA and various regulations, and the revenue generated by EQPB from permit applications goes into general National Treasury funds rather than into a separate account or fund that can be used for EQPB's activities. It should be noted that there is no incentive for EQPB to collect all revenue to which it is entitled under the EQPA and regulations because it is not ear-marked for use by EQPB. This is an issue that needs to be addressed in terms of an overall policy on financing, and as noted above will be discussed in the work on financing of development.

264. A Mitigation Trust Fund is established and is funded by fines imposed by EQPB, these funds are used for addressing environmental risks (such as weed or invasive eradication) or emergency situations. There are restrictions imposed upon the use of the Fund, it may not be used for salaries or daily operating expenses.

Key recommendation – EQPB promulgate regulations that permit charging for water testing and monitoring, and fees accrued in respect of permit applications and EIS review be separated from National Treasury and used solely for the activities and operations of EQPB; EQPB exercises its duties under the EIS Regulations to charge an environmental impact fee, and for reimbursement of inspections, monitoring, and miscellaneous expenses in respect of permit applications and EIS review

³⁷ Public works, such as large infrastructure projects, are still required to comply with the basic rules of EQPA, EIS Regulations, and apply for relevant permits. These costs will be met by the government agency proposing the work.

5. Conclusions and Recommendations

5.1 Key Conclusions and Summary of Recommendations

265. The key conclusions of this overview and stock-take report are prioritized in terms of suggested importance and need for action in respect of developing a medium-term development strategy and five-year plan. It should be noted that some conclusions i.e. the need to complete an environmental management policy framework, have longer-term implications, but in order to prepare and implement a five-year plan that responds to the issues raised, a number of these will need to be addressed as soon as possible.

266. The conclusions in order of suggested priority are as follows:

i. The environmental management policy and regulatory framework is incomplete, policies are still required in key areas such as energy, mining, forestry and watershed management (climate change adaptation policy will be put before the House in December 2007);

ii. In order to meet immediate resource management and environmental protection needs, trying to work around the resistance of states to any initiatives that are seen to be nationally imposed is a priority. States accept the need for a framework of regulation and policy but want the flexibility to achieve the minimum standards set at national level in ways that their suit their own visions;

iii. Within the national policy framework and setting of minimum environmental standards, states should be supported and encouraged to prepare and implement management plans in ways that best fit their context and capacity. States require the assistance of one clearly identified agency within government to access information and technical assistance available through grants (including knowledge about grant availability, proposal writing, project/program implementation and reporting requirements);

iv. Within the approved project framework of the SLMP, the work program and deliverables can be focused to support ongoing initiatives that could achieve some of the anticipated outcomes of the SLMP, for example, the BWA, whilst recognizing the limited institutional and implementation capacity of a small country;

v. On the basis of existing and future projected population, state administration staffing and capacity, states may choose which type of resource management planning document would best suit their needs, some states may opt for a land use plan while other states may opt for a watershed management plan. In addition to any protected areas management plans they may already have or propose, either a watershed management plan or a land use plan, along with zoning regulations and a building code will be sufficient for integrated resource management. The SLMP, while aiming to achieve a range of outcome, retains the flexibility for states to choose;

vi. More fully adopting integrated resource management would assist in simplifying the institutional structure and supporting the role of states in resource management;

vii. In respect of institutional arrangements, realignment of functions and responsibilities at the ministry and bureau level is required to ensure that environmental management is given sufficient attention in national decision making (ministry level) and to reduce over-management of resources and remove over-lapping jurisdictions (bureau level);

viii. A new bureau with an environmental planning and conservation mandate should be established. The functions of the OERC need to be institutionalized within the government structure, an appropriate place would be in a new bureau of environmental planning and conservation. This bureau could also include an office or division that provides assistance to states in terms of accessing grants and implementing projects and programs;

ix. The EQPA and various regulations require updating in terms of Palau's current political and environmental management context, previously unforeseen risks, such as climate change and bio-security, need to be addressed;

x. Addressing cumulative impacts and synergistic effects across legislation is important, especially in respect of development and intensifying use of watersheds, coastal zone and mangrove areas, and a developing aquaculture sector;

xi. New regulations are also required, e.g. vegetation clearance, and a range of minimum environmental standards, e.g. forest cover, need to be established;

xii. Once the policy framework is established, environmental management requirements can be more effectively mainstreamed in master planning documents and development strategies rather than be dealt with in a separate chapter; and

xiii. Currently the EQPB is not collecting all revenues, such as environmental impact fees, to which it is entitled under the EQPA and various regulations. Revenue generated by EQPB from permit applications goes into general National Treasury and is not ear-marked for the activities and operations of EQPB so currently there is no incentive to EQPB to collect all revenue to which it is entitled.

