



National Oceans Policy of Papua New Guinea 2020 - 2030



Department of Justice & Attorney General

Foreword



I am privileged on behalf of all our people in seafaring communities scattered across the maritime boundaries of our country to be part of the initiative and collaboration that has led to this first-ever policy document devoted to sustainable development and management of our oceans and maritime endowment of our country.

I am part of a government that has set out to “take back Papua New Guinea” from a journey of four decades that has yielded uncertain outcomes. In the policy space, we want to return to the vision of our founding fathers espoused in the National Goals and Directive Principles. We want to take the opportunity to reposition the country going into the future.

Oceans policy is a foundation policy that has been neglected for four decades since independence. We now have a policy framework that deals with the policy and legal gap that will cover the important development challenge that balances our ambitions to exploit our nation’s marine resources under a sustainable and equitable framework. The policy is not intended to be a pedantic policy blueprint as some would have wanted. It is but the beginning of a guided work needed in policy and legal development required in the area.

The policy raises a legitimate expectation in our people for government to work smarter to correct and restore years of unjust exploitation, deprivation and injustice for marine resource owners and our country that has spanned many generations starting from first contact with outsiders till now.

I think of ordinary citizens in many far flatched isolated island communities like Budibudi in Milne Bay Province and many others in our coastal regions who depend on government at all levels to action and use this policy with a sense of urgency. For these communities, our sovereignty as a country has become meaningless in many ways. Positive action and nothing less will appease our people.

Whilst our National Constitution, Goal 4, National Goals and Directive Principles relates to the protection of the environment, including oceans and the wise use of the natural resources, our policy focus in the area of environment and natural resources has been directed to land-based extractive industries.

Given that PNG is an archipelagic state meaning that we are surrounded by oceans, our failure to put in place a policy governing the sustainable management of our marine resources is lamentable. For

example, it is not without significance that our maritime boundaries have not been clearly defined almost 45 years since independence.

I note that work in this regard was encouraged following Papua New Guinea becoming a signatory to the United Nations Law of the Sea Convention (UNCLOS) in 1997. Legal reforms were introduced to implement UNCLOS and related maritime treaties to protect and preserve our oceans.

But all these effort in legislation were introduced without a National Oceans Policy.

I am happy to note therefore that this National Oceans Policy is inspired and derives its character from Goal 4 of the Constitution, and Vision 2050 for PNG to achieve a ranking within the top 50 countries in 2050 based on the UN Human Development Index (UNHDI).

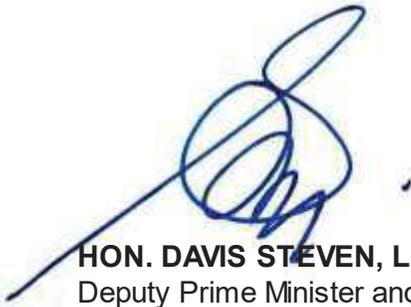
The road to this goal has been articulated in the principles of the National Strategy for Responsible Development (STaRS) where “responsible development encapsulates integrating environmental protection, biodiversity development and conservation; that is, not posing any unnecessary risks to present generations and at the same time not jeopardizing the needs of future generations.”

On the global front, our Oceans policy framework is consistent with our national commitment to implement the United Nations Sustainable Development Goals (SDGs). In particular, sustainable development Goal 14 - Life Below Water, that aims to promote conservation and sustainable use of our oceans, and its marine resources. In implementing the Oceans Policy therefore our nation will be contributing to adaptation and mitigation of challenges facing the oceans of our planet.

Implementation of this policy should influence a more prioritized, structured approach to national planning and linked to more accurate and transparent budgeting, implementation and monitoring. This will strengthen the capabilities of our national, provincial and district planning system and improve funding into the sectors via the co-ordination mechanism set up through the National Oceans Office.

I express appreciation and gratitude to our officials from inter-government agencies led by Secretary, Dr Kwa, Secretary, Department of Justice and Attorney General (DJAG) whose engagements with our regional stake-holders, multilateral and bi-lateral partners have delivered this policy milestone for our nation.

On behalf of the Marape-Steven government and our people I commend this policy.

A handwritten signature in blue ink, appearing to read 'D. Steven', is written over a light blue rectangular background.

HON. DAVIS STEVEN, LLB, MP
Deputy Prime Minister and Minister for Justice & Attorney General



Secretary's Statement

At the 8th Pacific Islands Nature Conservation and Protected Areas Conference in Alotau, Milne Bay Province in 2007, Papua New Guinea (PNG) promised its Pacific neighbours that it would immediately commence work on completing its national oceans policy in 12 months. As a member of the National Organizing Committee of the Conference, I was very thrilled and excited that PNG would finally have a national policy to guide the Government and the different stakeholders in managing our oceans and its natural resources.

I am delighted that finally after 13 years of waiting, we now have our first ever National Oceans Policy (NOP). The work on developing the NOP began with the election of the Marape-Steven Government in May 2019. Under the leadership of Hon. Davis Steven, the Deputy Prime Minister and Minister for Justice and Attorney General, the stakeholders with the support of the Department of Justice and Attorney General have now completed the NOP.

The protection, sustainable use and management of our oceans and natural resources is critical to the people of PNG and our future generations. The Government has acknowledged this fact by enacting a suite of legislation, including the latest statute, the *Maritime Zones Act* 2015, to achieve this objective. This legislative regime however did not have the policy support. The NOP therefore fills that void.

The NOP draws its strength from the Constitution, particularly the National Goals and Directive Principles, the Vision 2050 and the National Development Strategy 2030. The NOP has been fashioned with the backdrop international best practice and globally accepted principles of resources exploitation and management, especially the Sustainable Development Goals. The NOP also incorporates traditional knowledge and customs relating to ocean and coastal resources management.

The need to develop appropriate policy frameworks that provide the best opportunities for successful management of our resources in an integrated and sustainable way – the bottom up approach – draws on our cultural heritage. A holistic approach to the use and management of the country's resources embedded in modern best practices and standards and intertwined with traditional best practices is a strong bedrock for a successful natural resources policy.

The governance of our natural heritage should be built on the capacity of our most valued resource, our people and communities - based on their traditional ties of stewardship to the land and sea. This local guardianship will need to be supported and coordinated by government institutions that have regained the wider perspective of responsible sustainable development, management and conservation to facilitate dialogue including the interests of other groups.

This coordination role supported by our inter-agency and stakeholders needs international and regional inter-governmental organizations involvement. Their roles include overviews of emerging issues and threats and international dimensions as well as contributing ocean science for the management of the resources, that are often, or, if not always, outside the community purview, due to geographical isolation or other reasons.

The National Oceans Office and our Ministry of Justice and Attorney General calls for support in the refinement of our NOP framework; especially the practical aspects of institutionalizing the NOP strategies. While there is emergence, of various levels of institutional capacity being developed from different national processes, with some advances in a number of provinces and sectors, the appropriate integration linkages must be adopted to provide a more efficient integrated management approach.

The greatest challenge is on implementation of an overall integrated oceans management model. Overcoming the challenge is critical for the future in which the plight of local coastal and island communities must be borne in mind from the outset. The Department of Justice and Attorney General is committed to fully implementing the NOP for the interest of our people. I encourage all development partners, stakeholders and especially the coastal and island communities to be active participants in reaping the desired maximum benefits from this policy initiative.

On behalf of the Department of Justice an Attorney General, acknowledge and thank all those who have supported and contributed directly and indirectly to the formulation of our National Oceans Policy framework. My sincere thanks to you all.

Praise and thanks be to our God Almighty.

A handwritten signature in blue ink, appearing to read 'Eric Kwa', with a long horizontal flourish extending to the right.

DR ERIC KWA, PhD
Secretary

Department of Justice and Attorney General

Acknowledgement

This Papua New Guinea National Oceans Policy framework was prepared and coordinated through the Ministry of Justice and Attorney General, in consultation with all Government ministries, including Department of Foreign Affairs and International Trade, National Fisheries Authority, Department of Transport, Department of Higher Education, Science, Research and Technology, Conservation and Environment Protection Authority, Climate Change and Development Authority, National Maritime Safety Authority, Mineral Resource Authority, Department of Mineral Policy and Geo-Hazard Management and Tourism Promotion Authority.

We are humbled by the contributions of the government sector, the provincial governments, land and marine resource owners who contributed in the national consultations. We are especially grateful to the communities, provincial government officers, national government officials and other stakeholders throughout the country who contributed their ideas and opinions to help design and shape the National Oceans Policy. We would like to dedicate this Ocean Policy to all our traditional leaders and people who have passed on their knowledge and skills in protecting and managing our oceans and its resources in a sustainable manner for the present and future generations.

Finally, we record our appreciation to the Commonwealth Secretariat and the University of Papua New Guinea for the initial work towards guiding the formulation of this policy.



Table of Contents

FOREWORD	2
SECRETARY’S STATEMENT	4
ACKNOWLEDGEMENT	6
ACRONYMS AND ABBREVIATIONS	9
EXECUTIVE SUMMARY	10
CHAPTER 1 BACKGROUND INFORMATION	13
1.1 INTENT OF POLICY.....	13
1.2 AUDIENCE	13
1.3 POLICY DEVELOPMENT PROCESS.....	13
1.4 LEGAL FRAMEWORK TO GOVERN OCEANS	13
CHAPTER 2 DEFINITIONS AND POLICY APPLICATION	15
2.1 INTEGRATED OCEANS MANAGEMENT (IOM).....	15
2.2 INTEGRATED COASTAL AND ISLAND MANAGEMENT (ICIM)	15
2.3 CUSTOMARY TENURE SYSTEMS AND RESOURCE MANAGEMENT	16
2.4 PROTECTING CUSTOMARY USE OF RESOURCES	16
2.5 SUSTAINABLE USE	16
2.6 ECOSYSTEM-BASED MANAGEMENT.....	16
2.7 ENVIRONMENTAL IMPACT ASSESSMENT (EIA)	16
2.9 PRECAUTIONARY APPROACH	17
2.10 MARINE SPATIAL PLANNING.....	17
2.11 MARINE PROTECTED AREAS (MPAs).....	17
2.12 MULTIPLE-USE MANAGEMENT	18
2.13 ADAPTIVE MANAGEMENT	18
2.14 JOINT MANAGEMENT	18
2.15 BLUE ECONOMY.....	18
CHAPTER 3 POLICY CONTEXT AND DIRECTION	19
3.1 VISION.....	19
3.2 GOAL	19
3.3 OBJECTIVES	19
3.4 PRINCIPLES	19
3.5 OUTCOMES.....	20
3.6 INTERNATIONAL AND REGIONAL POLICY AND LEGAL CONTEXT	21
3.6.1 International and Regional Policy Context	21
3.6.2 Development Agenda 2030 and the Sustainable Development Goal 14	21
3.6.4 Regional Policy Context.....	22
3.6.5 PACIFIC ISLANDS REGIONAL OCEAN POLICY.....	23
3.6.6 BLUE PACIFIC	23
3.7 NATIONAL POLICY CONTEXT & NATIONAL LEGAL CONTEXT	24
3.7.1 National Policy Context.....	24
3.7.2 National Legal Context.....	26
CHAPTER 4 POLICIES AND STRATEGIES	29

