

Executive Summary

Today's growth in human population and a sharp increase in resource consumption have turned environmental problems into issues of global significance. Only recently, in 1983 and more significantly in 1992, people have come to understand that economic prosperity is interconnected with the general health of the natural environment. Prior to 1992, the global business sector did not take into consideration the need to conduct business with sustainable resource use as a factor for their long-term success. In 1983 the UN General Assembly established the independent World Commission on Environment and Development, aiming to define global problems and seeking solutions thereto. The 1987 in the Brundtland Report, *Our Common Future*, the UN General Assembly defined the principle of sustainable development as development "which meets the needs of the present without compromising the ability of future generations to meet their own needs". The 1992 United Nations Conference on Environment and Development in Rio de Janeiro was a major breakthrough in this respect. The principles of maintaining the quality of the environment and using its resources in a balanced manner have been set out in three documents approved by the UN member states, dealing with the different facets of the natural and human environment. These documents are generally known as the Rio conventions:

- The United Nations Convention on Biological Diversity, whose main objective is conservation of biological diversity at its various levels, both occurring naturally and in domesticated or cultivated form.
- The United Nations Framework Convention on Climate Change, whose principal objective is to control and slow down the increase in greenhouse gas concentrations in the atmosphere and to develop measures to mitigate the effects of possible climate changes.
- The United Nations Convention to Combat Desertification, whose principal objective in the narrower sense is to put a stop to the worsening of the environment in the arid climatic zone and in a broader sense to prevent land degradation and protect the soil as a valuable global resource.

The main goal of this self-assessment was to review Palau's national priorities, and then analyze those priorities within the context of the Republic's need to develop its capacity to fulfill its obligations under the "Rio Conventions". The primary objectives of the NCSA project were:

- To identify priority issues for capacity building for the themes of biodiversity, climate change and land degradation;
- To explore the needs for capacity building within the framework of each issue and those arising from the interrelationship of these issues;
- To catalyze targeted and coordinated action, and requests for future external funding and assistance;
- To couple specific environmental protection activities with the broader framework of national environmental management and sustainable development.

Palau, with the support of the United Nations Development Programme (UNDP), completed this self assessment process to gain a better understanding of capacity development needs in the context of Palau's priorities for addressing global environment challenges, and to gain a better understanding of how the global environmental management system may assist Palau to address these capacity development needs. The National Capacity Self Assessment (NCSA) project was produced through a broad-based collaborative effort, comprising of representatives from the Ministries, the NGO community and civil society. It operated under the guidance of the National Environmental Protection Council (NEPC), which served as the Steering Committee for this project. Hence, the information presented in this document summarizes the work of the stakeholders engaged in this year-long process, and presents information gathered and analysis undertaken during this process.

1. Introduction and Background

1.1 Basic Country Profile

The Republic of Palau is an archipelago in the Western Pacific located between 7° North latitude and 134° East longitude. Palau consists of over 500 islands covering a land area of 535 sq km. Out of the hundreds of islands in the Republic, only 9 are currently inhabited. There are four distinct geological islands types found in Palau: reef and atoll islands (Kayangel, Ngauangel, Ngemelis, Helen, Southwest Islands), high limestone islands (Rock Islands), low platform islands (Peleliu, Angaur), and volcanic islands (Babeldaob with 10 watersheds, Ngarekebesang, Malakal, western Koror). The hundreds islands of Palau contain a rich diversity of habitat types, all of which are susceptible to damage caused by land degradation. These include:

- Forests (upland forests, swamp forests, limestone forests, atoll forests, mangroves);
- Savanna and grasslands [Babeldaob, Ngarekebesang];
- Freshwater habitats (rivers, streams, lakes, swamps, taro patches) [Babeldaob, taro patches on all inhabited islands];
- Brackish water habitats (wetlands, coastal lagoons) [Babeldaob, Peleliu, Angaur, Southwest Islands];
- Marine lakes [some Rock Islands];
- Nearshore habitats (mudflats, seagrass beds, sandy beaches) [all islands]; and
- Coral reefs (barrier, patch and fringing) [all islands].

The Republic of Palau is situated close to the global center of marine biodiversity. There are at least 10,000 species of living organisms in Palau. The marine life consists of nearly 1,500 species of reef fishes and over 300 scleractinian corals. Approximately 1,000 endemic organisms are found in Palau, the bulk of them from the terrestrial environment. Terrestrial endemics include about 200 endemic plants, of which 60 are orchids, 300 terrestrial gastropods, 500 insects, 16 birds, 12 amphibians and reptiles, two freshwater fishes, and two species of bat. All of these organisms are directly affected by drought, soil erosion, land degradation, and unsustainable development.

1.1.1 Climate

The Republic of Palau boasts a maritime tropical rainy climate; annual mean humidity level is 82% and annual mean temperature is 27° C (81° F). However, temperature rarely varies more than 10 degrees throughout the year. Annual mean rainfall is about 3,810 mm, or 150 inches per year, with seasonal variation.¹ February,

¹ National Climatic Data Center et al, 1996

March and April are the driest months with an average of 6-8 inches of precipitation per month. The rest of the year averages between 10-20 inches per month. Palau has two seasons during the year, wet and dry. The wet season typically begins in May and peaks in September. Dry season prevails from February to April and October to December. Predictions indicate that the Caroline Islands, along with some South Pacific Islands, may be a region of decreased precipitation in the near future due to the enhanced greenhouse effect, though other model projections predict increased rainfall by 2099.²

1.1.2 Vegetation

1.1.2.1 Forest and Woodland

While all of Palau may have been covered by forest at one time, at present approximately 75 percent of Palau is covered in native forest.³ With probably more than 1200 species of plants, Palau's forests are the most species-diverse in Micronesia. A wide range of plant and animal species rely on these native forests for their survival. In addition to their direct biodiversity values the forests provide vital services that help to maintain the health and ecological integrity of all of the terrestrial and marine ecosystems (e.g. sediment trapping, climate stability, nurseries for reef fish, soil production and conservation, etc.).

Table 1 below shows the major forest types in Palau, based on vegetation maps derived from 1976 aerial photography.

Table 1 Major Forest Types in Palau⁴

Forest Type	Hectares	Percent of natural forest cover
Upland (volcanic) forest	21,891	70
Mangroves	4,708	15
Swamp forest	1,680	5
Limestone forest	1,232	4
Rock Island forest	1,116	4
Casuarina forest	451	1
Atoll, plantation, palm forest	182	<1
Total Forest Cover	31,259	100
Agroforest	1,109	-

Since 1976 there has been some additional clearing of forests, mainly in southern Babeldaob, but also some regeneration of forest in previously cleared savanna

² Shea et al, 2001

³ Cole, T.G., et. al. 1987

⁴ Cole, T.G., et. al. 1987

areas. For most of Babeldaob, rates of forest loss are unknown due to a lack of updated maps and records.

Palau is home to the greatest amount of undisturbed forest area in Micronesia. There are over 75,000 acres of forest cover throughout the islands. Nine types of forest are found throughout Palau including; Upland Native Forest, Low Coastal Island Forest, Raised Limestone Island Forest, and Mangrove Forest. Forests cover 77,248 acres.⁵ Agro-forest covers 2,700 acres and is dominated by coconut stands.⁶ Palau's forests are highly valued as watershed areas, for preventing soil erosion, as sources of firewood, medicines, building materials, and as areas to forage and hunt for food.

1.1.2.2 Grassland/Savanna

The 1976 vegetation map of Palau categorizes wild areas without a continuous tree canopy as savanna. This category includes areas of: predominantly bare soil, fern lands, grasslands, and savanna shrub lands. Much of this open land results from human activities such as land clearing, repeated burning and mining. Some areas dominated by grass are lands that were formerly cultivated. Savanna shrub lands however, support a variety of native and even some endemic plant species. Some of these species are found only in savannas. Another set of plant species have the potential to grow into large forest trees under favorable conditions, but are also adapted to savanna conditions and can mature, flower, and fruit as shrubs.