267. These suggested priorities and action points need to be considered by the Project Steering Committee (PSC) and their timing for implementation set out in a five-year plan as the medium-term development strategy is finalized.

268. The main recommendations in respect of these conclusions are:

Key recommendation – establish a clear and over-arching national policy framework for environmental protection and management

- Establish national environmental management policy framework - prepare environmental management policies for key sectors including those previously identified (i.e. forest policy and energy policy) and address gaps in existing policies viz-a-viz new challenges such as climate change and bio-security;
- Complete and/or prepare strategic action plans and management plans for sectors;
- Clearly define the role of, and support, states in resource and environmental management; and
- Within the approved project framework, provide focus to Sustainable Land Use Management Project in terms of identified priorities and future directions of state-led initiatives in respect of watershed management.

Key recommendation – streamline activities and roles matching environmental management framework and realign functions at ministry and bureau level

- Establish a dedicated ministry for environment and natural resources;
- Realign bureaus along lines of key functions and services (separating some conservation functions from service delivery functions);
- Create a new bureau with the core functions of environmental planning and conservation. A division or office within this new bureau would be responsible for supporting states to access grant funding for resource management projects;
- Institutionalize the functions of OERC within the government structure so key environmental planning and coordination functions are not lost; and
- Avoid stumbling blocks to effective resource management by devolving as much of management planning to states as possible. Support states to prepare and implement key management plans within the policy framework and minimum environmental standards set by national government.

Key recommendation – undertake a comprehensive review and revision of EQPA and Regulations

- EQPA and all regulations promulgated there-under updated and revised to better reflect Palau context and to incorporate climate change risk and adaptation requirements and bio-security aspects;
- Update and revise relevant regulations (EIS, Fresh and Marine Water Quality, Earthmoving) to incorporate the need for assessments to address cumulative impacts and synergistic effects;
- Address gaps in existing regulations e.g. exemption of agricultural activities under the Earthmoving Regulations;
- Support states to promulgate zoning rules and regulations and building codes; and
- Promulgate new vegetation clearance regulations specifying minimum environmental standards for forest cover (including mangroves) and requirement for permit.

Key recommendation – user charges principle to apply to EQPB activities and fees generated from EQPB activities should be retained for EQPB operations

- EQPB promulgate regulations that permit charging for water testing and monitoring;
- Fees accrued in respect of permit applications and EIS review be separated from National Treasury and used solely for the activities and operations of EQPB;
- EQPB exercise its duties under the EIS Regulations in respect of charging an environmental impact fee, and for reimbursement of charges incurred during inspections, monitoring, and miscellaneous expenses in respect of permit applications and EIS review.

5.2 Deliverables of Next Input

269. The outputs to be produced in the next input, at this stage scheduled for five weeks from mid-June 2008, are as follows:

- Review of the environmental impact of existing public infrastructure;
- Identification of the opportunities and constraints the environment offers for development; particularly estimating how much the environment can contribute to economic growth and the gains to be made from environmental improvement in specific infrastructure;
- Assessment of the impact of potential environmental problems due to major infrastructure on livelihoods, health, the vulnerability of poor communities, and vulnerable groups; and
- Preparation of an environmental and natural resource development (and action) plan for Palau to identify key environmental components and their relationship to projected development plans.

270. The deliverable of the second input will be (i) the environmental management strategy in respect of medium-term (five-year plan) development of the key sectors included in this TA i.e. tourism, infrastructure, agriculture, aquaculture and fisheries; and (ii) an environmental management action plan covering those sectors. In this regard, the environmental and natural resource development action plan will adopt the priorities established in the National Biodiversity Strategy and Action Plan, which has been adopted by the Government, as a starting point.