4.1 CURRENT SITUATION	29
4.2 ANALYSIS OF ISSUES.....	29
4.2.1 Governance & Management.....	29
4.2.2 Knowledge & Technology.....	30
4.2.3 Environment Protection, Conservation & Climate Change.....	31
4.2.4 Sustainable Economic Development.....	34
4.2.5 International Relations, Security, Safety & Recreational Use	35
4.3 POLICY RESPONSES.....	37
4.3.1 Strategy 1: Governance and Management.....	37
4.3.2 Strategy 2: Knowledge and Technology.....	37
4.3.3 Strategy 3: Environment Protection & Conservation.....	38
4.3.4 Strategy 4: Sustainable Economic Development.....	38
4.3.5 Strategy 5: International Relations, Security and Safety	39
CHAPTER 5 INSTITUTIONAL ARRANGEMENTS.....	40
5.1 NATIONAL OCEANS OFFICE	40
5.1.1 Operational Policies.....	40
5.1.2 Ministerial Oceans Committee (MOC).....	40
5.1.3 National Oceans Committee	40
5.1.4 Core Technical Committee (CTC).....	41
5.1.4 Oceans Office Operational Requirements	41
5.1.5 Working Committee to develop Applied Research regimes.	41
5.1.6 National Advisory Committees.....	41
5.1.7 RESOURCE IMPLICATIONS	41
5.1.8 Funding Sources.....	42
5.3 ORGANIZATIONAL RESPONSIBILITIES.....	42
CHAPTER 6 IMPLEMENTATION PLAN.....	45
IMPLEMENTATION PHASE 1:.....	45
IMPLEMENTATION PHASE 2:.....	46
IMPLEMENTATION PHASE 3	46
CHAPTER 7 MONITORING & EVALUATION	47
TABLE 7.1: THE NOP NATIONAL OUTCOMES	47
TABLE 7.2: PNG SDG 14 TARGETS AND INDICATORS	48
7.3 GOVERNMENT AGENCIES	49
7.4 PAPUA NEW GUINEA OFFICE OF OCEAN AFFAIRS	49

Acronyms and Abbreviations

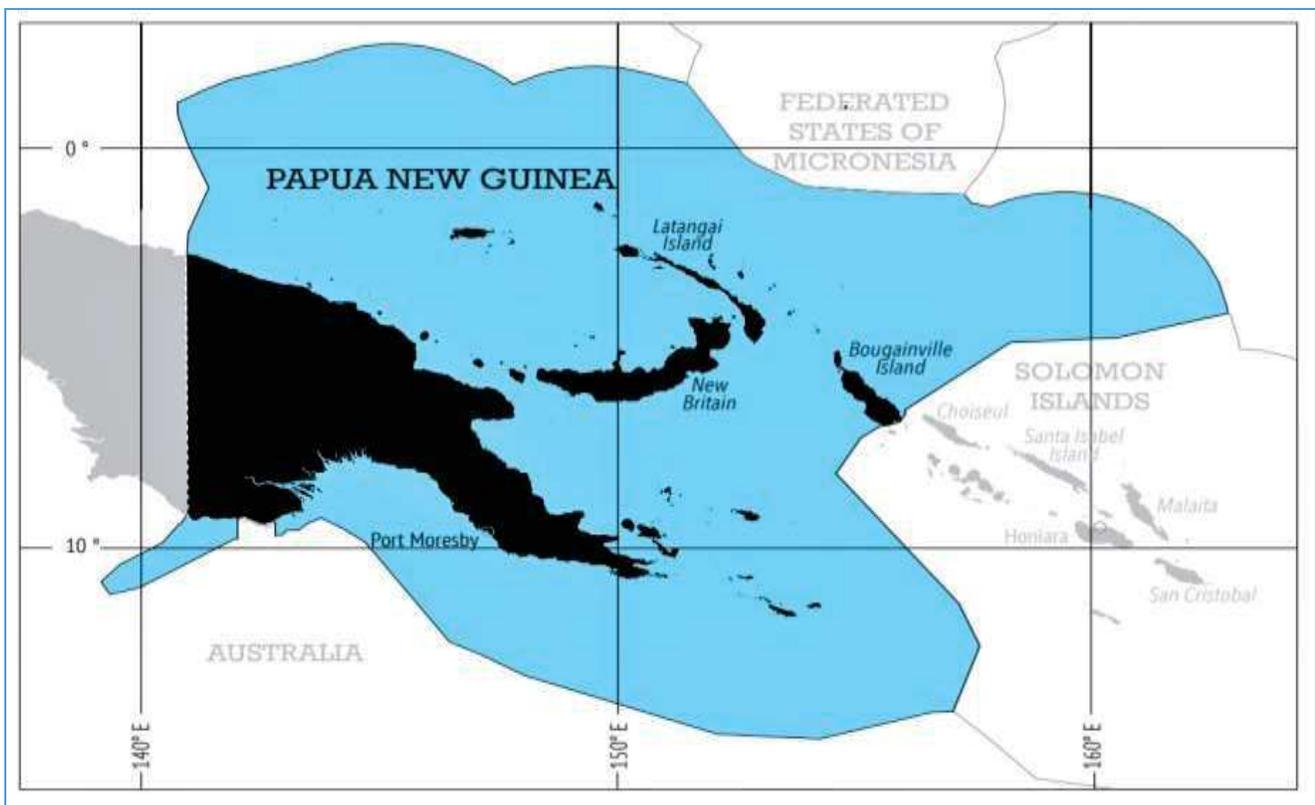
ABS	Access and Benefit Sharing
CMEP	Commonwealth Marine Economies Program
CTI-CFF	Coral Triangle Initiative – Coral Reefs, Fisheries and Food Security
CEPA	Conservation & Environment Protection Authority
DFAIT	Department of Foreign Affairs and International Trade
DNPM	Department of National Planning and Monitoring
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization
GOPNG	Government of Papua New Guinea
ICIM	Integrated Coastal and Island Management
IOM	Integrated Oceans Management
IPRs	Intellectual Property Rights
IUCN	International Union for Conservation of Nature
MARPOL	International Convention for the Prevention of Pollution from Ships
MPAs	Marine Protected Areas
MSP	Marine Spatial Planning
MSR	Marine Scientific Research
MSRC	Marine Scientific Research Committee
MEEP	Marine Environment Education Program
NFA	PNG National Fisheries Authority
NEC	National Executive Council
NGO	Non-Government Organization
NOO	National Oceans Office
NOP	National Oceans Policy
NOC	National Oceans Committee
PNG	Papua New Guinea
PIROP	The Pacific Islands Regional Ocean Policy
PIF	Pacific Islands Forum
PIP	Public Investment Program
R&D	Research and Development
RPO	Research Performing Organizations
SDG	Sustainable Development Goal
SIDS	Small Island Developing States
SPREP	South Pacific Regional Environmental Program
SPC	Secretariat of Pacific Community
TMT	Transfer of Marine Technology
UNCLOS	United Nations Convention on the Law of the Sea
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEP	United Nations Environment Programme
UNHDI	United Nations Human Development Index
UNCTAD	United Nations Conference on Trade and Development

Executive Summary

Introduction

Papua New Guinea (PNG) is an archipelagic state. It is a country surrounded by oceans with the main landmass comprising the eastern-half of the island of New Guinea in the Western Pacific Ocean (Rim of Fire) Region, and within the prime influence of the 'Pacific Warm Pool' – the warmest part of any ocean on planet earth. PNG's prime jurisdiction encompass an ocean space (by its declared Exclusive Economic Zone (EEZ)) of 3.12 million km² with a coastline of 17.110 million km. Eighty eight percent of PNG is covered by oceans in comparison to land. The Marape-Steven Government recognizes that the ocean(s) is the major driver of all natural and physical systems that impact on the country's natural environments or ecosystems (whether on land or in the seas), which in turn impacts the socio-economic livelihoods of the people and their aspirations for sustainable development.

Figure 1: Map of Papua New Guinea and its Exclusive Economic Zone (EEZ). Source: "A Roadmap for Coastal Fisheries and Marine Aquaculture for PNG 2017-2026"



The coastal, islands and the marine natural systems hold abundant natural renewable and non-renewable resources which are envisaged to meet the demands of the country's ever-growing human population, which at present, is 8.5 million people. These resources include food, water, medicines, and various components of biological diversity, minerals, hydrocarbons and energy. The oceans also hold opportunities for industrial and service sectors such as in fisheries, forestry, agriculture, transportation, business and finance, human settlement and infrastructure development, socio-economic livelihoods along the coasts and on islands, tourism, education and traditional knowledge, health, national security and international relations.

The development of PNG's National Oceans Policy (NOP) has occurred at an important juncture of the country's history in that we recognize the rapid land degradation resulting from extractive exploitation and human settlement. Thus, the policy which is fashioned by the United Nations Convention on the Law of the Sea (UNCLOS) and the Maritime Zones Act 2015 (MZA), will provide the sustainable management and governance framework to better use and safeguard our ocean resources and ensure their sustainability for our future generations.

The National Executive Council (NEC) through its Decision No. 3/2015 established the National Oceans Office (NOO), and subsequently its Secretariat through the workings of the National Oceans Committee and its Technical Working Committee under the auspices of the Department of Justice and Attorney General (DJAG) as Chair and the Department of Foreign Affairs and International Trade (DFAIT) as co-chair, since 2016. The governance framework proposes a Ministerial Oceans Committee to provide relevant reports to the NEC.