1.1.2.3 Freshwater Wetlands

Freshwater marshes occur slightly above sea level and are surrounded by mangroves or located in depressions in upland areas. There are also many freshwater marshes cultivated for taro and here the edible vine *Ipomoea aquatica* may be found.

Palau's swamp forests are the most diverse in Micronesia, but are also Palau's most limited forest type in terms of area, making up only 2 percent of the forest and 1 percent of Palau's land area. Swamp forests are particularly vulnerable to siltation resulting from road building activity, and to clearing for taro patches.

1.1.2.4 Mangroves

One of the most significant ecosystems found in Palau are the mangrove forests. Mangroves cover over 48 sq km of Palau, accounting for approximately 11 percent of the vegetation.⁷ Mangroves are ecologically important because they help stabilize coastal areas by trapping and holding sediments washed down from inland areas and local watersheds. The most extensive areas of mangrove forests occur along the west coast of the big island, Babeldaob, covering approximately 80 percent of the shoreline.

⁵ Otebed and Maiava, 1994; Cole et al, 1987

⁶ Otebed and Maiava, 1994; Cole et al, 1987

⁷ Crombie, R.I. and Pregill, G.K., 1999.

1.1.3 Water Resources

The primary source of fresh water in Palau is from the atmosphere in the form of precipitation. The pattern of late afternoon rain, rainy season, and yearly variations related to global climate changes such as the ENSO, all affect the availability of rainwater as a resource. Ground water is found in Palau, though the ground water lens is thought to be fairly thin and most water pumped from the ground is non-potable. The majority of fresh water used is surface water.

Lake Ngardok is the largest freshwater lake in Micronesia encompassing 0.18 sq km with a storage capacity of 15 million gallons. The longest river in Palau, Ngerdorch River, drains from Lake Ngardok and flows 10 kilometer to its mouth. The Ngermeskang River is the second largest river, and part of the Ngeremeduu, the largest watershed on the west coast of Babeldaob. The Ngerikiil watershed, located in southern Babeldaob is the main source of water for Palau's population, supplying 4 million gallons of water a day. These watershed areas are also ecologically valuable, supporting wetland flora and fauna. Constraints on water usage are inadequate storage capacity and a lack of well-established infrastructures for distribution. The current water treatment plant in Airai State pumps 4 million gallons per day, of which 35-45% is lost through transmission.

Threats to Palau's water resources include man-made contamination and climate change. Uncontrolled development, poor land uses, and deforestation in combination with intense rainfall may lead to rapid soil stripping and severe land degradation. There is also the potential for a decrease in precipitation over the next century.

1.1.4 Energy

While Palau is a relatively small consumer of energy, in terms of the global picture, it relies almost exclusively on fossil fuels. In 2003, Palau used 82,419,079 KwHr of electricity; of that total, businesses and commercial establishments consumed 33,030,931 KwHr, government and public buildings consumed 20,238,276 KwHr and private residences consumed 29,221,872 KwHr. All of these figures represent energy generated by diesel power.⁸ There is a very small amount of solar energy being generated. Most of the solar energy is generated in small, outlying islands, where solar energy is the only energy source. A few private individuals also generate small amounts of solar energy, mostly to decrease their commercial consumption.

1.1.5 People and Economy

The population of Palau, in 2002, was 19,121. Of this population, 69.5% of the people are concentrated in the urban center of Koror, while the remaining 30.5% are rural populations that are spread throughout the Republic. The overall population

⁸ Ministry of Administration, 2001.

density for Palau is 110 people per square mile. This figure is somewhat misleading, since nearly 70 percent of the population is concentrated in the urban center of Koror. The population growth for the same year was 2.1%. The average population growth from 1991 to 2000 was 2.3%.⁹ In 2002, the GDP, in current US dollars, was \$118,206 with a GNI of US\$6,127.

1.1.6 Human Development

While many statistical indicators would lead one to view Palau as a lesser-developed nation, the main education indicators more closely mirror levels of development of industrialized nations. For example, Palau has a primary school completion rate of 96.9%. The illiteracy rate is only 3.1%, with a rate of 2.1% for males and 3.4% for females. The unemployment rate in Palau is 2.3%. Finally, the youth employment rate (individuals aged 15-24) is much lower than other lesser-developed countries at 9.6%. When one looks at the main health indicators, the scenario is similar. The average life expectancy in Palau is 70.5 years with an infant mortality rate is 16.2 per 1,000 live births.

1.1.7 Science and Technology

Palau has a number of institutions, both government and private, that are engaged in sustainable land management (SLM) related work. The government agencies and semi governmental agencies engaged in SLM include the Office of Environmental Response and Coordination (OERC), Bureau of Agriculture (BoA), the Bureau of Marine Resources (BMR), the Palau Automated Lands and Resources Information System (PALARIS), the Environmental Quality Protection Board (EQPB), Palau Community College-Cooperative Research and Extension (PCC-CRE), and the Palau International Coral Reef Center (PICRC). In addition to these agencies, two US Government agencies, the Army Corps of Engineers, and the United States Department of Agriculture (USDA) have also been active in SLM related work in Palau. Private Non-Governmental Organizations (NGO's) and Community Based Organizations (CBO's) engaged in SLM activities include Palau Conservation Society (PCS) and The Nature Conservancy (TNC). There is one institute of higher education in Palau, Palau Community College (PCC), and it has been engaged in land restoration projects, primarily reforestation, afforestation and invasive species clean ups. However, there are no institutions currently conducting terrestrial research.

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1.2 The NCSA Process

This National Capacity Self-Assessment (NCSA) began in September of 2006 when a consultant was hired to conduct the five-step assessment and planning process

⁹ All statistics are from the Ministry of Administration's Office of Planning and Statistics, unless noted otherwise.

and to prepare this Report. The five-steps included inception, stocktaking, thematic assessment, cross cutting analysis and action planning. Activities undertaken in step one, inception, included a document review of (1) documents relevant to the NCSA process, (2) documents relevant to the Rio Conventions, (3) documents that provided background on Palau's approach to environmental conservation, and (4) documents that provided information both on Palau's capacity for implementing obligations of the conventions and on capacity gaps. Also during the inception phase, the first meeting with the NEPC, who served as the steering committee for this process, was held. Finally the inception phase was completed after the first national stakeholder meeting was held on November 08, 2006, at the Palau International Coral Reef Center, located in Koror State.¹⁰ Stocktaking, the second phase, included the consultant completing a legislative review, the results of which are presented in Annexes II and III, and compiling and preparing a database of environmental projects and programs that have been, or are being, conducted. Thematic assessment activities were completed with the assistance of three corresponding sub-committees. Each sub-committee looked at the work specific to one of the conventions -- UNCBD, UNFCCC, UNCCD—and completed a comprehensive analysis of capacity constraints along with possible action steps to manage these constraints and fill capacity gaps. In addition to the work of subcommittees, a number of interviews with key stakeholders were conducted to assure that the thematic assessments were inclusive. The work of the subcommittees and the information from the interviews allowed the consultant to complete the thematic assessments as well as complete the cross-cutting analysis, which is the fourth step in the NCSA process. Finally, based on the information supplied by the sub-committees, the action planning phase was commenced. During this phase, a draft of capacity development actions was generated and shared with stakeholders. This was revised based on input from stakeholders and added to the NCSA document. The entire NCSA document was then shared with stakeholders, and shared with the NEPC, who approved the document.

Prior to beginning the NCSA process, there had been previous work which touched on assessing the status of Palau's environmental sector, as well as planning to address gaps in capacity. However this work was often done by individual agencies as they prepared organizational level work plans. Some level of assessment was undertaken vis-à-vis the development of the National Biodiversity Sustainability Action Plan (NBSAP), the Land Degradation National Action Plan (NAP), and the First and Second Report on Climate Change.