5.3 Key Actions Required from Government Counterparts

271. This report sets out a number of recommendations, these are translated into key actions in Table 5.3.1, which also identifies the agency with main responsibility and sets out the timeframe in which the suggested actions are required to be taken:

Table 5.3.1 – Key Actions Required

Action	Responsibility	Timing
Confirm the intended deliverables of the second input as described in Section 5.2 above	PSC	By April 2008
Distribution of this report to stakeholders as appropriate	Focal Point	January 2008
Consideration of, and agreement with, conclusion priorities as suggested in this report	PSC, stakeholders	By March 2008
Facilitate discussions with stakeholders to focus the work program of SLMP to reflect integrated resource management needs of small states and support the work of BWA in this regard	Focal Point (OERC)	By March 2008
Provide support to BOA for forest and watershed policy, new regulations for vegetation clearance and establishing minimum environmental standards in respect of forest cover (could be an activity funded under SLMP)	BOA-Forestry to lead; Supported by PSC and Focal Point (OERC)	Start January 2008
Facilitate dialogue on the proposal for a dedicated ministry for environment and natural resources, and realigning of functions in respect of (i) realigning core environmental management functions; (ii) creating a new bureau of environmental planning and conservation, and the need for an executive order to effect such etc	PSC, Focal Point, stakeholders	January – May 2008
Facilitate discussions on updating and revising EQPA and revising regulations	EQPB- Legal Counsel to lead; Supported by Attorney General's Office	January – May 2008
Facilitate discussions regarding ear-marking fees accrued from permit applications and EA/EIS review to be used exclusively for EQPB activities and operations	EQPB to lead, stakeholders	January – May 2008
Discuss and decide on the implementation of fees already permitted under EQPA and EIS Regulations	EQPB to lead, stakeholders	By April 2008
Advice is sought as to the nature and extent of vulnerable groups in Palau, and how their vulnerability might expose them to environmental impacts not experienced by the non-vulnerable.	PSC, Focal Point and other stakeholders	By May 2008

Appendices

Appendix 1 – Record of Stakeholder Consultation

Date	Agency/Organization	Name	Designation
11.11.07	Palau International Coral Reef Centre	Fabian Iyar	Chief Executive Officer
11.11.07	Environmental Quality Protection Board	Donald Dengokl	Assistant Executive Director
12.11.07	Palau Natural Resources Council	Tarita Holm	Chairperson
12.11.07	BMR – Endangered Species Program	Joshua Eberdong	Coordinator
14.11.07	House of Delegates	Noah Idechong	Chairperson – RD Committee
14.11.07	MRD – PAN Office	Joe Aitaro	Coordinator
14.11.07	BOA – Forestry Unit	Ebias Sadang	Head
15.11.07	The Nature Conservancy	Eric Verheij	Director
15.11.07	MRD – Bureau of Public Works	Techur Rengulbai	Director
16.11.07	Palau Public Lands Authority	Grace Yano	Director
16.11.07	Palau Conservation Society	Tiare Holm	Executive Director
19.11.07	Environmental Quality Protection Board	Donald Dengokl	Assistant Executive Director
		Alex Apostel	Environmental Engineer
		Metiek Ngirhechol	Laboratory Supervisor
20.11.07	Palau International Coral Reef Centre	Steven Viktor	Technical Advisor
20.11.07	Office of Environmental Response & Coordination	Youlsau Bells	National Environmental Planner
		Joel Miles	Invasive Species Coordinator
20.11.07	PALARIS	Jerry Knight	Program Manager
21.11.07	Environmental Quality Protection Board	Jonathan Koshiba	Chairperson
23.11.07	Ministry of Resources & Development	Fritz Koshiba	Minister
23.11.07	Chamber of Commerce	Ken Uyehara	President
		Timetuchl Banks	Executive Secretary
		Greg Gordon	
23.11.07	Belau Tourism Association	Jennifer Kostilin	
23.11.07	Palau Visitors Authority	Darin de Leon	Managing Director
23.11.07	Koror State: Dept of Conservation & Law Enforce.	Adalbert Eledui	Director
26.11.07	Office of Environmental Response & Coordination	Olai Polloi	Climate Change Coordinator
26.11.07	The Nature Conservancy	Umich Sengebau	Terrestrial Conservation Coord.
26.11.07	MRD – Energy Office	Greg Decherong	Manager
27.11.07	MRD – Capitol Improvement Program	Brian Melairei	Acting Manager
30.11.07	Office of Environmental Response & Coordination	Youlsau Bells	National Environmental Planner
	Environmental Quality Protection Board	Donald Dengokl	Assistant Executive Director

Appendix 2a – Categories in IUCN Red List

Category	Definition
Least concern	Common and widespread species not dependent on conservation efforts and not assessed to be near threatened or threatened.
Near threatened	A species does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying or is likely to qualify for a threatened category in the near future and is dependent on conservation efforts to prevent it becoming threatened with extinction.
Vulnerable	Same definition as previous category of “threatened”. Species is likely to become endangered unless circumstances threatening its survival are improved or a species is considered to be facing a high risk of extinction in the wild.
Endangered	A species with few in number or its habitat is threatened and evidence indicates that the species is considered to be facing a very high risk of extinction in the wild.
Critically endangered	A species is considered to be facing an extremely high risk of extinction in the wild.
Extinct in the wild	When it is known that a species can only survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range.
Extinct	When there is no reasonable doubt that the last individual has died. A species is presumed extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual.
Data deficient	When there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A species in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat but does not discount that the habitat of a species could be threatened indicating that investigation and assessment is required.