The development of the NOP strengthens the organizational development and establishment of the NOO and its working Committees. The NOP is a 10-year policy that will run from 2020 to 2030. The design, planning and development of the NOP has been a collective effort by all Papua New Guineans and friends through national consultations, the review and assessment of numerous reports, laws and literature.

The NOP supports relevant reforms including those provided under the current MZA. An effective national ocean policy will require sustained investment to support research and exploration, provide adequate infrastructure for data collection, science and management. The NOP also provides for an opportunity for PNG to link up with the United Nations Decade of Ocean Science for Sustainable Development (2021-2030) and becoming a key stakeholder of the Ocean Decade within the Pacific Region.

Basic Issues

There are numerous natural and man-made disasters that have occurred and will continue to occur at the national, regional and international levels. Many of these disasters have greatly affected our oceans and its natural resources. The global community has witnessed increased opposition to developments that affect our oceans through protests, petitions and court proceedings. In PNG, the uncertainty of the impacts on the marine environments by offshore deep seabed exploration and mining for minerals by foreign companies is imperative.

It is noted that more than 8% of our people live within one kilometer of coastal and island environments and these environments are vulnerable and prone to hazards and risks of complex dynamics. There is a need to apply modern risk assessments such as, the Integrated Vulnerability Index, to enable improved planning strategies and implementation of programs. The application of relevant marine scientific research is crucial to appreciate and understand the nature of our oceans.

The major challenge that confronts the country in the implementation of NOP is the weak governance processes. It is imperative that the Government tackles this issue through strategic policy, legislative and administrative reforms.

Approach to Resolving the Issues

The NOP framework is based on the principle of Integrated Oceans Management (IOM). There is now consensus amongst the mainline organizations in different Government ministries for a paradigm shift to embrace a national oceans policy based on the IOM concept. The implementation of programs and activities under the principles of good governance for an IOM policy must also include our traditional

ocean communities and strive for gender, inter-generational and geographic diversity amongst stakeholders. The IOM is a national strategic policy document that sets out a planned-system wide approach to ocean management; and covers all sectors and all levels of governments in an integrated mode of planning, developing, and implementation of policies.

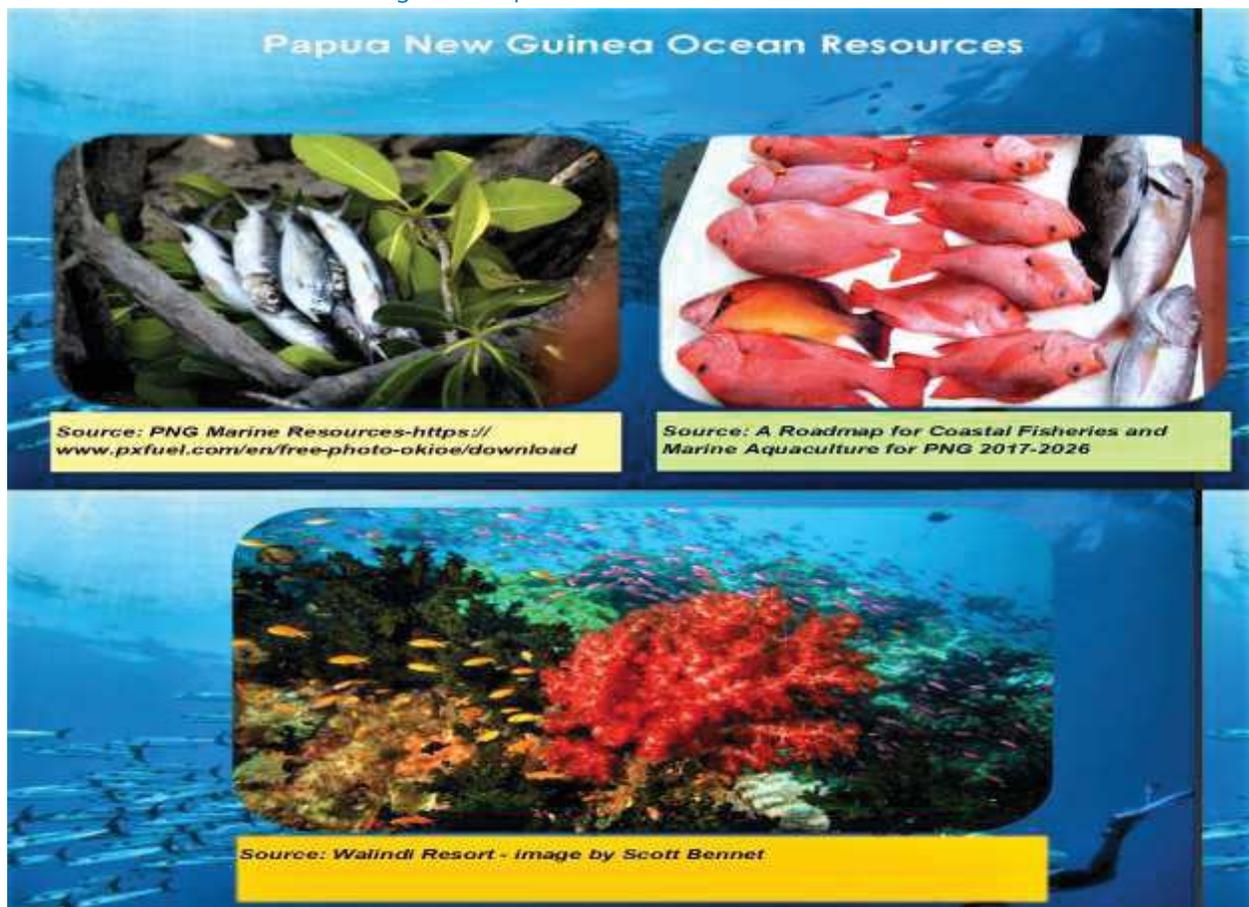
An IOM policy is not confined to the country's EEZ but also extends beyond its jurisdiction. PNG needs support and cooperation from other States, and relevant multilateral and bilateral organizations under the auspices of the United Nations. One of these opportunities is to engage with the UN Decade of Ocean Science for Sustainable Development (2021-2030) initiative.

An integration of resource development, conservation and management, to lead PNG into the next promising viable global economy – the blue economy - requires an appropriate national oceans policy framework. The blue economy entails the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, while protecting the health of the ocean ecosystems. In essence, the IOM policy framework requires an appropriate governance structure for all actors on oceans to abide by. Generally, it is a set of guiding principles which provide integrated strategic actions for implementation. This envisages realizing the benefits of the blue economy.

Purposes of the National Ocean Policy

The Primary Purpose of the NOP is to develop and establish an Integrated Ocean Management System within PNG's national jurisdiction and at the same time establish a Framework for Regional and International Cooperation and Collaboration in Areas Beyond its National Jurisdiction.

Figure 2: Papua New Guineas Ocean Resources



CHAPTER 1 BACKGROUND INFORMATION

1.1 Intent of Policy

The PNG National Ocean Policy is designed to provide a framework to improve ocean governance and management. It aims to provide the strategic direction for planning, resource allocation and to promote sustainable management and use of ocean resources within and beyond PNG's national jurisdiction.

1.2 Audience

The NOP is for the benefit of all Papua New Guineans. It strives to be inclusive across generations, gender and geographical distributions. The NOP serves to guide stakeholders including national, provincial and local governments, state owned enterprises, development partners, non-government organizations, private sector and the rural communities that are involved in the planning, use and management of the ocean and its resources.

1.3 Policy Development Process

The Government through NEC Decision 124/96 directed the ratification of the United Nations Convention on Law of the Sea (UNCLOS) and for PNG to implement UNCLOS domestically, through the Department of Justice and Attorney General (DJAG) and Department of Foreign Affairs and International Trade (DFAIT). The National Fisheries Authority (NFA) and other technical agencies undertook the technical and legal implementation of UNCLOS in the country, which led to the delimitation of PNG's maritime boundaries and enactment of the *Maritime Zones Act 2015 (MZA)*.

In 2015, the Government through NEC Decision No. 03/2015, directed DJAG to create the Oceans Office to oversee the implementation of the MZA, in consultation with key stakeholders. The same NEC Decision also approved the Maritime Boundaries Delimitation Project and its activities to be subsumed into the Oceans Office.

1.4 Legal Framework to Govern Oceans

The MZA is the legal framework for ocean governance in PNG. It replaced the National Seas Act 1977 and corrected the country's National Baseline and Maritime Zones, consistent with the technical requirements of UNCLOS. It further ensures that PNG's rights and obligations in those zones are reflected in the legislation consistent with the governance framework under UNCLOS.

The MZA provides maritime jurisdictional limits for enforcement of PNG's responsibilities as against the rights of other coastal States. Some of the ocean responsibilities are found in Shipping, Maritime Security, Environmental Protection, Fisheries Development, including potential exploitation of Natural Resources Policies and Legislations. The MZA further provides administrative and legal guidelines to regulate the conduct of Marine Scientific Research in the waters of PNG through an appropriate consent regime.

Cross-cutting issues related to ocean use and space, although varied, cannot be isolated or separated and must be treated holistically. This sets the foundation for an integrated approach on sustainable development consistent with Vision 2050, the Strategy on Responsible and Sustainable Development (StaRS), Sustainable Development Goal (SDG) 14 and other related

policies. The Oceans Office and the establishment of governance arrangements coincide with the development of this Oceans Policy, as the NOP will guide the roles and responsibilities of various competing interests in the overall administration of ocean governance.

Figure 3: Marine Environment Education Program (MEEP) students under Mahonia Na Dari (a local NGO) in Kimbe on a field excursion in Restorf Island with Fish Identification Guides. *Photo: Stefan Andrews*



CHAPTER 2 DEFINITIONS AND POLICY APPLICATION

2. The NOP is underpinned by Key Concepts pertaining to Integrated Oceans Management (IOM) outlined below. These are captured in the NOP in principle to focus and strengthen our planning and research programs at all levels and to apply when developing and integrating the NOP directions into relevant sectorial policies for the long-term.

2.1 Integrated Oceans Management (IOM)

An integrated ocean management policy is a national strategic policy document that provides for a 'planned system-wide approach to ocean management'. It involves coordination and collaboration by sectors using the ocean. It covers all sectors and all levels of government whose scope of activity relates to the use of ocean resources and provides a process where specific actions can be taken by user groups.