1.3 Synergies and Alignment Among Assessment And Planning Processes

It is important to note that during the year that the NCSA process was being completed, other planning and assessment activities were being conducted. Where these processes were germane to the NCSA project, or where the work of the NCSA had something to lend to other projects, information was shared as appropriate. In

¹⁰ A list of NCSA participants can be found in Annex I.

particular, the NCSA process and findings were shared at the Compact Review Commission (CRC) Symposium. The CRC symposium was a major assessment activity that involved numerous stakeholders from all different levels of government and the private sector. In addition, during the year NCSA was being completed, the Asian Development Bank (ADB) conducted a Country Environmental Analysis. Once again, the NCSA generated information was shared with the consultants developing the analysis report.

2. Thematic Assessments

2.1 United Nations Convention on Biological Diversity (UNCBD)

Profile Summary

Name of Convention: United Nations Convention on Biological Diversity (UNCBD)

Adopted: June 12, 1992

Entry into force: December 30, 1992

Ratified by Palau: Signed in 1998, ratified by the Palau National Congress [Olbiil Era Kelulau (OEK)] on January 06, 1999

Organizations contributing to implementation in Palau: National Environmental Protection Council (NEPC); Office of Environmental Response and Coordination (OERC); Ministry of Resources and Development; Ministry of Justice; Ministry of Education; Ministry of Health; Ministry of State, State Governments; Environmental Quality Protection Board (EQPB); Palau Visitor's Authority; Belau National Museum; National Weather Service; Palau Community Action Agency; Palau Community College; Palau International Coral Reef Center; Palau Conservation Society; The Environment Inc. (TEI); Coral Reef Research Foundation (CRRF); The Nature Conservancy; Council of Chiefs (COC); Mechesil Belau; and State Affiliated Community Organizations (Youth, Women and other groups).

National focal point: Office of Environmental Response and Coordination

2.1.1 Main Convention objectives:

The main objective of the Convention on Biological Diversity is conservation of biological diversity at its various levels (genetic, taxonomic and ecological), both those occurring naturally and those in domesticated or cultivated form, through protection and sustainable use. The Convention also pertains to all processes and activities in the society that may, even if indirectly, influence biological diversity. Thus the Convention has an impact on many different facets of the society and this is reflected in the obligations of different agencies, both governmental and non-governmental. In addition the Convention establishes international obligations pertaining to the fair and equitable sharing of costs and benefits between the parties. The obligations arising from this Convention include conservation planning, managing the environment and its resources, and addressing the related economic consequences. However, the obligations formulated in the Convention are aimed at actions on the national level and are worded in such general terms that they are applicable in the case of widely different social, economic and ecological conditions. The Convention does not define the

objectives or the activities to be undertaken by nations in precise terms. Each signatory to the Convention has to determine for itself the national goals to be implemented.

2.1.2 Commitments undertaken under the Convention:

Of the 42 Articles of the Convention, those most relevant to Palau are to:

- Establish general measures for sustainable use of resources.
- Develop systems for protective areas.
- Rehabilitation of ecosystems and recovery of threatened species.
- Provide systems to address biosafety.
- Mitigate and protect against invasive species.
- Recognize record and maintain traditional knowledge systems.
- Plan for sustainable use of biological resources.
- Provide incentive measures for conservation of biodiversity.
- Promote research and training regarding biodiversity.
- Address public education and awareness.
- Ensure access to genetic resources.

2.1.3 Priority issues for implementing the Convention on Biological Diversity:

The obligations arising from this Convention, as prioritized by Palau, are outlined in Palau's NBSAP. For the purposes of this document we have included an abbreviated listing of those priorities below:

- Establish a network of adequately funded and effectively managed protected areas.
- Provide protection for native and endemic species and their habitats.
- Protect Palau's biological diversity from invasive species and living modified organisms (LMO's)
- Provide a system that ensures legal protection for communities in terms of benefit sharing of genetic resources.
- Facilitate long-term, sustainable development and ensure that communities reap the benefits of their resources.
- Develop adequate waste management systems that promote reduction, reuse and recycling.
- Conserve and use Palau's agro-biodiversity.
- Integrate biodiversity conservation and sustainable resource use into government planning and development.

2.1.4 Constraints to Implementation of Convention on Biological Diversity:

- There is no national body charged with coordinating the National Biodiversity Strategy and Action Plan (NBSAP) implementation efforts. Even though much of

the plan is being carried out, the efforts are not being coordinated in a way that assures that all aspects of the plan are being addressed and that minimize the duplication of efforts. There needs to be expanded national attention at the ministry level to implementation efforts.

- Due to our lack of human resources, in many instances the technical expertise necessary to carry out activities prioritized in the NBSAP is lacking.
- In some instances baseline data are either fragmented or non-existent; in addition, frequently research and implementation methodologies lack standardization.
- In the areas of biotechnology and biosafety, Palau lacks any type of comprehensive legislative or policy framework.
- Incentives to motivate compliance are lacking.
- Financial aid is needed.
- The legislative, regulatory and policy processes of government need a formal stage at which a proposal's impact on biodiversity is considered.
- Inadequate sharing of information and feedback when return from international and regional meetings.
- Insufficient participation of Governor's Association and offices of state governors.
- Limited capacity to address issues related to Access and Benefit Sharing.
- Very limited capacity (human, technical, financial, managerial) at the state level for most states.

2.2 United Nations Framework Convention on Climate Change (UNFCCC)

Profile Summary

Name of Convention: United Nations Framework Convention on Climate Change (UNFCCC)

Adopted: May 9, 1992

Entry into Force: March 21, 1994

Ratified by Palau: September 16, 1999

Organizations contributing to implementation in Palau: National Environmental Protection Council (NEPC); Office of Environmental Response and Coordination (OERC); Ministry of Resources and Development; Ministry of Justice; Ministry of Education; Ministry of Health; Ministry of State, State Governments; Environmental Quality Protection Board (EQPB); Belau National Museum; National Weather Service; Palau Community Action Agency; Palau Visitors Authority (PVA), Palau Community College; Palau International Coral Reef Center; Palau Public Utility Corporation (PPUC); The Environment, Inc. (TEI); Coral Reef Research Foundation (CRRF); MOJ-NEMO; Palau Conservation Society; The Nature Conservancy; Council of Chiefs (COC); Mechesil Belau; Governor's Association; the Private Sector; and State Affiliated Community Organizations (Youth, Women and other groups).

National focal point: Office of Environmental Response and Coordination (OERC)

2.2.1 Main Convention objectives:

The Convention on Climate Change sets out an overall framework for intergovernmental efforts to tackle the challenges posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. Hence its primary objective is to stabilize greenhouse gas (GHG) concentrations. Pursuant to the Convention on Climate Change control over GHG concentrations should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner. The Convention enjoys near universal membership, with 190 countries having ratified it.

2.2.2 Commitments undertaken under the Convention:

Under the Convention, governments agree to:

- Gather and share information on greenhouse gas emissions, national policies and best practices;
- Launch national strategies for addressing greenhouse gas emissions;
- Promote educational and public awareness programs, and
- Cooperate in preparing for adaptation to the impacts of climate change.

2.2.3 Priority Issues of implementing the Convention on Climate Change:

Some of the key issues for Palau, as for other Small Island States, are as follows:

- Develop technical capacity to measure greenhouse gas emissions and changes over time in these emissions;
- Develop national strategies for planning for and dealing with rising sea levels;
- Develop systems to monitor coral bleaching;
- Develop prevention systems against flooding and landslides from storms;
- Promote energy efficiency;
- Prepare for and mitigate against drought conditions;
- Monitor ocean warming;
- Develop and implement awareness campaigns;
- Develop adaptive technologies; and
- Monitor and mitigate against loss of coastlines.