Appendix 2b – Red List Species found in Palau

Genus/Family - Common Name	Red List Category						Total
	Near threatened	Vulnerable	Endangered	Critically endangered	Extinct	Data deficient	
Mammal; marine	1	1				5	7
Mammal; land	1		2		1		5
Birds	6		2			1	9
Reptile; crocodile			1				1
Reptile; turtle			1	2			3
Frog/toad							0
Fish and sharks	15	9	2			4	30
Arthropod; crab						1	1
Mollusc; bi-valve	4	2					6
Mollusc; gastropod				3		53	56
Plant	3	1	1				5
Total	30	13	9	5	1	64	122

Source: IUCN 2007 Red List

Appendix 3 – Main Provisions of Flora and Fauna Protection Laws

Protection	Law/Regulations	Stipulations
Endangered Species Act	Title 24; Division II; Chapter 10; Sections 1001 - 1012	Provides protection to endangered plants and animals; Minister of Resources and Development required to prepare list of endangered species along with regulations protecting them ³⁸ ; makes it illegal to possess any part of an endangered species, or to hunt them or export them; makes it illegal to import any species into Palau that is listed in CITES which lists plants and animals that are threatened with extinction; prohibits the import of exotic plants and animals without a permit from the Minister of Resources and Development.
Protection of Sponges	Title 24; Division II; Chapter 12 – Protected Sea Life; Section 1211	Prohibits the taking or harming of any artificially planted or cultured specimens of sponges, except with permission from the President; penalties for breaking the law include fines and up to 6 months in prison, or both.
Protection of Mother-of-Pearl Oysters	Title 24; Division II; Chapter 12 – Protected Sea Life; Section 1221	Prohibits the taking or harming of living pearl oyster shells between August 1 - December 31; sets size limit for collection of shells in open season; President may permit shells of any size to be taken for scientific purposes; penalties for breaking the law include fines and up to 6 months in prison, or both.
Protection of Dugongs	Title 24; Division II; Chapter 12 – Protected Sea Life; Section 1233	Prohibits the killing, trapping, capturing, wounding, restraining or possessing a dugong; Minister of Resources and Development was authorized to initiate a 90-day period of registration for dugong products, allowing historically or traditionally significant bracelets to be exempted from the law if they were registered in time; ³⁹ penalties for violation of the law were include 3 months – 1 year prison term and/or \$5,000 - \$10,000 fine for the first violation, subsequent violations result in 6 months - 3 year prison term and/or \$10,000 - \$20,000 fine; Ministry of Resources and Development and Ministry of Education required to develop a public education program about dugongs, and EQPB is required to add dugong habitats to their EIS requirements.
Protection of Trochus	Title 24; Division II; Chapter 12 – Protected Sea Life; Sections 1241 - 1246	Prohibits harvesting or intentionally interfering with the growth of trochus; permits Civil Administrator to declare an open season of not more than two weeks during either May or June; sets the size limits for taking of trochus; requires a royalty of 1% per pound of trochus; authorizes the removal of trochus beds for projects in the public interest if have obtained permit from the Civil Administrator, and required to replant the beds; penalties for breaking this law included a fine, up to 6 months in prison, or both; recent amendments established a three-year moratorium on trochus harvesting (Tobi State was exempt), and required a Presidential Executive Order to declare an open season.

³⁸ The real strength of this law is not in effect because the list of endangered species has never been officially promulgated.

³⁹ The registration period is now expired and possession of any olecholl bracelet or any other dugong product that has not been registered is illegal.