An IOM provides a process by which actions are taken for the use, development and protection of coastal resources and areas to achieve national goals established in cooperation with user groups, regional and local authorities and traditional ocean communities. In this definition, integrated management refers to; "the management of sectoral components as parts of a functional whole with the explicit recognition that it is the users of resources, not the stocks of natural resources that are the focus of management." (*FAO Guidelines*)

The IOM policy is a formal commitment by the Government of the principles and standards that will achieve a balanced and holistic approach to ocean management. It will also provide detail as to how these goals will be achieved. The UNESCO states that 'in essence' in an integrated approach sector *policies will have to be subsidiary to the principles and standards of a common National Ocean Policy, i.e. that objectives, programs and measures (policies) to manage the marine environment and its resources will be developed in such a way that the different objectives, programs and measures are mutually consistent across different sectors*. The NOP sets standards, baselines and benchmarks upon which that consistency will be measured.

The IOM policy will apply across all levels of government. It promotes a multipronged approach as to how desired goals will be met. The Government would be required to identify problems, assess the feasibility of alternative courses of action and select approaches to overcome them.

2.2 Integrated Coastal and Island Management (ICIM)

The integrated coastal management (ICM) or integrated coastal and island management (ICIM) concept is focused on coastal and whole islands and also assumes the basic principles of the IOM concept. Given the dynamic nature of environmental conditions in coastal areas and whole islands' ownership, and in addition, as they are the prime attraction for human settlement and related development activities, the issues are complex and warrant attention.

The attention required includes reviewing and establishing appropriate policies, programs and projects under the ecosystem-based management process by all the partners and stakeholders. In noting that the coastal areas are the interface between the atmosphere, sea and land, and land-based impacts to the sea are substantial, it is of significance in the ICM processes to take into account the nature of the river basins and catchments as a continuum to the oceans.

2.3 Customary Tenure Systems and Resource Management

The NOP reaffirms the recognition of indigenous and local community ownership regimes of any ocean space and natural resources therein within PNG's national jurisdiction by virtue of our traditional and customary tenure systems. This assertion therefore acknowledges the indigenous and local communities as an integral and intrinsic component in community-based resource management.

2.4 Protecting Customary Use of Resources

In noting the above, it is acknowledged that modern development interventions may vary from the traditional norms and will require appropriate protection and resources, such as scientific information alongside traditional knowledge to be offered to indigenous and local communities on the wise use of their ocean resources.

2.5 Sustainable Use

Sustainable use refers to the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.

2.6 Ecosystem-Based Management

Understanding the dynamics of natural coastal and marine ecosystems is crucial to introducing appropriate policy initiatives for the management of viable population's *in-situ*. The main aspects of interests are on understanding the various but integrated components of ecosystems in terms of their structure, services and functions. This is critical in an ecosystem-based management as it includes planning and design of marine protected areas (MPAs) and the application of marine spatial planning (MSP) within an IOM framework.

2.7 Environmental Impact Assessment (EIA)

It is imperative that certain activities should not be undertaken or authorized without prior consideration, at an early stage, of their environmental effects. Where the extent, nature or location of a proposed activity is such that it is likely to significantly affect the environment, a comprehensive environmental impact assessment (EIA) should be undertaken in accordance with the following principles. An EIA should include, at a minimum:

- a) A description of the proposed activity;
- b) A description of the potentially affected environment, including specific information necessary for identifying and assessing the environmental effects of the proposed activity;
- c) A description of practical alternatives, as appropriate;
- d) An assessment of the likely or potential environmental impacts of the proposed activity and alternatives, including the direct, indirect, cumulative, short-term and long-term effects;
- e) An identification and description of measures available to mitigate adverse environmental impacts of the proposed activity and alternatives, and an assessment of those measures;
- f) An indication of gaps in knowledge and uncertainties which may be encountered in compiling the required information;

- g) An indication of whether the environment of any other State or areas beyond national jurisdiction is likely to be affected by the proposed activity or alternatives.

2.8 Information Management System

Establish and develop an information management system portal to store and validate agreed data and information to be used to implement the MZA and the Policy.

2.9 Precautionary Approach

Comprehensive Scientific Research for all maritime zones is needed as there is limited information to guide the development of sectoral policies and regulatory regimes. This limited or lack of adequate scientific knowledge should not be used as a reason or excuse not to take any marine conservation or management actions. This precautionary approach principle is a core tenet of integrated oceans management.

2.10 Marine Spatial Planning

The Marine Spatial Planning (MSP) model is internationally accepted whereby all partners and stakeholders are involved in various processes of planning and decision-making at different levels to enable allocation of different marine areas for human use in terms of space and over time periods – the zoning system. The zoning system establishes criteria and limitations for use under regulations. The overall outcome is achieving environmental protection, conservation and sustainability of the natural resource base, and thereby improving the socio-economic livelihoods of local communities, and supply of public goods and services to areas beyond the demarcated zones.

2.11 Marine Protected Areas (MPAs)

Marine Protected Areas (MPAs) are areas of seas, oceans, estuaries or large lakes that are protected. These marine areas can come in many forms ranging from wildlife refuges to research facilities. They restrict human activity for a conservation purpose and many such marine resources are protected by the local communities, Non-government Organizations (NGOs), the state or international authorities. In some situations, MPA also provide revenue for countries, potentially equal to the income that they would have if they were to grant companies permissions to fish.

PNG as a developing state with a wealth of natural resources is committed to ensuring that the status of the environment remains a primary focus. Under its Protected Area Policy, the Government recognizes the importance of natural ecosystems, biodiversity, conservation, people, culture and sustainability.

The primary purpose of an MPA is to protect Marine Biodiversity. The MPA apply the same principle of ‘no-take’ areas in coastal and marine areas under both the traditional conservation practices according to specific societal customs, and the introduction of conventional marine protected areas. The undertakings under marine spatial planning (MSP) processes and zoning systems are required in order to consider appropriately the value of MPA in fisheries management, and levels of restrictions and interests on extractive and partial extractive activities.

2.12 Multiple-Use Management

Multiple use management draws attention to the uses of a coastal or marine area by different groups for various purposes. Effective and efficient management of multiple uses ensures broader understanding of sustainable use.

2.13 Adaptive Management

The concept of adaptive management works well under conditions that foster learning and change to deal with uncertainties. The conditions or issues to be addressed emerge from ecological conditions, socio-economic conditions, and institutional conditions; and lend support for integrated management values as outlined above.

2.14 Joint Management

Joint management over an area is when countries pool any rights they may have over a given area, and to a greater or lesser degree, undertake some form of joint management for the purpose of exploring, developing, and extracting offshore living and non-living resources. This can include multilateral agreements on maritime joint development zones, which allow access to resources within an area by more than two states. This inter-state cooperation may be applied, for example, to extended continental shelf areas to which participating states are entitled in international law following a joint submission as provided under UNCLOS.

2.15 Blue Economy

The Blue Economy comprises activities that directly or indirectly take place in the seas, oceans and coasts using oceanic resources and eventually contributing to sustainable, inclusive economic growth (equitable opportunities), employment, well-being, while preserving the health of the ocean. It includes activities such as exploration and development of marine resources, appropriate use of ocean and coastal space, use of ocean products, provision of goods and services to support ocean activities and protection of ocean environment.

The application of a 'blue' economy concept would be a big step in the right direction for PNG. 'Innovation' is the key word on which to work on in the ocean environment. The world's marine ecosystems provide essential food and livelihoods to millions of people. According to the United Nations Environment Programme (UNEP) Secretariat, a switch to a blue economy would unlock the potential of the marine-based economy while reducing ocean degradation and alleviating poverty.

Many natural resources found in marine environments are being degraded by unsustainable use, ultimately putting their ecosystems, food security and climate regulations at severe risk. A major challenge for users of the sea is ensuring that the ocean assets equitably balance the economic activities provided by marine resources with food security and livelihood issues, public use and amenity and conserving and protecting the health and function of our ecosystems. A key component here is the capacity in applying science-based means of managing the use of ocean resources and a national competency to support a sustainable ocean economy and managing ocean related risks.

CHAPTER 3 POLICY CONTEXT AND DIRECTION

3.1 Vision

A healthy ocean that achieves responsible sustainable development outcomes and aspirations of Papua New Guinea, whilst addressing and mitigating impacts of climate change, natural disasters, anthropogenic waste and land-based sources of pollution.

3.2 Goal

To sustainably develop and manage PNG's marine resources through an integrated ocean management system within its national jurisdiction as well as in areas beyond the country's national jurisdiction, and at the same time, facilitate for cooperation and collaboration in areas beyond PNG's national jurisdiction.

3.3 Objectives

The supporting objectives of the NOP are to:

- i. Strengthen the implementation of UNCLOS and the MZA through mutual cooperation and collaboration with international, regional and domestic partners and stakeholders.
- ii. Support the implementation of the Fourth Goal of the National Constitution relating to the wise use and management of PNG's environment and natural resources.
- iii. Strengthen cooperation and collaboration between different stakeholders in the implementation of the NOP.
- iv. Support the implementation of overarching national policies namely; the *Papua New Guinea Vision 2050* and the *National Strategy for Responsible Sustainable Development for Papua New Guinea* (STaRS).
- v. Provide strategic directions upon which sub policies dealing with the ocean space can be standardized to enable a coherent integrated management system.
- vi. Facilitate capacity building, the transfer of marine technology, and ocean literacy, and promote tools and approaches that transform ocean knowledge into actions on ocean sustainability

3.4 Principles

The implementation of the NOP is based on the following five fundamental principles, which will provide guidance towards achieving the goals and objectives of this policy.

1. Governance and Management

Shared responsibility of the governance and management of the oceans, through transparency, inclusiveness and accountability.

2. Knowledge & Technology

Improving our understanding of our ocean through Science, Research, Knowledge and Innovation.

3. Environment Protection and Conservation

Protection and maintaining the health of our oceans.

4. Sustainable Economic Development

Sustainable Development and Management of the use of the ocean and its resources.

5. Safety, Security & International Relations

Promoting and enhancing the peaceful use of the oceans.

3.5 Outcomes

The following outcomes listed, but not limited to, must be achieved under the NOP and periodically reviewed and evaluated against the policy objectives:



3.6 International and Regional Policy and Legal Context

3.6.1 International and Regional Policy Context

The UNCLOS is widely considered as the international constitution of the oceans incorporating both the codification of customary international law and negotiated treaty commitments relating to the world's oceans. It provides for jurisdictional rights and obligations of coastal states and common uses of the ocean. It also provides for a range of uses of the oceans such as navigation, marine environmental protection, and underwater cultural heritage, exploitation of living and non-living resources, marine scientific research, and dispute settlement mechanisms.