2.2.4 Constraints to Implementation of Convention on Climate Change:

- There is not a large enough national body charged with coordinating implementation. Moreover, there needs to be expanded national attention at the ministry level toward coordinated implementation efforts in a way that assures that all aspects of the plan are being addressed and that minimizes the duplication of effort.
- Lack of capacity to measure green house gas emissions;
- Lack of technology to analyze real time meteorological data;
- Lack of financial and technical resources to address the sector implementation and community-based assistance needed to mitigate and/or adapt to the impacts of climate change;
- Inadequate energy policy regulations;
- Lack of forestry policy or regulations;
- Lack of funding to improve water distribution and storage systems;
- Lack incentives to develop alternative energy systems;
- Lack of incentives to construct energy efficient structures;
- Lack of resources, both human and financial, to conduct vulnerability studies for coastal infrastructure;
- Lack of financial and technical resources to implement strategies for hazards such as flooding and landslides, and their impact on homes, farms, and taro patches;

- Inability to protect against the introduction of new invasive species and to mitigate the effects of invasive species already present;
- Lack of capacity and equipment for firefighting;
- Lack of land use plans or implementation of existing plans or national capacity for urban planning; and
- Vulnerability to vector born diseases.

2.3 United Nations Convention to Combat Desertification (UNCCD)

Profile Summary

Name of Convention: United Nations Convention to Combat Desertification (UNCCD)

Adopted: June 17, 1994

Entry into force: December 26, 1996

Ratified by Palau: 1999

Organizations contributing to implementation in Palau: National Environmental Protection Council (NEPC); Office of Environmental Response and Coordination (OERC); Ministry of Resources and Development; Ministry of Justice; Ministry of Education; Ministry of Health; Ministry of State, State Governments; Environmental Quality Protection Board (EQPB); Belau National Museum; National Weather Service; Palau Community Action Agency; Palau Community College; Palau International Coral Reef Center; Palau Conservation Society; The Environment Inc. (TEI); The Nature Conservancy; Council of Chiefs (COC); Mechesil Belau; and State Affiliated Community Organizations (Youth, Women and other groups).

National focal point: Office of Environmental Response and Coordination (OERC)

2.3.1 Main Convention objectives:

The Convention to Combat Desertification primarily addresses the problems of the arid tropical climatic zone, found especially in Africa. In its capacity as an environmental policy document the convention treats desertification as a global issue, but the scientific approach is narrower, dealing with insufficient water resources of arid areas. In general the Convention takes a narrow approach to desertification, i.e. proceeding from insufficient freshwater resources. In the broader sense, desertification is not limited to the expanding and advancing of deserts, but also includes worsening environments for plants, animals and people resulting from excessive use of water, grazing and inadequate land use. Thus the convention indirectly covers loss of fertility and degradation of every kind of soil cover. The initial version of the convention took a regional approach to desertification (tropical and subtropical desert areas). However, the range of social problems related to the use of water and soil arising from desertification is considerably broader. Thus, in order to bring other zones, which may not be suffering from a lack of water, into the scope of the Convention, and to resolve the additional problems, a new Annex was added to the convention. Palau is now also covered by this Annex. This implementation annex deals primarily with inadequate use and deterioration of soil caused by socio-economic changes and pollution, as well as physical degradation.

2.3.2 Commitments undertaken under the convention:

The obligations arising from this convention include:

- Address the problems related to the process of economic transition (production, privatization, legislation, etc.);
- Plan for mitigation strategies for desertification (serious loss of soil fertility) due to soil erosion caused by water and wind;
- Plan for and encourage sustainable practices in soil and water use;
- Address chemical degradation and salinization;
- Prevent forest coverage losses and deterioration of forest soil;
- Prevent unsustainable practices in using natural resources and inadequate land use practices, leading to physical, biological, political, social and economic problems;
- Address social and economic hardships in affected areas;
- Review and modify policy and legislative frameworks for the sustainable management of natural resources; and
- Improve regional and international cooperation to successfully implement the principles of sustainable development.

2.3.3 Priority issues for implementing the Convention to Combat Desertification:

The general priority issues to the successful implementation of the Convention to Combat Desertification are the following:

- A lack of land use planning;
- Land degradation due to construction and use of the Compact Road;
- Drought;
- Sea level rise;
- The loss of soil fertility;
- Watershed degradation;
- Invasive species;
- Uncontrolled fires; and
- Unsustainable development activities.

2.3.4 Constraints to Implementation of Convention on Combat Desertification:

- Lack of land use plans, technical expertise to develop such plans and general lack of understanding of the benefits of land use planning;
- Frequent landslides along the Compact Road;
- Ongoing soil erosion challenges from agricultural use, unpaved secondary roads and miscellaneous road paving activities;

- There is no national body charged with coordinating implementation efforts.
- Lack of capacity, both in funding and in human resources, in the extension program;
- Land tenure (ownership) issues;
- Lack of awareness of the effects of and the prevention strategies for land degradation at all levels;
- Lack of agricultural policies, regulations, guidelines and permitting processes;
- Limited capacity to conduct land degradation monitoring;
- Lack of forestry policy and regulations;
- Lack of agroforestry promotion;
- Monitor and mitigate the impact of drought, including the identification of agencies or entities responsible;
- No guidelines or assistance programs for rehabilitation of degraded land;
- Lack of equipment for soil testing;
- Lack of comprehensive legislative framework for land degradation issues;
- Lack of planning and implementation of strategies for hazards such as flooding and landslides, and their impact on homes, farms, and taro patches;
- Lack of capacity and equipment for firefighting; and
- Limited capacity to determine and understand carrying capacity and incorporate this information into development and resource planning.

- **3. Comprehensive Analysis Of Capacity Constraints**

The most obvious capacity constraint in the Republic of Palau is the small population. While blessed with a gifted and knowledgeable indigenous population, there are a limited number of people available to hold the numerous positions that could be created to do the work needed in the areas of climate change, biodiversity and land degradation, even if there were sufficient monies to pay for each of these positions. The corollary to this dilemma is that the same talented people are in demand for a variety of jobs – there is great competition for a limited workforce. The logical remedy is for Palau to work with other nations in the area to cooperatively develop regional expertise or capacity and have these experts and state-of-the-art equipment available to all of the countries within the region – turning a constraint into an opportunity.

Work in the area of biodiversity has its own constraints. The following table sets out those identified thus far.

3.1 Comprehensive Analysis of Capacity Constraints in Area of Biodiversity

Obligations	Capacity Constraints
<i>Effective National Biodiversity Planning</i>	▪ Lack of understanding by decision makers that biodiversity protection should be a high-priority consideration for all legislation, not only environmental legislation. ▪ Weak/no comprehensive biodiversity policy and legislation, particularly in areas of biotechnology and biosafety. ▪ Weak framework for cooperation in matters related to biodiversity.
<i>In-situ and ex-situ conservation of biological diversity</i>	▪ Lack of human resources capacity for biodiversity conservation and sustainable use. ▪ Low institutional capacity of public, NGO, CBO, PVO agencies for the conservation and sustainable use of biodiversity.
<i>Identification and Monitoring of components of biological diversity</i>	▪ General lack of, or weak capacity for, assessment, identification and monitoring of components of biodiversity. ▪ No comprehensive standardized baseline data, criteria and indicators so biodiversity can be measured and monitored. ▪ Lack of a biodiversity assessment and monitoring program and systems. ▪ General lack of taxonomic expertise at the national level for biodiversity characterization, conservation and sustainable use.
<i>Economically and socially sound incentive measures</i>	▪ No explicit strategy, policy or program on incentive measures for biodiversity conservation and sustainable use.