Protection	Law/Regulations	Stipulations
Protection of Turtles	Title 24; Division II; Chapter 12 – Protected Sea Life; Section 1281	Sets size limits for taking hawksbill turtles and other turtles; prohibits the collection of turtle eggs and killing turtles found on land; prohibits killing of turtles between June 1 - August 31 and December 1 - January 31 every year; penalties for violations include fines, up to 6 months in prison, or both.
Illegal Methods of Capture	Title 24; Division II; Chapter 13; Sections 1301 - 1326	Prohibits fishing with dynamite, hand grenades or any other explosive, and poisons or chemicals; President can give permits for such acts for scientific purposes; allows use of local roots, nuts, or plants for stupefying fish; penalty includes fine of \$100 - \$2,000 plus 6 months – 2 years in prison.
Protection of Birds	Title 24; Division II; Chapter 14 – Protection of Land Life; Section 1401	Prohibits the hunting or taking of any bird in Palau except for Malkureomel (jungle chicken), uek (purple swamphen), Yakotsiang (sulfur-crested cockatoo), and tengadidiik (kingfisher) except during open seasons; sale of Micronesian pigeon prohibited at all times; District Administrator authorized to close the hunting season in specified localities; penalty for illegally taking or selling birds is a fine and up to 6 months in prison, or both.
Protection of Angaur Monkeys	Chapter 14 – Protection of Land Life; Section 1401	Prohibits transport of monkeys (mongkii or sikou) from any island in Palau to any other island in Palau without a special permit from Chief Entomologist; penalty includes \$1,000 fine and/or up to 6 months in prison. ⁴⁰

Source: National Code of Palau

⁴⁰ The monkey (specifically, the macaque) is listed on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This means that shipping a monkey from Palau to any country that signed the CITES treaty is illegal without following the special and exhaustive procedures specified by the importing country.

Appendix 4 – IUCN Protected Area Classifications

Category	Designation	Definition
I	Strict Nature Reserve/Wilderness Area	Protected area managed mainly for science or wilderness protection; Category 1a: Strict Nature Reserve: protected area managed mainly for science – definition: Area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring; and, Category 1b: Wilderness Area: protected area managed mainly for wilderness protection – definition: Large area of unmodified or slightly modified land, and/or sea, retaining its natural character and influence, without permanent or significant habitation, protected and managed so as to preserve its natural condition.
II	National Park	Protected area managed mainly for ecosystem protection and recreation. Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.
III	Natural Monument	Protected area managed mainly for conservation of specific natural features. Area containing one, or more, specific natural or natural/cultural features which are of outstanding or unique value because of its inherent rarity, representative or aesthetic qualities or cultural significance.
IV	Habitat/Species Management Area	Protected area managed mainly for conservation through management intervention. Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.
V	Protected Landscape/Seascape	Protected area managed mainly for landscape/seascape conservation and recreation. Area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.
VI	Managed Resource Protected Area	Protected area managed mainly for the sustainable use of natural ecosystems. Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

Source: IUCN

Appendix 5 – Matrix of Objectives, Status and Issues

Objective, strategy or activity	Status; progress & gaps	Implementation issues	Recommended actions	Prioritization and funding (implication)
Objective – protect the environment and improve management of resources	Environmental protection objectives identified in plans (but separate); Some acts and regulations have been approved; Key areas (policy and plans) still not completed and/or implemented;	Tension between state and national level in respect of land and resource ownership which presents difficulties for management; Institutional arrangements in place but confused and overlapping; Lack of resources to fully prepare and implement all policies, plans required	Work around states resistance to nationally imposed initiatives by supporting state-driven actions; Mechanisms for mainstreaming env. management into each sector need to be identified and implemented; Infra. development and PSIP must identify env. management issues (i.e. land use, waste issues, pollution control, EIS, permits, consultation etc)	Foreign assistance for some areas but Gov needs to address budget shortfalls across sectors for ongoing env. management and protection functions
Policy and regulatory framework incomplete	Policies in key areas (energy, mining, forestry and watershed management) still required	No over-arching env. management policy framework for development to guide actions;	Fill existing gaps through comprehensive policy framework; National level to establish minimum environmental standards, states have flexibility to comply in manner in-keeping within own context and capacity	<u>Priorities 1, 2 and 3</u> Funding from SLMP can be directed to assist ongoing state initiatives in watershed man. i.e. BWA
Develop a comprehensive watershed protection and rehabilitation plan	Little progress through BOA (Forestry); BWA (state level initiative) recently established;	Forestry activities focusing on reforestation rather than policy; States and NGOs driving watershed management issues and initiatives without national policies in place	Fundamental area for policy and promulgation of regulations (vegetation clearance); Focus SLMP to support ongoing initiatives driven by states in terms of watershed management	<u>Priority 4</u> Funding can be directed through SLMP for watershed management plans
Establish land management guidelines for agro-forestry and activities that involve soil disturbance	Little progress through BOA (Forestry); Many states stalled on land-use plans and rules	As above	Need to revise Earthmoving Regulations; Modify and focus SLMP; Integrated resource management approach can support role of states	<u>Priority 5</u> Can be incorporated into SLMP - Best Management Practices
Develop a comprehensive mangrove management and protection plan; and develop a comprehensive forest management plan	Mangrove Management Plan completed but not implemented; Forest inventories have been completed but forest management plan not prepared	As above	As above	As above