3.6.2 Development Agenda 2030 and the Sustainable Development Goal 14

The Development Agenda 2030 is a plan of action for people, planet and prosperity, it focuses on the global issues related to poverty and recognizes the need to eradicate poverty in all its forms and is part and parcel of achieving sustainable development. The framework of the development agenda has been broken up into 17 sustainable development goals (SDG's) and 169 targets to facilitate actions and monitor progress on achieving the sustainable development agenda. The SDGs are universal, and they provide a clear policy framework for regulatory actions at national, regional and international level.

The direct relevance of the SDGs to the NOP is the SDG 14, *Conserve and sustainably use the oceans, seas and marine resources for sustainable development*. The Goal 14 has 7 Targets as bench-marks to progress to the Year 2030. NOP complements the STARs in highlighting the blue growth through the blue economy processes to achieve the desired achievements on national, regional and international contexts within the framework of the UN SDG-A2030.

The PNG government will need to complete the Monitoring and Evaluation reporting and for submission to its sectors and provinces in the next 5 years before submission to the UNSDG Conference by 2030

3.6.3 International and Regional Legal Context

PNG' sectors through their various mandates to deal with the ocean space implementation and enforce the rights and obligations under UNCLOS and it's implementing arrangements in cooperation with the mandated relevant UN multilateral bodies. Some of these implementing arrangements include:

- Convention on Biological Diversity (CBD) and the Nagoya Protocol on access and benefit sharing.
- United Nations Framework Convention on Climate Change (UNFCCC)
 - The United Nations (UN)
- Commonwealth Secretariat
- International Seabed Authority (ISA)
- International Maritime Organization (IMO)
- Food and Agriculture Organization (FAO)
- Intergovernmental Oceanographic Commission (IOC)
- United Nations Fish Stocks Agreement (UNFSA)

- International Hydrographic Organisation (IHO)

There are also cooperative arrangements with sub regional bodies. Some of these include:

- The Pacific Community (SPC)
- The South Pacific Regional Environment Program (SPREP)
- Pacific Islands Forum Secretariat (PIFS)
- Office of the Pacific Ocean Commissioner (OPOC)
- Forum Fisheries Agency (FFA)
- Parties of the Nauru Agreement (PNA)
- Western and Central Pacific Fisheries Commission (WCPFC)

PNG has incorporated most of these international obligations into its domestic legislation and this must be linked to an overarching national ocean policy document. The MZA which implements UNCLOS in PNG, is the primary legislative framework which other related legislation and policies and mandated government agencies must align with in terms of their respective mandates in the use of the ocean and its resources.

3.6.4 Regional Policy Context

The Pacific Ocean is the world's largest ocean in which its people rely on it for food, transport, traditional practices and economic opportunity. There are increasing common challenges that affect the way of life of the Pacific peoples and puts at risk the health of our oceans. The Pacific Island Countries and Territories continue to work together to balance the needs and economic aspirations of their current and future generations.

The *2014, Framework for Pacific Regionalism* (the *Regionalism Framework*) is the principal regional policy instrument for strengthening and deepening regional cooperation, regional integration and the regional provision of public goods and services, under four pillars: (1). Sustainable development; (2). economic growth; (3) governance and (4) security.

The *Regionalism Framework*, inter alia, adopts a *process for priority setting* for the region and specific forms of *regional collective actions* (regionalism) to be applied to achieve priority actions. These regional collective actions are:

- i. Coordination;
- ii. Cooperation;
- iii. Collaboration;
- iv. Economic Integration; and
- v. Administrative/ legal/ institutional integration

The *Regionalism Framework* provides the vision of the Pacific region for peace, harmony, security, social inclusion and prosperity for the pacific people identifying regional values that must be applied to all policy making and implementation in the region.

In this regard, the *Pacific Oceanscape Framework* (*Oceanscape Framework*) has incorporated the values and principles espoused in the *Regionalism Framework* and

raises a number of ocean related priorities for action, which have been translated further into the *Pacific Island Regional Ocean Policy (PIROP)*.

The *Oceanscape Framework* identifies six strategic priorities which the *PIROP* will be implementing against: (i) establishing 'jurisdictional rights and responsibilities', (ii) fostering 'good ocean governance', (iii) supporting 'sustainable development, management and conservation', (iv) promoting 'listening, learning, liaising and leading', (v) sustaining action, and (v) facilitating adaptation to a rapidly changing environment.

3.6.5 Pacific Islands Regional Ocean Policy

The *PIROP* was endorsed by the Leaders in 2002. The primary principles advocated under this Regional Policy are:

- Improving ocean governance;
- Improving understanding of the ocean;
- Achieve responsible sustainable development and management of the use of ocean resources;
- Maintaining the health of the oceans;
- Promoting and enhancing peaceful use of the ocean; and
- Creating partnership and promoting cooperation.

The above principles provide guidance for the development of the *PIROP* objectives: (i). *Integrated Ocean Management*, (ii). *Adaptation to Environmental and Climate Change* and (iii). *Liaising, Listening, Leading and Learning*. Strategic Priorities and Actions to be undertaken under *PIROP*, to achieve the objectives are:

- Strategic priority 1 – Jurisdictional Rights and Responsibilities;
- Strategic priority 2 – Good Ocean Governance;
- Strategic priority 3 – Sustainable development, management and conservation;
- Strategic priority 4 – Listening, Learning, Liaising and Leading;
- Strategic priority 5 – Sustaining action; and
- Strategic priority 6 – Adapting to a rapidly changing environment.

Given that PNG is embarking on this maiden journey of its NOP initiative, the *Oceanscape Framework* and *PIROP* outcomes will continue to provide guidance and adoption of appropriate integrated strategic actions, noting that these have been framed against the Leaders directions for the region.

3.6.6 Blue Pacific

The Blue Pacific describes the world's largest oceanic continent with recognition of the Pacific Island Countries and Territories working together under the auspices of the Pacific Island Forum. In 2017 under the Blue Pacific declaration by the Leaders, the Government pledged a number of national commitments, and these included the declaration of PNG's first national marine protected area of the Bootless Bay encompassing both the NCD and Central Province. This initiative is being supported by JICA under the leadership of the Conservation and Environment Protection Authority (CEPA).

The Pacific Vision was endorsed by the Leaders in 2014, calling for a region of peace, harmony, security, social inclusion, and prosperity, so that all Pacific people can lead free, healthy, and productive lives.

In 2017 the Pacific Forum Leaders endorsed the “Blue Pacific” identity as the core driver of collective action to advance this vision. The Blue Pacific seeks to re-capture the collective potential of the region’s shared stewardship of the Pacific Ocean based on an explicit recognition of its shared “ocean identity”, “ocean geography”, and “ocean resources”. Through the Blue Pacific, Forum Leaders seek to reaffirm the connections of Pacific people with their natural resources, environment, culture and livelihoods. Forum Leaders recognize the Blue Pacific as being about all Pacific peoples, who recognize their needs and potential, who plan and own their development agenda, and who can act collectively for the good of all, rather than a few.

3.7 National Policy Context & National Legal Context

3.7.1 National Policy Context

The NOP is formulated within the parameters of the existing national policy frameworks that sets the policy platform for the country. The NOP takes que from the PNG Development Strategic Plan (DSP) 2010-2030 and Medium-Term Development (MTDP) Plan III 2018-2022 that translate the aspirations of Vision 2050. The policy also complements other significant national strategies, policies and plans.

A. Vision 2050

The Vision 2050 provides an overarching policy direction for the country; hence it envisions PNG to be a Smart, Wise, Fair and Healthy nation by 2050. The vision is designed to be achieved through its seven pillars. Those pillars are aligned to the National Goals and Directive Principles. Pillar 5 of Vision 2050 calls for the Government of Papua New Guinea to pursue environment sustainability and combat climate change while pursuing economic developments. The Vision is to be materialized within the 40 years.

The Vision 2050 will ensure that PNG has a strong, dynamic and competitive economy by 2050. The focus is to develop manufacturing, agriculture, forestry, tourism, fisheries and ocean resources to generate around 70 percent of GDP, with the balance coming from mining, petroleum and gas ventures in the non-renewable sector. The NOP is a guide and calls on the Government to sustainably develop its ocean resources to achieve the objectives of the Vision 2050.

The Vision 2050 provides that:

“Oceans and Coastal Environments: While the country’s focus has been on land utilization, the ocean environment has not been developed, mainly because of the poor understanding of ecosystems and the new challenges that are offered. A no regret ocean policy is urgently required and must be developed to enhance our prosperity before 2011.”

The development of the NOP implements the objective of the Vision 2050. The implementation of the NOP will contribute to PNG's efforts to be a smart, wide, fair and healthy country by 2050.

B. Papua New Guinea Development Strategic Plan 2010-2030

The Strategic Development Plan 2010-2030 (DSP 2030) is a 20 years plan that also aligns with Vision 2050. It interprets the Vision 2050 with clear and specific policy goals and targets. Those goals are to be achieved by 2030. The goal of the DSP 2030 is for PNG to be one of the "Middle Income" countries by 2030. It gives clear policy directions to all other national policies to take the que from.

Goal 6.6 of the DSP 2030 is to promote sustainable use of the environment including marine/ocean resources. The sustainable development of ocean resources is important in order to benefit current and future generations. Water and Ocean pollution are listed as major environmental concerns. This includes pollution by manufacturing activities such as canneries, illegal dynamite fishing, dumping of tailings by mining companies into rivers and direct disposal of untreated household wastes and raw sewerage into the ocean. The adoption of the NOP therefore complements the goals of the DSP 2030.

C. National Strategy for Responsible Sustainable Development (STaRS)

The Government made a significant paradigm shift in 2014 in development planning, policy formulation and investment. It introduced the STaRS with its 21 guiding principles that provide the basis for a new approach to planning, investments and development. The NOP takes into consideration principles 11, 13 and 20. Principle 11 is on the retention and protection of biodiversity and ecosystems, and services. Principle 13 relates to planetary boundaries or ecological limits and principle 20 relates to the promotion of international cooperation. The NOP is designed around the parameters of the relevant STaRS principles. The NOP introduces prudent management and conservation of the ocean resources that have the potential to sustainably grow the economy.