	▪ Some existing policies act as perverse incentives. ▪ Lack of a national incentive program to induce compliance. ▪ No capacity development / building in incentive measures.
<i>Scientific and technical research and training</i>	▪ Lack of data in the structure and function of ecosystems. ▪ Lack of relevant socio – economic and policy planning capacity and data. ▪ Lack of human resources, resulting in a lack of technical expertise necessary to carry out activities prioritized in the NBSAP.
<i>Promotion and encouragement of understanding of the importance of biodiversity</i>	▪ Lack of effective enforcement of the laws especially with regards to wildlife and poor understanding of biodiversity conservation and sustainable use issues and practices. ▪ Inadequate environmental education campaign efforts. ▪ No / little biodiversity teaching in schools.
<i>Implement the Cartagena Protocol on Biosafety</i>	▪ Poor capacity in biotechnology as well as poor awareness of the impact of products of biotechnology on human health and the environment. ▪ No comprehensive legislative and policy framework to guide the use of biotechnology in the country. ▪ No national institutional structure to regulate and monitor the use of biotechnology and biosafety issues.
<i>Control of Alien Invasive Species</i>	▪ Poor understanding and information on status of invasive alien species and their impact on biodiversity as well as the methods to eradicate them. ▪ Lack of a comprehensive legal and legislative framework on invasive alien species including non- enforcement of existing laws.
<i>Promotion of access and benefit sharing</i>	▪ No legislative policy or administrative measures to facilitate ABS in the use of genetic resources as well as lack of ABS negotiation skills. ▪ Lack of national capacity to implement a regulatory regime on ABS.
<i>General Implementation</i>	▪ No national body charged with coordinating the NBSAP to ensure that all aspects of the plan are being addressed and that minimizes the duplication of effort. ▪ Lack of adequate financial assistance.

3.2 Capacity Constraints in Area of Climate Change

As for the specifics in the area of climate change, Palau's constraints are reflected in the following table. Constraints listed may be relevant to more than one objective.

Objective	Constraint
<i>Address rising sea level problems</i>	• Need for sea level rise measurements. • Lack of human resources. • Lack of financial resources. • Lack of vulnerability studies for coastal infrastructure.
<i>Address coral bleaching problems</i>	• No policy on coral reef protection.
<i>Prevent flooding and landslides from storms</i>	• Lack of hazard planning and implementation of strategies for flooding and landslides.
<i>Promote energy efficiency</i>	• Lack of funding to construct or remodel structures to be energy efficient. • No building codes to incorporate energy efficiency or structural strength. • Lack incentives to develop alternative energy systems; • Lack of incentives to construct energy efficient structures; • Inadequate energy policy regulations.
<i>Prepare for problems associated with drought</i>	• Lack of funding to improve water distribution and storage. • Lack of data regarding uncontrolled fires. • No forestry policy or regulations. • Lack of capacity and equipment for firefighting.
<i>Adapt to a warmer ocean</i>	• Lack of capacity to analyze real time meteorological data.
<i>Raise awareness of climate change issues and prevention strategies</i>	• Lack of financial and technical resources to address the sector implementation and community-based assistance needed to mitigate and/or adapt to the impacts of climate change. • No clearly defined implementation focal point.
<i>Address spread of invasive species</i>	• Need for vulnerability studies of vector born diseases. • Inability to protect against the introduction of new invasive species and to mitigate the effects of invasive species already present; • Vulnerability to vector born diseases.
<i>Promote adaptive technologies and planning</i>	• Lack of or failure to implement land use plans. • Lack of forestry policy and regulations.

	• Lack of land use plans or implementation of existing plans • No national capacity for urban planning.
<i>Prepare for the loss of coastlines</i>	• Need for vulnerability studies for coastal infrastructure.
<i>General Implementation</i>	• No national body charged with coordinating implementation efforts. • Lack of capacity to measure green house gas emissions. • Lack of capacity to analyze real time meteorological data.

3.3 Capacity Constraints in Area of Land Degradation

The problems of land degradation present additional challenges. The following table sets out some of those challenges and the constraints Palau faces. As with the constraints noted in earlier sections of this Report, listed constraints may be relevant to more than one action step.

Action Steps	Constraints
<i>Provide enabling conditions for prevention of land degradation</i>	• Need for education of legislators, community development officers, and general public. • No national body charged with coordinating implementation efforts. • Land tenure (ownership) issues. • Lack of comprehensive legislative framework for land degradation issues.
<i>Establish land degradation inventory and conduct regular monitoring</i>	• No national land degradation policy. • Various government offices, agencies and NGO's are beginning to gather data on one or more aspects of land degradation, but more comprehensive data needs to be collected and then shared with others the environmental field. • Frequent landslides and resulting soil erosion along the Compact Road. • Increased secondary road construction in Babeldaob, frequently resulting in soil erosion and watershed degradation. • Limited capacity to conduct land degradation mapping and monitoring. • Lack of equipment for soil testing.
<i>Promote agroforestry</i>	• No forestry management act.

	• No trained foresters. • No money for training of foresters. • Need to identify appropriate regulatory agency and have it issue needed regulations. • Lack of forestry policy and regulations. • Lack of agroforestry promotion. • Lack of capacity and equipment for firefighting.
<i>Monitor and mitigate impact of drought</i>	• Need to identify appropriate regulatory agency. • Need government policy and mandate. • Need money to monitor and conduct mitigation activities, once identified. • Need human resources – experts and/or persons with some background in this area.
<i>Prevent land degradation</i>	• Need to identify and/or train experts. • Experts need to educate the public. • Experts need to educate planners of government and private sector construction efforts to anticipate and prevent degradation issues such as runoff and erosion. • Need money to conduct individual and community education efforts. • No one mapping locations of forest and agricultural fires, which data could be used in a Geographic Information System to prevent future fires through better planning, runoff prevention and erosion control. • Lack of agricultural policies, regulations, guidelines and permitting processes.
<i>Rehabilitate degraded land</i>	• No technical expertise. Need experts. • No equipment to test soil. • Need money. • Need to plan to rehabilitate entire ecosystems. • Need to educate the public of linkages to health. • No guidelines or assistance programs for rehabilitation of degraded land.
<i>Improve the water delivery system and promote water conservation</i>	• Need engineers. • Need money to upgrade water system. • Need a just water billing system. • Need to educate the public.
<i>Monitor and evaluate climatic variations</i>	• Limited capacity to analyze climate data within Palau. • Need for guidelines and permits prior to development, whether commercial, residential or agricultural.
<i>Empower local communities and institutions</i>	• States fail to put landscaping conditions on use of public leases. • Landscaping services not available in Palau. • Institutions, like USDA and banks, fail to put

	landscaping or forestry conditions on loans issued. • Lack of capacity, both in funding and in human resources, in the Extension Program in the Bureau of Agriculture (BoA). • Lack of awareness of the effects of and the prevention strategies for land degradation at all levels.
<i>Establish Sustainable Land Management plans</i>	• Limited capacity on many state planning boards or commissions. • Insufficient expertise of persons sitting on existing planning boards or commissions. • Lack of a professional land use planner. • Need to fill gap in the exchange of information among the government offices, agencies, NGO's and private sector businesses working in the environmental field. • Lack ecosystem based management system. • Lack of land use plans. • Lack of technical expertise to develop such plans. • Lack of understanding of the benefits of land use planning. • Lack of planning and implementation of strategies for hazards such as flooding and landslides, and their impact on homes, farms, and taro patches.

4. Cross Cutting Analysis

4.1 Priority Capacity Strengths

Perhaps the greatest strength that Palau has in stretching itself to comply with the Rio Conventions is Palau's people. There is a genuine respect for the environment. This is reflected in Palau's culture, in its traditional knowledge of how to treat the land and the sea so that both will continue to provide for the needs of the people, as well as an appreciation for beauty of these tropical islands. This respect is also reflected in the national and state governments and their agencies, in Palau's private sector, and in its numerous environmental NGO's. In light of Palau's population and size, it really does have a large number of entities that are charged with protecting its environment.

Another of Palau's advantages is that, despite numerous ecological problems, overall Palau has retained a pristine environment. While a great deal of work needs to be done to ensure that Palau's ecosystems are not degraded, Palau does not have a lot of rehabilitation work to do. As long as Palau can institute and enforce appropriate laws and regulations in a timely fashion, its work primarily needs to be directed toward prevention.