Facility for Economic and Infrastructure Management Project

Objective, strategy or activity	Status; progress & gaps	Implementation issues	Recommended actions	Prioritization and funding (implication)
Develop a strategic plan to limit forest usage to sustainable levels	BOA Strategic Action Plan 2006 notes need for mapping forest cover and monitoring changes	Lack of key policies and comprehensive forest management plan means can not be completed	Establish minimum standards for forest cover; Promulgate vegetation clearance regulations	Seek funding under SLMP Can work with PALARIS to develop database
Institutional arrangements and implementation	Conservation functions identified in BOA and BMR; Staff are over-whelmed and have difficulties completing all tasks; Proposal to split MRD and create two new ministries (proposed in Budget Bill); Mineral resources have not been given enough attention	OERC functions not within government structure; Lack delineation between key service delivery functions of BOA/BMR and conservation functions; Overlapping jurisdictions at bureau/division level across many bureaus; Little performance-based review or accountability in government	Institutionalize functions of OERC within government structure; Establish new ministry dedicated to environment and natural resources; Realign bureaus (key functions and roles) first; Create new bureaus for env. planning and conservation; tourism; and minerals, energy and land information Prepare minerals management policy, establish division or office to manage and develop minerals	<u>Priority 6 and 7</u> New ministry and bureaus require additional funds; Institutionalizing OERC functions will need funding from Gov; Minerals policy to be developed with funding from World Bank
Develop a comprehensive national plan that...protects habitats; establishes MPAs; and, identifies areas of cooperation and delineates responsibilities between the national and state governments	States have identified PAs and MPAs, some have management plans; PAN Act and Regs approved; Additional regulations for funding tabled, currently before House	Resource ownership issues between states and national gov. unresolved, tension segues into other areas; National plans not necessarily required, strong and focused policies and regulations will give states flexibility in implementation	Comprehensive review and revision of EQPA, regulations and other relevant acts; Support states in key areas of resource management including protected areas	Funding through PAN and Micronesia Challenge Trust Fund
Identify appropriate conservation areas and work with the states to provide appropriate designations	As above	Should be driven by states themselves, most PAs to date have been state initiatives	Designations to be linked with existing PA management plans and watershed management plans	Funding through PAN and Micronesia Challenge Trust Fund
Establish a national strategic plan for environmental response	Several assessment reports have been completed; Lack overall framework	OERC over-tasked with response to international obligations	Number of key policy areas need to be addressed before plan can be prepared	Addressed through existing UN enabling activities funding
Develop institutional policies to ensure improved project evaluation and implementation at the state level	EPQB clearing house for permit applications and EA/EIS review ; States have own laws and regulations; State laws can be more stringent than national requirements	Lack of national policy means states can not link in with overall goal; EQPB responsible for monitoring and enforcement; Encourage states to focus on key areas	National level to establish minimum standards; Project and permitting review and approval to be retained by EQPB; States preparing and implementing management plans, and zoning rules	Funding for management plans available through SLMP