D. Medium Term Development Plans (MTDPs)

There are four 5-year Medium Term Development Plans (MTDP) that seek to implement the DSP 2030. Hence, the MTDP elaborates on the policy objectives of the DSP 2030 into achievable targets with specific indicators and appropriate resources. The MTDP III 2018-2022 has eight Key Result Areas (KRA). KRA 7 calls for the responsible sustainable development of both land and ocean resources. The NOP therefore gives effect to the aspirations of the DSP 2030. The NOP is the lighthouse that guides the sustainable development of the ocean and its resources.

E. Other Sector Policies

The NOP is integrated well with other complementing policies such as Climate Change Policy, National Fisheries Plan and Environment and Conservation Plan.

3.7.2 National Legal Context

The National Goals and Directive Principles provide the bedrock for the Constitution of PNG. In particular the Fourth Goal calls for Papua New Guinea's natural resources and environment to be conserved and used for the collective benefit of us all and be replenished for the benefit of future generations. In this regard, the NOP acknowledges the legislative mandates of sectors and agencies to carry out activities in the country's ocean space, whilst at the same time acknowledging legislation that recognize the environmental, social and economic considerations for current and future generations.

A. *Organic Law on Provincial and Local Level Governments (OLPLLG)*

The Organic Law on Provincial and Local Level Governments 1995, (OLPLLG) mandates Provincial governments, districts, local-level governments (LLG) and wards to produce development plans based on national priorities and targets customized to their localities. The main aim of this legislative requirement is to merge bottom-up planning with a top-down strategic approach, thus creating a realistic plan which addresses development challenges effectively at each level. The NOP will promote and strengthen the coordination of ocean governance and management activities to improve the livelihoods of our people in the wards, LLG, districts and provinces. The transfer of functions from the national government to the provincial government is provided for under the Constitution and the OLPLLG and should be explored and utilized when developing management approaches from the national level down to the LLG's and the communities. Possible new areas to optimize includes consultation with stakeholders such as landowners, LLG, Provincial Government, and NGOs in relation to the use of ocean assets or ocean ecosystem services.

B. *Environment Act 2000*

This legislation protects and regulates the environment from impacts of development activities in order to promote sustainable development. Furthermore, it provides for the management, conservation and protection of the environment from unsustainable uses.

C. *Recognition of Custom and Traditional Knowledge*

The Constitution recognizes Customary and Traditional Systems under the National Goals and Directive Principle, particularly Goal 5 and section 9 of the Constitution. There is also provision under the Constitution for the development of the underlying law with regards to the application of custom. These laws must be considered in enabling an all-inclusive approach in the IOM approach. The NOP takes into consideration the *Underlying Law Act*, the *Customs Recognition Act*, the *Land Dispute Settlement Act* and other relevant statutes when implementation is operational

D. *Maritime Zones Act 2015*

The MZA now provides for coastal waters which will enable provinces to declare three nautical mile coastal waters in consultation and agreement with the national government. The coastal waters are separate from provincial boundaries declared under the *Organic Law on Provincial Boundaries* and the OLPLLG. Maritime boundary coordinates must be corrected in the relevant legislation.

E. Mining Act 1992

This legislation regulates the mining of minerals in PNG. It acts as a cornerstone in controlling and regulating the wise use of mineral resources in the country.

F. Fisheries Management Act 1998

The **Fisheries Management Act** (FMA) is the principal legislation allowing for the management and sustainable development of fisheries in PNG. It also contributes to the implementation of the National Goals and Directive Principles, specifically to promote the management and sustainable development of the fisheries resources.

G. Climate Change Management Act 2015

The Climate Change Management Act provides for a regulatory framework to;

- a) Promote and manage climate compatible development through climate change mitigation and adaptation activities; and
- b) Implement any relevant obligations of the State under applicable rules of international law and international agreements related to climate change; and
- c) Establish Papua New Guinea's Designated National Authority or an equivalent entity for the purposes of the Kyoto Protocol and any other or subsequent arrangements or agreements made under the Kyoto Protocol.

H. National Maritime Safety Authority Act 2003

The National Maritime Safety Authority (NMSA) is established by this Act, to perform the functions and roles relating to maritime safety, marine pollution, regulating standards for international shipping and the registering of shipping vessels under the *Merchant Shipping Act 1975*. PNG is a signatory to the International Convention for the Prevention of Pollution from Ships (MARPOL) which regulates marine pollution. As such PNG has responsibilities to ensure that ships operating in PNG waters are properly equipped to operate under MARPOL standards. NMSA implements, inter alia, the following marine pollution statutes:

- i. Marine Pollution (Sea Dumping) Act 2013
- ii. Marine Pollution (Ballast Water Control) Act 2013
- iii. Marine Pollution (Ships and Installations) Act 2013
- iv. Marine Pollution (Liability and Cost Recovery) Act 2013
- v. Marine Pollution (Preparedness and Response) Act 2013

I. National Information and Communication Technology Authority Act 2009

This legislation deals with the laying of submarine cables which also have cross implementation issues with ensuring safe passage and sea traffic lanes safety zones to be established around the cables. The Department of Transport is, however, responsible for the issuance of notices.

J. Income Tax Act 1959

The *Income Tax Act* provides for the imposition of a tax upon incomes and to provide for its assessment and collection. Compliance with the Act would be fundamental for purposes of the imposition and collection of tax by the national government, provincial governments and local-level governments. Fishing and other activities that will be carried out in the oceans must be subjected to the requirements of the Act.

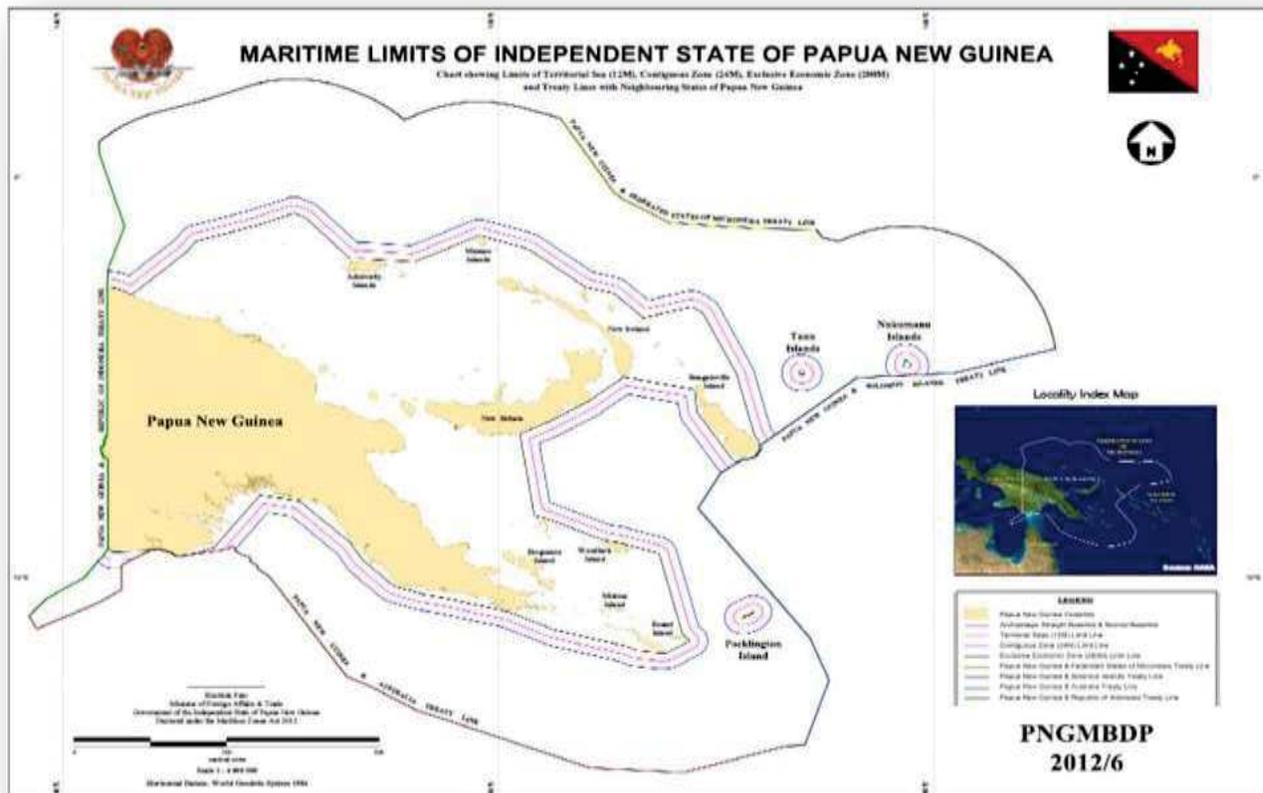
K. National Agriculture Quarantine Act 1997

Quarantine powers are exercised around the contiguous zones. There are cross cutting issues with customs, fisheries and shipping regulatory powers.

L. Oil and Gas Act 1998

Offshore exploration and exploitation activities are regulated under this legislation. The Oil and Gas Act sets out the licensing regime for the different types of exploration activities that may be undertaken in the ocean.

Figure 4: PNG's Confirmed Baseline & Maritime Boundaries.



CHAPTER 4 POLICIES AND STRATEGIES

4.1 Current Situation

PNG is the 6th largest EEZ in the Blue Pacific, with fifteen Maritime Provinces and a total EEZ of 2.8million square kilometers. PNG shares sea boundaries with Australia, the Federated States of Micronesia, Indonesia and the Solomon Islands.

However, the marine or ocean resources have been managed and used in a policy vacuum. The sector lacked strategic policy direction to enhance the management and development of the ocean strategic assets to optimize economic benefits. The agencies within the sector are not working together as such there is poor coordination and management of our oceans and its natural resources.

PNG's maritime boundaries are not monitored and controlled effectively, since resources and manpower are limited and maritime domain awareness is not fully developed. Illegal, unreported and unregulated fishing (IUU) is an international issue around the world and is present in PNG. Some estimates state that IUU accounts for up to 30% of total catches in some fisheries.

Currently there is no specific policy and legislation to improve the coordination and management of the maritime sector. The variety of uses and activities affecting PNG's ocean space are currently managed through sectoral policies and laws. Crosscutting issues and competing interests require integrated approaches to ocean management which this policy will address.