4.2 Priority Capacity Constraints

Palau's greatest constraint is the lack of a comprehensive environmental framework that includes the necessary variety of policies and clearly designated implementation and enforcement agencies. Only a comprehensive approach can ensure that new proposals will be evaluated for their potential impact on the environment, especially proposals that, at first glance, would appear to have no ecological repercussions. For example, Palau has a lot of foreign workers. Providing housing, transportation, utility services (sewage, electricity, water, telephone, cable TV, etc.), food (much of which is imported), and consumer items for this additional population puts a strain on the environment. Yet when labor issues are considered, these environmental impacts are not a required part of the deliberation process.

Another constraint concerns the availability of financial and human resources. While having a number of agencies and organizations and people working on environmental issues is an advantage, having those agencies and organizations competing for the same personnel and the same funding resources is a definite disadvantage.

4.3 Priority Capacity Needs

- The human resources available in a small country are limited. Local people need to undergo training to expand the nation's capacity and develop Palau's own experts.

- The reporting requirements of United Nations programs are a strain on the personnel and the finances of a small country. Monies that could be used for implementation are being directed to preparation of reports, and professionals working in the environmental sector find that large portions of their time are spent generating the necessary reports, leaving little remaining time for implementation efforts.
- The ratification of United Nations Conventions by the Palau National Congress (Olbiil Era Kelulau) without the provision of a financial resource creates unfunded mandates, unfulfilled expectations, and incomplete implementation.
- The failure to coordinate the actual implementation of the various conventions results in both duplicative work being performed by a myriad of agencies in some areas and no work being done by any agency in other areas.
- Adequate funding is always a need. Ensuring that the funding gets to the people doing the actual implementation is a corollary need.

4.4 Priority Opportunities for Linkages and Synergies

As already noted, there are tremendous opportunities to create effective regional approaches to the problems of climate change, biodiversity and land degradation. In particular there are opportunities to use the best of the indigenous solutions which have proven effective for millennia.

4.4.1 Linkages And Synergies Among Environmental Conventions

The Focal Point institution for all UN environmental conventions in Palau is the OERC. Presidential Executive Order 189 created the OERC in January 2001, to coordinate Palau's response to UN environmental mandates. The OERC is also mandated to develop a broad and coordinated planning approach to issues of environmental response; integrate governmental environmental programs into Executive Branch environmental response planning; establish a coordinated grant writing capacity on environmental issues faced by the Republic; and assist environmental support agencies in the development of funding assistance for environmental programs in Palau.

In January 2002, the National Environmental Protection Council (NEPC) was created via Presidential Executive Order 205, with the OERC acting as Secretariat. This Council provides coordinated planning and staffing for the nation's responses to issues of global climate change, biodiversity management, land degradation and other internationally and nationally identified issues. The NEPC includes stakeholders from national and state agencies, NGO's and CBO's that have environmental components and concerns in Palau. The Council will serve as the National Coordinating Body (NCB) for the NAP.

Since all of the UN conventions on the environment are closely linked to each other, consolidating the policy and planning work required to carry out the

responsibilities of the conventions allows for maximum efficiency and synergy in planning. Thus, the UNCCD strategies and priorities are aligned with the National Biodiversity Strategy and Action Plan (NBSAP), the First National Communication to the United Nations Framework Convention on Climate Change (UNFCCC), the Barbados Plan of Action +10 (BPOA+10), and the World Summit on Sustainable Development (WSSD). Finally, since the OERC is part of the Office of the President, this allows for maximum alignment between the NAP and the National Master Development Plan (NMDP).

While the focal point agency for CCD is the OERC, it is important to note that the OERC's role is primarily one of coordination and policy recommendation. The main government agency responsible for implementation of the strategies identified in the NAP is the Bureau of Agriculture, under the Ministry of Resources and Development. Additionally, other GO's such as the EQPB, BMR, and Division of Environmental Health may assist with certain implementing strategies. Finally, in order to attain a mainstreamed, integrated and holistic approach, a number of communities, state governments, male and female traditional leaders, and NGO's will be actively involved in implementing strategies.

5. Recommended Actions for Building Capacity

A logical next step, after assessing priority actions and capacity gaps is to plan for building capacity to assess the gaps identified. The persons who participated in identifying the issues and constraints noted in this Report lack the authority to dictate legislation, obligate national funding or hire every category of expert that could be useful. Nonetheless, within their individual role and sphere of influence, they, and the offices they represent, are committed to the goals and objectives set out in this report. Some action steps to work toward those goals include the following:

Priority Actions
<i>Cross Cutting Issues</i>
Action steps
1. Designate/create/assign a single government agency/body to coordinate implementation of activities for all three conventions, as well as for other environmental work.
2. Organize and/or develop a comprehensive and coherent national framework of government policy and regulations for integrated environmental management.
3. Continue to develop and strengthen the corps of professional and technical staff engaged in environmental management.
4. Strengthen institutional capacity of government and organizations so they can more effectively and collaboratively address environmental issues.
5. Promote public-awareness, and public policy awareness, aimed at all related stakeholders, ensuring they are aware of the importance of the environmental programs, and are able to contribute to, and become involved in, the programs.
6. Provide scholarships and opportunities for education and training in specific, technical fields and targeted fields.
7. Expand studies to collect and provide baseline information on Palau's terrestrial and marine ecology that include carrying capacity thresholds.
8. Strengthen National monitoring and evaluation systems.
9. Address the need for improved systems to incorporate indigenous and traditional knowledge into environmental management.
10. Strengthen international, regional, and sub-regional cooperation mechanisms as means of providing access to technical expertise and funding unavailable on-island.
11. Develop capacity to conduct 'green accounting' (valuation of eco-systems and natural resources) and integrate this methodology into GNP/GDP calculations.
12. Develop incentive mechanism to recruit and place recent Palauan college graduates in job positions back in Palau.
13. Mandate an institution to serve as a clearinghouse mechanism for sharing information and determining data needs.
14. Develop endowed Palau environmental trust fund for agencies to secure

funding for implementation of environmental priorities.
UNCBD
Action Steps
1. Continue to build capacity that supports full integration of the nationwide network of protected areas.
2. Develop comprehensive biodiversity policy and legislation including framework for cooperation in matters related to biodiversity.
3. Improve capacity to collect comprehensive baseline data, criteria and indicators on biodiversity so changes can be measured and monitored.
4. Develop taxonomic expertise at the national level for biodiversity characterization and conservation practices.
5. Develop comprehensive legislative and policy framework to guide the use of biotechnology in the country.
6. Develop national institutional structure to regulate and monitor the use of biotechnology and biosafety issues.
7. Develop legislative policy or administrative measures to facilitate access and benefit sharing (ABS) in the use of genetic resources as well as lack of ABS negotiation skills.
8. Develop national capacity to implement a regulatory regime on ABS.
9. Build local/state level capacity to spearhead protected areas at local level.
10. Prioritize ecosystem protection for areas that support populations of critically endangered species/habitats – i.e. dugongs, turtles.
UNFCCC
Action Steps
1. Enhance capacity to effectively monitor climate change impacts.
2. Develop capacity to monitor greenhouse gas emissions.
3. Improve meteorological data and analysis.
4. Improve national fuel and energy strategy, emphasizing the development of alternative energy sources.
5. Strengthen both regulatory capacity and human resource capacity for watershed management.
6. Conserve and rehabilitate watersheds through protection of existing forests and implementation of reforestation, afforestation, and agroforestry activities.
7. Develop coastal erosion mitigation and rehabilitation action plans, based on active local research, with states most severely affected by coastal erosion.
8. Formulate drought contingency plans and monitor water availability.
9. Improve/rehabilitate existing water storage and delivery systems to sustainably use water resources and prevent loss during delivery, especially during periods of water shortage/scarcity.
10. Develop capacity to compile detailed trend analyses, documenting climate variability.
11. Document the impact of the global phenomena of future ENSO events, and identify areas where data can be compiled, stored, and managed.
12. Increase national water storage capacity.
13. Develop plan and incentives to encourage enlarged household water

catchment systems in order to supplement existing water supply.
UNCCD
Action Steps
1. Develop both human and systems capacity to monitor soil erosion, sedimentation and fire.
2. Provide assistance and capacity building to state and traditional leaders, as well as individual landowners, on the benefits and techniques of development of sustainable land use plans.
3. Facilitate the development of state level SLM plans.
4. Expand capacity to inventory and map degraded land using appropriate technology.
5. Enhance capacity to manage land degradation data and information systems.
6. Promote and support proper solid waste management practices and rehabilitate improper solid waste disposal sites.
7. Strengthen research activities to attain drought-resistant crops.
8. Recognize, document, and support the use of traditional knowledge, and agricultural practices related to the prevention and control of land degradation
9. Develop targeted awareness campaigns on the dangers of land degradation and the benefits of soil conservation.
10. Provide high quality seed/planting material especially for drought resistant species of locally grown crops and promote indigenous species for multipurpose plantations in marginalized areas.