Facility for Economic and Infrastructure Management Project

Objective, strategy or activity	Status; progress & gaps	Implementation issues	Recommended actions	Prioritization and funding (implication)
Review and implement the 'Integrated Solid Waste Management Plan'; review the viability of establishing a regional cooperative recycling export operation	Ratified important conventions to ban/control waste import into PICs; Recycling Program Act passed; Recycling Office established in MRD; Fund to be established Landfill user charges proposed in Budget Bill;	EQPB responsible for monitoring and enforcement – staffing issues; EQPB to work with states; Recycling Office established in MRD but not staffed as yet, awaiting funding issues to be resolved by MOJ; MRD must work with states on landfill user charges	Various management plans to identify coastal zones as “no go” areas for landfill sites; Estab. joint committee for feasibility study of regional recycling export initiative; Work with TAPC to promote waste control and minimization in tourism sector	Some funding from Japan; Budget Bill proposes increased charges and user charges; Services must NOT be subsidized
Develop and implement a comprehensive energy conservation program for all government facilities	Energy conservation strategy attached as rider to climate change policy bill; Energy audit undertaken once only;	No energy policy; Capacity issues - staff of Energy Office only recently increased to two people; Mandate for renewable energy (RE) only recently included in responsibilities	Prepare energy policy (link with climate change policy)	Funding under EU project
Fully implement existing regulations and exercise tariff schedule	Ability to charge high kW users not implemented; Flat rate only charged – penalises small or average users	PPUC not exercising or implementing tariff schedule that provides for collecting charges imposed on high kW demand (no gov. customers have ever been charged)	Direct PPUC to implement tariff schedule and impose charge on high kW users	Additional funds can be levied through imposing additional charges permitted under existing regulations
Current electricity generation from diesel generators	Maintenance issues, increasing frequency of power outages	Directive in NMDP not clear that PPUC has responsibility to consider RE when generators nearing capacity; PPUC mandate does not include RE	Expand PPUC's mandate to include RE; PPUC to coordinate with MRD's Energy Office to prepare a policy along lines of proposals in Climate Change Bill	Can be included as part of GEF-PAS funding (national priority 6)
Exec. Order 132 (1994) required one person per ministry be designated as Energy Conservation Officer (ECO)	Has not been fully implemented i.e. ECOs not active until 2005; No sanctions imposed for non-compliance	ECOs not completing or submitting monthly energy consumption reports	Energy Office to prepare compliance report and set realistic targets for conservation for each sector; ECOs to prepare reports, energy conservation issues to be addressed in annual performance reviews;	Included in existing mandates and functions
Establish a comprehensive and effective water conservation program	MRD does not have framework for water conservation MRD developing an incentive program to allow purchase of residential water catchment tanks to alleviate pressure on national water supplies, tanks also allow for household water deliveries and storage during severe drought	MRD not tasked with water conservation	Include water conservation as part of MTD mandate; Work with EQPB and OERC on quality and drought management issues	Identify funding sources for integration of water conservation into planning, delivery and drought management

Facility for Economic and Infrastructure Management Project

Objective, strategy or activity	Status; progress & gaps	Implementation issues	Recommended actions	Prioritization and funding (implication)
EQPB to develop and implement a new five-year strategic plan	Have not updated plan since 2002; Prepare annual performance reports	Lack of resources, no-one allocated responsibility of updating plan	Link new five-year strategic plan with recommendations made in this report	Funding issues to be resolved
EQPB to develop and implement procedures that include other appropriate government agencies in the env. review process	Government agency review is requested as part of EQPB's process; Key agencies do not respond, or do not respond within timeframe (15 days)	Government agencies focused on other tasks often fail to see relevance of contributing to review	Proposed bureau of environmental planning and conservation to be tasked with role of coordinating responses from government agencies	Included in functions, no additional funding required
EQPB to recommend alternate strategies to establish buffer zones	None required	Not germane to EQPB's mandate	Buffer zones to be identified in watershed management plans, forest/mangrove management plans, PA management plans NOT in separate documents	Incorporated in items above
Development in tourism sector addressed in context of sustainable management	Previous plans (1998; 2001) not updated; Sustainable Tourism Taskforce not established; TAPC identifying priority areas	TAPC is private sector, no policy framework within which to work, actions currently ad hoc Carrying capacity of Palau as well as individual sites in respect of numbers of visitors is unknown; No unit within Gov responsible for tourism policy or development, PVA mandated for marketing only	Encourage TAPC to work within existing and proposed policy framework Tourism policy must identify elements of sustainable development incl. Palau's carrying capacity in terms of ability to comfortably provide goods and services for visitors, as well as the carrying capacity of individual sites and attractions needs to be assessed	Financing in tourism sector to be detailed in separate report prepared under this TA
Legislation	EQPA and regulations need to be updated and revised; Additional legislation required to address new risks and challenges	EQPB Legal Counsel newly appointed (commence Feb 2008); AG's Office already over-taxed in terms of revising and drafting new legislation;	Complete and approve existing drafts of laws e.g. bio-security as a priority; Undertake comprehensive review of EQPA ad Regs; Include need for assessments to address cumulative impacts, especially in light of development and intensifying uses of watersheds, coastal zone and mangrove areas (development of aquaculture sector)	<u>Priority 8 and 9</u> Seek grant funding from US NEPA as part of Compact renewal negotiations; Establish fund through impact and permit fees, to be used for the funding of enforcement activities;
"Umbrella" legislation proposed to replace separate laws and regulations	No progress made to date; Proposal is not supported by many stakeholders	Umbrella act too cumbersome to enforce; New regulations required	Regulatory framework to be linked with minimum environmental standards (e.g. forest cover); Promulgate vegetation clearance regulations	<u>Priority 10</u> Funding of new regulations discussed above