4.2 Analysis of Issues

4.2.1 Governance & Management

The UNCLOS is widely considered as the international constitution of the oceans incorporating both the codification of customary international law and negotiated treaty commitments relating to the world's oceans. It provides for jurisdictional rights and obligations of coastal States and common uses of the ocean. It also provides for range of uses of the oceans such as navigation, marine environmental protection, and underwater cultural heritage, exploitation of living and non-living resources, marine scientific research, and dispute settlement mechanisms.

PNG has committed to implement the United Nations Sustainable Development Goals (SDGs). In line with this commitment, the Government has taken steps to integrate the SDGs in the Medium-Term Development Strategy (MTDP) and has localized some of the SDGs and Key Result Areas and indicators in the MTDP. SDG14 (life below water) is an important goal as it promotes the conservation and sustainable use of our oceans, seas, and marine resources. The NOP will clearly define the roles and responsibilities of sectors to effectively address the governance and use of the oceans.

PNG' sectors through their various mandates, to deal with the ocean space, implement and enforce the rights and obligations under UNCLOS and its implementing arrangements in cooperation with the mandated relevant UN multilateral bodies. Some of these implementing arrangements include the Conservation on Biodiversity, United

Nations Fish Stocks Agreement, United Nations Framework on Climate Change, IMO Conventions on marine pollution.

4.2.2 Knowledge & Technology

A. *Marine Scientific Research*

Improving the knowledge and understanding of marine and coastal processes is a prerequisite for protecting the marine environment and ecosystems in a more precautionary way and for supporting sustainable economic opportunities from ocean resources.

The result from marine scientific research will provide the input for policy makers in pursuing development options and benefit society in terms of weather forecasting, climate changes and prevention of natural disasters. Every effort must be made to develop and apply ocean science and marine technology in PNG in order to support evidence-based decisions and actions in the sustainable use of the ocean and its resources.

The NOP provides the framework for diligent commitment and undertakings with relevant partners in the region and international research institutions to advance this policy. The institutional and human capacity of marine research institutions in PNG must be enhanced; these include the University of Papua New Guinea (UPNG)'s Motupore Island Research Centre in Central Province, the National Fisheries Authority (NFA)'s Nago Island Fisheries Research Station in New Ireland Province, and the PNG Maritime College in Madang Province.

Research and Development (R&D) innovations are envisaged to offer advanced research, sciences, technologies including biotechnology and the realization of benefits from intellectual property rights. The Marine Scientific Research Committee (MSRC) established under the MZA will oversee the coordination of marine scientific research within the national jurisdiction in partnership with international institutions, including data and research collection as well as the dissemination of data and knowledge. The MSRC working through the national oceans committee will review the MSR guidelines, formulate joint research proposals, and other related functions.

Through the NOP, PNG will also participate in the UN Decade of Ocean Science for Sustainable Development. The Ocean Decade represents a possibility to build scientific capacity and deliver us of the potential of the ocean to achieve the goals of the 2030 Agenda for Sustainable Development, specifically SDG14. The vision of the Ocean Decade is “the science we need for the ocean we want”, with a mission to “generate and use knowledge for the transformation action needed to achieve a healthy, safe, and resilient ocean for sustainable development by 2030 and beyond.” The scope and reach of the Ocean Decade is global and it offers PNG an avenue to participate and co-design regional and international partnerships. An active engagement in the Ocean Decade by PNG will strengthen the success of the NOP.

PNG is also participating in the intergovernmental conference on the proposed treaty for the conservation and sustainable use of biodiversity in areas beyond national jurisdiction (BBNJ). PNG stands to benefit under the agreement through capacity building and

transfer of marine technology in participating in the conservation and sustainable use of marine biodiversity beyond its national jurisdiction.

B. Transfer of Marine Technology

Technology and Science can help deliver more efficient sustainable operational methods in industries, including enhancing monitoring and surveillance of fishing operations, facilitate pollution prevention and clean-up and enhance marine spatial planning. It can help improve outcomes and implementation of the NOP.

The main issue affecting PNG's participation in Transfer of Marine Technology (TMT) is the lack of governance and coordination to secure pathways for collaboration and to ensure that science and technology cooperation are made available for Research Performing Organisations (RPO) involved in Marine Scientific Research (MSR). It is noted that there is a fragmented coordination of development cooperation and science and technology cooperation for the sector.

PNG needs to develop its marine science and technology plans (and strategies) for building human and technical capacity in ocean affairs and law of the sea. Specific infrastructures will also need to be established nationally and where required, in provinces.

4.2.3 Environment Protection, Conservation & Climate Change

A. *Marine Environment Protection, Preservation and Conservation*

The conservation and protection of our oceans is becoming more urgent as the effects of over exploitation, pollution from land based and sea-based activities, effects of climate change, over-fishing, increased population and loss of biodiversity are felt globally and domestically. Studying cumulative effects and applying strict measures where required is a necessary management tool to ensure ecosystems and marine resources are protected from human based interactions on their environment. Different ecosystems must be managed according to their particular needs and connected systems made where required. Implementation of effective area-based management systems require sufficient funding as well as technical and scientific capacity.

The Sustainable Development Goal target 14.5 sets the conservation target of at least 10% of marine and coastal areas by 2020. PNG has also committed to Marine Protected Area establishment under its voluntary initiatives at the United Nations Ocean Conference in 2017. Identifying vulnerable and sensitive marine areas requiring conservation and protection is necessary to know which areas require management approaches to be applied.

PNG has several designated protected areas over coastal and marine habitats, identified to be high biodiversity areas. However, there are not enough resources to manage and enforce regulations and compliance in these areas and a comprehensive marine spatial plan to manage potentially competing demands is not in place. This means the effectiveness of these areas as sanctuaries for marine species is usually uncertain. There are, however, demonstrated successes in the small-scale and community-based protected areas in a number of locations.

The Precautionary approach, Polluter pays principle and the User pays principle must be applied in actions and decision making on the use and management of the ocean.

Without baseline data and science on our marine biodiversity, ecosystems and resources, knowledge on what is existing within and beyond our national jurisdiction is limited. Addressing these gaps will enable efficient mapping, planning and funding according to specific management needs and interventions. Specific legislative frameworks and policies for the ocean identifying permitted activities and environmental and planning standards for compliance, transparency and accountability in the marine space is required.

Environmental guidelines and processes must be streamlined for applications to conduct activities in the ocean. These processes must be provided in laws and regulations. A specific Environmental Impact Assessment (EIA) for the ocean must be developed, with clear process and stakeholder consultation guidelines. A committee must be appointed to screen and provide recommendations to CEPA. The Conservation Environment and Protection Authority must be supported to provide for an EIA process for the ocean space.

B. *Ocean-Climate Nexus*

The ocean is an integral part of the earth's climate system for both mitigation and adaptation. There is a need to also consider existing United Nations Framework Convention on Climate Change (UNFCCC) processes to address various aspects of the ocean-climate nexus, that is, the interface between ocean and climate issues.

The UNFCCC is promoting the Blue COP dialogue which places greater emphasis on the role of oceans in the climate change system. These discussions include:

- i. Promoting coherence in addressing ocean-climate issues both under the UNFCCC and between the UNFCCC and other international processes;
- ii. Increasing knowledge on, and the capacity to address, ocean-climate issues and the protection and conservation of the ocean and of ocean and coastal ecosystems;
- iii. Further mobilizing appropriate mitigation and adaptation action at the ocean-climate nexus under the UNFCCC; and
- iv. Mobilizing ocean-related actions, such as adaptation of marine ecosystems and mitigation in the maritime sector within the Global Climate Action Agenda.

Climate change causes changes in the oceans that than have impacts on marine ecosystems and ecosystem services with regionally diverse outcomes, challenging their governance. Both positive and negative impacts result for food security through fisheries, local cultures and livelihoods, and tourism and recreation. The impacts on ecosystem services have negative consequences for health and well-being, and for Indigenous peoples and local communities which are dependent on fisheries.

Coastal communities are also exposed to multiple climate-related hazards, including tropical cyclones, extreme sea levels and flooding and marine heat waves. The Government needs to plan and invest in needs-driven and science-based solutions for small island communities. This issue is critical for small island communities. It is important to engage the end-user upfront and co-design investments in tools and knowledge transfer mechanisms. Systematic observation and research is needed to

better understand the role of ocean and coastal areas in climate change and appropriate actions to apply. It is therefore important to support and fund oceanic observation and research to help understand oceans and climate change linkages and solutions.

C. Marine Pollution

The United Nations defines Marine Pollution as;

“The introduction by man, directly, or indirectly, of substances or energy to the marine environment resulting in deleterious effects such as: hazards to human health, hindrance to marine activities, impairment of the quality of seawater for various uses and reduction of amenities.”

Land based sources of pollution emanate from a range of sources including agricultural runoff, untreated sewage and wastewater, oils, sediments and marine debris. Coastal tourism, port and harbor developments, mining, fisheries, aquaculture and manufacturing all contribute to development in the country but must be sustainably managed.

Measures have to be adopted to prevent and control pollution caused by ships and to mitigate the effects of any damage that may occur as a result of maritime operations and accidents, especially in the prevention of marine pollution by oil or any ship-sourced pollution. There are existing international pollution funds which PNG should be aware of as these can contribute not only financing, but resourcing assistance for clean-up and enforcement exercises.

The Government needs to ensure that there is efficient and effective controls and standards in place, in accordance with international agreements to help coordinate prevention, mitigation and response measures to marine pollution nationally and internationally.

D. Deep Sea Tailings

Globally and for PNG (and Pacific) there are some deep-sea mining and tailing activities which could affected our EEZ and provincial areas. Given a lot of uncertainties, the need for a comprehensive hazard risk management application is necessary.

In recognizing the precautionary principle and polluter-pays principle all mining and related extractive activities must employ and deploy science-based evidences for geological surveys, mineral exploration; and especially proven technologies for mining operations at the coastal belts and in the maritime zones with no significant levels of negative environmental impacts in particular. In mining operations either in-shore or off-shore, the employed or deployed technologies must have been fully tested *in-situ* for at least 10-15 years and also internationally approved or accredited for application.

It is worthwhile to observe that in the 2011 White Paper on Off-shore Mining, very limited attention was paid to the 2003 Green Paper on, *Sustainable Development Policy and Sustainability Planning Framework for the Mining Sector in PNG*, probably because it focused on land-based mining; some of the basic principles including those related to distribution of benefits merit discussions in ocean mining fora; and also, the lack in the

Green Paper of a foresight on how to deal with mining in the oceans the year after, and since then.