6. Conclusion

This Report is a working document, designed as a guide for the participating agencies and groups, as well as any new organizations, to use in determining how their future activities fit into the overall vision of meeting the environmental needs of Palau and the world. Moreover, this document should be consulted and considered in future planning efforts, especially the upcoming generation of a new Master Plan for the Republic, as it does point out capacity gaps and prioritized strategies to fill those gaps. Although, as noted throughout this Report, long-term answers to Palau's environmental challenges include developing adequate funding mechanisms and regional expertise, there is much that can be, and is being, done at the community, state, and national levels. The protection of Palau's fragile environment is a priority for the people of Palau, as our very lives and livelihoods depend on it.

Annex I

Stakeholders

Participants in the NCSA Stakeholders Meeting included representatives from the following national government, state government, private sector and NGO offices and agencies:

- Office of the President;
- Office of the Vice President;
- Office of Environmental Response and Coordination (OERC);
- Ministry of Justice (Division of Fish and Wildlife Protection (DFWP);
- Ministry of Resources and Development's Palau Automated Land And Resource Information System (PALARIS; Bureau of Agriculture; Bureau of Marine Resources; Bureau of Public Works);
- Ministry of State (Bureau of Foreign Affairs);
- Environmental Quality Protection Board (EQPB);
- Palau Community Action Agency (PCAA);
- Palau Community College – (Cooperative Research and Extension PCC-CRE);
- Koror State Government (KSG);
- Palau Conservation Society (PCS);
- Palau International Coral Reef Center (PICRC);
- Palau Community Action Agency (PCAA);
- Coral Reef Research Foundation (CRRF);
- The Environment, Inc. (TEI);
- Food and Agriculture Organization (FAO);
- The Nature Conservancy (TNC); and
- GMB Consulting.

Annex II

Summary Of National Laws

PNC TITLE / RPPL NO.	PNC CHAPTER NO[S].	PNC TITLE OF ACT	YEAR ENACTED	UNITED NATIONS CON-VENTION	APPLICABILITY TO PROJECT
Title 24	1001-1002	Endangered Species Act	1975	CBD	Palau's Endangered Species Act prohibits any person from taking, engaging in commercial activity with, possessing, or exporting any endangered or threatened species of plant or animal. The statute allows certain exceptions for cultured species and for takings for subsistence or traditional purposes where the Minister of Resources and Development determines that the taking does not further endanger the species. However, the Endangered Species Act has no effect until endangered and threatened species are listed by the Minister of Resources and Development. The Endangered Species Act was adopted in 1975, but a list of endangered and threatened species has not yet been adopted into regulation.
Title 24	1401	Conservation Of Birds Act		CBD	Under 24 PNCA § 1401 Conservation of Birds Act, all birds except for four species in Palau are protected. This law has only been partially enforced and is in need of review and revision for several reasons. For example, there is limited scientific or cultural justification for the four species exempt from the law and, conversely, for some species such as the Micronesian Pigeon or belochel, it may be more appropriate to have regulated harvest rather than a complete ban (as it is considered to be a delicacy and a culturally important species, and there doesn't appear to be a current threat to pigeon populations). The maximum penalty for violation of this section is only \$100 and six months imprisonment.
Title 24	3001-3004	Ngerukewid Islands Wildlife Preserve	1976	CBD	Under the statutes establishing the Ngerukewid Islands Wildlife Preserve, the area is to be maintained in a primitive condition, and it is illegal to take or possess weapons, traps, snares, or objects capable of killing or otherwise taking birds, animals, or marine life in the preserve. Possession of birds, animals, marine

					life or eggs is also prohibited, as is lighting of fires or cutting or removing any plant life. There are no civil enforcement provisions however, and the maximum criminal penalties are a \$50 fine and imprisonment of six months combined with forfeiture of gear (including boats).
Title 24	3201-3207	Protected Area Network Act	2003	CBD	The Protected Areas Network (PAN) Act has recently been passed by the Palau National Congress and signed into law by the President. Under the PAN legislation, states will be able to nominate areas to be designated within a nationwide network of protected areas and subsequently obtain national government assistance in managing the protected areas. States will thus have added incentive to designate areas as protected areas in order to enable them to receive funding from the national government and from pass-through grants for which the national government may be eligible. This Act replaces The Natural Heritage Reserve System Act which was never successfully implemented as it required States to voluntarily designate lands to be included in the national Reserve System or upon purchase of lands or upon donations of private lands.
RPPL – 5-7		The Palau International Coral Reef Center Act	1999	CBD	Establishes the Palau International Coral Reef Center to conduct coral reef and related marine research and education that will contribute to the management, use and conservation of Palau and the world's marine environment.
27	1201	Marine Protection Act	1994	CBD	Regulates the taking of certain species of marine organisms, prohibits or limits certain fishing methods and authorizes the Minister of Resources and Development to develop regulations for the collection of marine animals for aquaria or research.
24	101-169	Environmental Quality Protection Act	1981	CCC	The Environmental Quality Protection Board is a semi-government agency created in 1981 to be the national clearinghouse for all structural development activities within the Republic. All development projects are required to conduct an Environmental Assessment (EA). Depending on the scale of the project, a full Environmental Impact Statement (EIS) may be required. An EIS normally requires evaluation of water quality and capacity within a given watershed, soil characteristics, and terrestrial and/or marine inventories depending on the site location. EQPB regulations relate primarily to impacts from earthmoving, and don't provide any direct powers to control forest clearing if there is no earthmoving involved.

Annex III

Summary Of State Laws

STATE	PUBLIC LAW NO.	TITLE OF ACT	YEAR ENACTED	UNITED NATIONS CON-VENTION	APPLICABILITY TO PROJECT
Aimeliik	ASPL No. 6-9	Ngaremeduu Conservation Area Act of 1999	1999	CBD	This Aimeliik State Public Law, effective as of February 4, 1999, and also known as the Ngaremeduu Conservation Area Act of 1999, establishes in perpetuity the Ngaremeduu Conservation Area (the "NCA") located in portions of Aimeliik State, Ngatpang State and Ngaremlengui State to maintain and enhance biodiversity while providing for sustainable development by incorporating traditional resource management and active community participation into project planning and development. Established, in part, to prevent erosion and runoff from terrestrial activities into the four rivers - the Tabecheding, Yamato, Ngchelotel and Ngermeskang – that empty into Ngaremeduu Bay (the "Bay"), the NCA contains 44% of Palau's mangroves, 12% of Palau's swamp forests and 42% of Palau's freshwater marshes and wetlands. Total area affected – 167 sq km.
Aimeliik		Ngerheba Island Wildlife Conservation Area Act		CBD	Ngerheba Island Wildlife Conservation Area covering 1 sq km area for sustainable use.
Aimeliik		Immul Mangrove Conservation Area Act		CBD	Immul Mangrove Conservation area covering 0.4 sq km for restricted non-extractive use.
Airai	ASPLA No. A-2-04-94	Airai State Conservation Area Set Side Act	1994	CBD	In Ngchesechang Village, a mangrove conservation area covering an area of about 0.935 sq km was established under the Airai State Conservation Area Set Side Act (ASPLA No. A-2-04-94) as a compensatory mitigation measure recommended by the Army Corp of Engineers for the loss of natural resources as a result of the Ngchesechang Dredging Project in 1994.
Airai	ASPLA No.	Airai State	1992	CBD	In 1992, 0.307sq km of mangrove was set aside as a