Facility for Economic and Infrastructure Management Project

Objective, strategy or activity	Status; progress & gaps	Implementation issues	Recommended actions	Prioritization and funding (implication)
Determine the need for an expanded endangered species law and recommend the appropriate actions required	BMR – Endangered Species Program has been trying to include additional species under the Act through regulations	Lack of funding for program limits ability to enforce existing regulations and obligations under CITES	Revise regulations and Endangered Species Act; Including Endangered Species Program in new bureau of environmental planning and conservation will allow for resource sharing	To be considered along with proposals to split MRD, both have funding implications
Review and make recommendations regarding the establishment of a shark fins moratorium pending the development of a comprehensive policy on incidental catches	Refer to Aquaculture and Fisheries Report	Aquaculture and Fisheries Report makes some recommendations in regard of comprehensive fisheries policy	Several Palau sharks listed on IUCN's Red List (10 as near threatened, 4 as vulnerable, 2 as endangered), any proposal to deal with incidental catches needs to carefully address potential of encouraging illegal catches;	Refer to Aquaculture and Fisheries Paper report prepared under this TA
Enforcement	Independence in permitting process as approved through EQPB;	EQPB under-resourced;	Retain independent process and agency with mandate for monitoring, compliance and enforcement; Cooperation with State Rangers	Establish fund through impact and permit fees, to be used for the funding of enforcement activities
Improve evaluation, prioritization and monitoring techniques through the establishment of a PSIP... provide a consistent framework for evaluation of investments that takes into consideration of env. impacts	PSIP does NOT address environmental issues at all; PSIP includes economic but not environmental sector analysis; Several plans specify env. management requirements but do not integrate or mainstream them into necessary chapters/proposals	Gov. agencies not mainstreaming environmental management requirements in master planning or strategic action plan documents; 'Environment' treated as separate component	Once the policy framework is established, environmental management requirements can be more effectively mainstreamed in master planning documents and development strategies rather than be dealt with in a separate chapter	<u>Priority 11</u> Part of planning process, no separate financing required
Capacity	Few of additional staff identified in NMDP recruited; EQPB Office has number of unfilled staff allocations;	Skilled staff still required in number of bureaus; Existing staff need ongoing training; Key offices (e.g. Energy Office) have insufficient staff for mandate	Support additional staff recruitment in EQPB Office (as per NDMP); Establishment of new bureau and clarification and consolidation of functions matched to roles will provide appropriate time to identify staffing requirements	Funding issues to be resolved
Develop and implement environmental training program	Most training opportunities specific to individuals within narrow range of interests rather broader;	Lack of mainstreaming of environmental management requirements shows lack of understanding of overall framework and how policies need to be translated into operations and activities	Develop curricula for gov. agencies/staff; NGO to implement orientation program; In-house staff with skills to deliver monthly training sessions	Request grant funding for curricula development and NGO

Facility for Economic and Infrastructure Management Project

Objective, strategy or activity	Status; progress & gaps	Implementation issues	Recommended actions	Prioritization and funding (implication)
Data	EQPB collates data from monitoring and compliance audits; PALARIS established to collate various information;	EQPB's data not seen as resource for information provision or planning; Huge volume of data available in different agencies, synthesizing information problematic; EQPB required to expand env. statistics base in line with the SOE Report to SPREP requirements	New bureau to coordinate national initiatives in similar way to OERC with international programs; Task to be shared between EQPB, PALARIS and new bureau; Assist EQPB with establishing new database	PALARIS required to consolidate data into library under SLMP
Funding	Each year EQPB only receive 2/3 of required budget	Currently the EQPB is not collecting all revenues to which it is entitled under the EQPA and various regulations; Revenue generated by EQPB from permit applications goes into general National Treasury and is not earmarked for the activities and operations of EQPB	Promulgate regulations that permit EQPB to charge for water quality testing and monitoring; EQPB supported to exercise duties under EQPA and Regulations to charge an environmental impact fee and be reimbursed for inspects and miscellaneous expenses related to permit applications and EIS review; Permit fees to be separated from National Treasury and used solely for activities and operations of EQPB	<u>Priority 12</u>