	A-4-02-02	Conservation Area Set Side Act			conservation area as compensatory mitigation recommended by the Palau Environmental Quality Protection Board for any loss for natural resources as a result of the proposed construction of a golf course project at Oikull Hamlet (ASPLA No. A-4-02-02).
Airai	ASPLA No.	Airai State Conservation Area Set Side Act	1997	CBD	In 1997, a rock island called Ngeream (0.7 sq km, fringing reef (0.46 sq km and mangrove area (0.542 sq km) covering a total area of 1.708 sq km was set aside in Ngeruluobel and Ngerusar as a conservation area as compensatory mitigation for the dredging project in Ngetkib Hamlet for a public marine and Surangel and Sons Company reclamation and fill.
Airai	ASPLA No. A-4-14-05		2005	CBD	In 2005, the first conservation area was set aside to protect the resources and not as a compensatory measure for dredging (ASPLA No. A-4-14-05). The total area is 3.645 sq km and includes fringing reef and seagrass beds (2.769 sq km), mangrove (0.763 sq km) and two rock islands (0.112 sq km.) The 2005 conservation area was set aside as an important ecological and biological habitat for fish and other invertebrates.
Angaur		Angaur Conservation Area		CBD	Restricted non-extractive uses.
Hatohobei	HS16-0 PL 5	Helen Reef Reserve		CBD	The Helen Reef Reserve covers 163 sq km of reef and lagoon with partly non-extractive uses and partly sustainable uses.
Sonsorol		Fauna		CBD	Conservation area
Kayangel		Ngaruangel Reserve			Covers 35 sq km of reef and lagoon for sustainable use.
Koror	MO 46-69	Permit for Shell Collection	1969	CBD	Regulates shell collection.
Koror		Harvesting restriction in the Rock Islands, Decree by Ngarameketii Chief Council of Koror	1973		Prohibits harvest of any marine or terrestrial life by non-residents of the State and the taking of domestic animals to the Rock Islands.
Koror	K6-110-00		2000	CCD	This Koror State Public Law, effective as of approximately March 29, 2000, prohibits the cutting and/or harvesting of trees and vegetation below the high tide line, in mangroves and within wetlands areas, except those instances in which such measures are taken to maintain or expand existing <i>mesei</i> (taro patches) or to create new

					<i>mesei</i> or when the state or national government performs such measures to benefit the public (i.e. for public roads or existing docks, power and sewer lines or sewage treatment centers).
Koror	K6-101-99	Ngerukuid Islands Wildlife Preserve	1999	CBD	Prohibits transport of firearms or other weapons capable of killing or capturing birds, animals or marine life, bans transport of domestic animals, use of fire, and cutting, destroying or removing plants.
Koror	K6-68-95	Ngemelis Island Complex -no motor boat	1995	CBD	Koror State prohibits fishing within 1 mile of the Ngemelis and Dmasch Islands (30sq km)
Koror	K6-95-99	Ngkisaol Sardine Sanctuary	1999	CBD	Koror State prohibits fishing at Ngkisaol Sardine Sanctuary (0.01 sq km)
Koror	K6-113-00	Koror Rock Islands Management and Conservation Act	2000	CBD	This Koror State Public Law, effective as of approximately August 31, 2000, was set up to manage the Rock Islands and surrounding water resources, and controls use of Rock Island forests. A new management plan, and associated revised legislation and regulations, now being developed, will replace this Act some time in 2004. The management plan will most likely prohibit most cutting of trees on the Rock Islands, except for very limited traditional use.
Koror	K6-110-00	Land Crab Act	2003	CBD	Prohibits the taking, possession, and sale of live or dead land crabs during certain times, and undersized or buried crabs at any time.
Koror	K6-101-99	Ngemelis Island Complex -no motor boat	1999		Ngemelis Island Complex - no boat operation.
Koror	K6-68-95	Soft coral arch, cemetery reef, and all marine lakes	1999	CBD	Prohibits fishing, hunting, taking or disturbance of any marine flora or fauna at the soft coral arch, cemetery reef, and all marine lakes.
Koror	K6-95-99	Permanent Conservation Moratorium - Ngedarrak Reef	2005	CBD	Establishes Ngerdarrak as a permanent Conservation site.
Koror	K6-113-00	Ngerkebesang Conservation Zone		CBD	Ngerkebesang Conservation Zone that prohibits fishing, hunting, taking or disturbance of any marine flora or fauna.
Melekeok	MSPL No. 4-21	Ngardok Nature Reserve Act of 1997	1997	CBD	This Melekeok State Public Law, also known as the Ngardok Nature Reserve Act of 1997, effective as of January 5, 1998, provides for the protection and

					conservation of the Ngardok watershed area (4sq km). (The law establishes the Ngardok Nature Reserve encompassing approximately the entire watershed draining into Ngardok Lake, with the goal of providing high quality water supplies for the people of Melekeok State, providing enjoyment and education for citizens and tourists, maintaining the ecological integrity of the lake and related plants and animals in the area, and providing research opportunities.
Melekeok		Ngeran Clam Area			1.0 sq km partly sustainable use and partly extractive use.
Melekeok		Melekeok Management Area			
Ngaraard		Ngaraard Mangrove Conservation Area		CBD	1.4 sq km of restricted non-extractive uses (I have 1.8 sq km).
Ngaraard		Ngaraard Beach Conservation Area		CBD	12.1 sq km sustainable uses.
Ngaraard		Ngaraard State Conservation Area Set Side Act	1994	CBD	This Ngaraard State Public Law, also known as the Ngaraard State Conservation Area Set Aside Act and effective as of June 21, 1994, provides for the designation of a mangrove area on the west coast of Ngaraard as a conservation area. Only traditional and subsistence uses and educational uses (as defined in the law) are allowed in the designated conservation area.
Ngarchelong		Ebiil Conservation Area			19.1 sq km of restricted non-extractive uses.
Ngardmau		Reef of Ileyakl Beluu (Ileakelbeluu)		CBD	
Ngardmau		Ngermasech Conservation Area		CBD	3.5 sq km of restricted non-extractive uses.
Ngaremlengui		Ngaremeduu Conservation Area Act	2000	CBD	Ngaremlengui State, as part of the Ngaremeduu Conservation Area, has enacted legislation similar to that of Airmeliik and Ngatpang States. This conservation area includes 92.4 sq km of barrier reef, lagoon, inner reef and inner bay, 4.05 sq km of mangrove, 0.82 sq km of swamp forest and 0.75 sq km of freshwater marshes and wetlands.
Ngatpang	NSPL No. 106-99 (Bill No. 38-99, D1,	Ngaremeduu Conservation Area Act	2000	CBD	0.5 sq km non-extractive uses.

	D2) NSPL No. 4-18 (Bill No. 4- 68-15, DI)				
Ngatpang		Ngatpang Conservation Area		CBD	0.5 sq km for restricted non-extractive uses.
Ngchesar	NSOL No. 146	Ngchesar State Protected Area Act	2002	CBD	The Ngelukes Conservation area is a 1 sq km patch reef to conserve fish and other seafood and protect the habitat of the fish and other marine life. Draft management plan and assessment surveys were completed.
Ngiwal		Ngiwal State Conservation Act	1997	CBD	1 sq km inner reef was conserved but it is now open.
Peleliu		Teluleu Conservation Area		CBD	0.8 sq km of restricted non-extraction use of this inner reef with seagrass habitat.

Annex IV

References

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