Our NOP entails all mining and related extractive activities from the coastal belt to the maritime zones within PNG's national jurisdiction are consistent with it; that is, scientific research and testing of technologies of more than 10-15 years are prerequisites for the required approvals to be given.

The opinion by the Seabed Dispute Chamber of the International Tribunal for Law of the Sea, *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* of 2011 is significant as it must be used as a guide to develop a legislative framework which ensures that any proposed deep seabed mining activities should meet strict limits with the aim of preventing harm, whether to the common heritage of mankind or in the national jurisdiction. In the pursuit of seabed mining in the country the government must take note of this opinion and develop the necessary legislative framework to protect our ocean.

4.2.4 Sustainable Economic Development

A. Sustainable Development of Marine Resources

Given that it is important to strengthen initiatives relating to the development, exploitation and conservation of the Exclusive Economic Zone, the Government must take such measures as are necessary for the promotion of the development of the EEZ, including measures to promote development reflecting the characteristics of the sea areas falling within the EEZ and measures to prevent the infringement of the sovereign rights of PNG in the EEZ.

Possible climate impacts of deep-sea mining, particularly of hydrothermal vents, in terms of releasing methane and sequestered carbon must be considered, as well as the need to abide by various biodiversity commitments under international law in any marine exploitation activity.

The decommissioning and rehabilitation of offshore mining or petroleum equipment and any related onshore facilities must be done in accordance with the legal framework (of the mining, oil and gas, and maritime laws, the *Environment Act 2000*) and any Mine Closure Policy. A marine consent regime must be legislated to conduct permitted activities in the ocean in a more effective, sustainable and transparent manner.

B. The Blue Economy

The blue economy comprises of a range of economic sectors and related policies that work together for the sustainable use of the ocean resources. The concept promotes economic growth, social inclusion and improvement of livelihoods as well as sustainability of the ocean and coastal environment. As such there is a need for key economic sectors such as fisheries, marine transport, science and technology and tourism to work together in the formulation of a blue economy plan to realize these goals.

Most importantly, the blue economy also encompasses science and innovation, and new activities in the ocean, such as offshore renewable energy (wind, wave, and tidal

energy), aquaculture, sea-bed extractive activities, marine biotechnology and bio prospecting.

The Blue Economy offers a new dynamic that could be used to mobilize new inter-institutional linkages across different sectors, marshal support for necessary reforms, and fill existing gaps in legislation and enforcement mechanisms. This could be done at various levels, including national, regional, and international, as deemed appropriate.

4.2.5 International Relations, Security, Safety & Recreational Use

A. *International Relations*

PNG also has ongoing bilateral relations with various countries and other development partners. Through this bilateral process, PNG will need to flag and encourage cooperation with partners in the ocean space, particularly to promote and pursue PNG's interests in oceans, and also ensure alignment with interests of partners, to contribute to the attainment of national, regional and global goals.

PNG is a party to several regional and international initiatives currently being pursued to promote the sustainable management and use of the oceans and its resources. These include the Blue Pacific Agenda, United Nations Ocean Conference forum, and initiatives to support the implementation of SDG 14 – Life under Water, the Commonwealth Marine Economies Program (CMEP), and the Commonwealth Blue Charter.

Given the importance of oceans and its direct linkages to climate and the impacts of climate change on the health and sustainability of oceans, there is greater emphasis on the need to address ocean related matters at the bilateral, regional and international levels. In that context, new and emerging initiatives, developments and discussions on oceans will arise in the near future. DFAIT and its Diplomatic Missions need to ensure that the NOO and national stakeholders are kept informed to participate and contribute meaningfully to such discussions.

B. *Areas Beyond National Jurisdiction (ABNJ)*

PNG is also participating in the negotiations for a proposed treaty for the conservation and sustainable use of biodiversity in areas beyond national jurisdictions which will become an implementing instrument under the UNCLOS. PNG, as well as other small island developing states, stands to benefit under the agreement through biotechnology and bio prospecting as well as capacity building in participating in the conservation and sustainable use of marine biodiversity beyond its national jurisdiction.

PNG may work in consultation with the International Seabed Authority to consider benefits from research, technological transfer and capacity building activities established within its governance and management frameworks.

C. *Maritime Security*

The UNCLOS contributes to the strengthening of peace, security, cooperation, and friendly relations among nations, as well as to the promotion of economic and social advancement, and to the sustainable development of the oceans and seas. The Government must continue to increase its maritime security surveillance and response capability in PNG's ocean space including along the maritime borders, to ensure that PNG's sovereignty and sovereign rights are protected. This includes ensuring that PNG's existing rights and entitlements stemming from maritime zones are preserved and not altered through climate change and related impacts.

With the enactment of the MZA, there are now clear and legally defined boundaries as to where specific agency roles and responsibilities begin and end. In this regard, improved and efficient coordination and cooperation amongst agencies, involved in security operations, is important to ensure there is required monitoring, control and surveillance of PNG's vast ocean space. This also means that limited financial resources are allocated accordingly.

Security has several dimensions, including illegal trafficking across borders, IUU fishing, customs breaches, quarantine, declaration and payment of import duties, immigration control and biosecurity. In PNG waters, while there is existing limited threat, the global increase in piracy cannot be ignored, and the secure passage of passenger and cargo vessels must be assured.

The environmental and social dimensions include monitoring environmental threats to the oceans, coastline and rivers from transport sources including pollution by shipping through oil and cargo spillages, discharge of liquid and solid wastes, and anti-fouling coatings, spillages and discharges from wharves and port industrial sites, modification to shorelines and beaches through reclamation, dredging and materials extraction for construction and other purposes. Verification and inspection of ports and incoming vessels require periodic inspections and verifications of compliance with IMO requirements.

D. *Maritime Safety*

The NMSA through its Hydrographic Services and the Department of Transport, through the National Weather Services Office should cooperate accordingly and advise with regards to safety on the ocean. Earth observational infrastructure must be supported and enhanced, and necessary investments made in the interpretation and preservation of this data. Accurate and up to date information about the sea state, atmospheric conditions and geo-hazards are required to ensure that risks to people and infrastructure are prevented or mitigated accordingly.

Compulsory pilotage must be considered to reduce the risk of ship groundings and collisions in particularly sea sensitive areas (PSSA). All regulated ships should have a pilot on board when travelling through specified routes.

E. Coastal and Ocean Observing Systems

With increased understanding of our oceans and coasts, comes an increased ability to keep the country safe, economy secure, and the environment healthy and productive. Coastal and ocean observations provide critical information for protecting human lives and property from marine hazards, enhancing our security, predicting global climate change, improving ocean health, and providing for the protection, sustainable use, and enjoyment of ocean resources.

While the technology currently exists to integrate data gathered from a variety of sensors deployed on buoys, ships, and satellites, the implementation of a sustained, coastal and ocean observation system is overdue in PNG and should begin immediately by relevant agencies. The system would gather information on physical, geological, chemical, and biological parameters for the oceans and coasts, conditions that affect and are affected by humans and their activities.

4.3 Policy Responses

4.3.1 Strategy 1: Governance and Management

Shared responsibility of our oceans through transparency and accountability

An effective governance and management system will have to be efficient, transparent and accountable. Laws, policies, and programs must be well coordinated and easily understood by regulated parties and the public. A comprehensive framework should be in place that defines the appropriate roles for different levels of government, its agencies, the private sector, and citizens, promoting effective partnerships for managing ocean and coastal resources with high level of leadership.

Strategic Actions:

- Identify the Stakeholders in Ocean Governance with emphasis on an inclusive rights-based and generational approach as the underlying or foundation of the NOP.
- Identify the roles and responsibilities of Stakeholders in the Ocean Governance.
- Identify the mechanism for Coordination, Communication and Cooperation between stakeholders.
- Identify international and regional partnerships for ocean governance and management.

4.3.2 Strategy 2: Knowledge and Technology

Improving the understanding of our Ocean through science and research and knowledge.

This strategy captures contemporary and traditional understanding of the oceans and provides the basis for sustainable use of the oceans and its resources, for the amelioration of pollution and harmful practices and for the prediction of weather, climate change and oceans variability.

Strategic Actions:

- Identify and prioritize information needs and the co-operative mechanisms for acquiring, accessing and disseminating information.
- Establishing a National Depository for Information and Data Access and identifying the cooperative mechanisms and processes, research, sharing of data and innovation.
- Support and strengthen national and regional capacity, encourage partnerships between regional and international organizations, and the public and private sectors, to improve our understanding of the oceans.
- Facilitate access to this information, encourage its wide application in the implementation of this policy and any compatible national oceans policies that may be developed in association with it.
- Have regard for traditional knowledge and its potential to contribute to better understanding the oceans and to the effective management of resources.
- Promote further formal education and training of local people in marine science and marine affairs disciplines.

4.3.3 Strategy 3: Environment Protection & Conservation

Protecting and maintaining the health of the ocean and coastal environment.

This strategy highlights the natural linkages on the health and productivity of our oceans and is driven by regional-scale ecosystem processes and is dependent upon preserving the ecosystem integrity and minimizing the harmful impact of human activity.

Strategic Actions:

- Adopt an integrated trans-boundary approach, through harmonized institutional arrangements, including existing international and regional agreements, for managing marine ecosystems for long-term sustainable benefit.
- Incorporate sound environmental and social practices into economic development activities. To protect and conserve biological diversity of the ocean's ecosystem at local, national and regional levels.
- Reduce the impact of all sources of pollution on our ocean's environment.

4.3.4 Strategy 4: Sustainable Economic Development

Sustainable development and management of the use of our ocean resources.

This strategy articulates that coastal and island communities in PNG are heavily reliant on the wide range of resources and services that the oceans provide for social, cultural and economic security - can be expanded to include conditions that economic activities are required to sustain the economy and contribute to the country's GDP, but must be conducted in a sustainable way.

Strategic Actions:

- Identify priorities and implement resource development and management actions and regimes in accordance with the precautionary approach.
- Enable equitable sharing of resource access and benefits at local, national and regional levels.
- Engage, as appropriate, local communities and other stakeholders in resource management decision making. And encourage free, prior and informed consent of

traditional landowners and marine resource owners for decisions which impact their land and resources, including any that involve the sea or ocean resources, according to international principles and best practices.

- Build capacity of PNG communities for sustainable resource development and management.
- Establish mechanism to protect traditional knowledge, rights and cultures.
- Establish and protect intellectual property rights through legislation.

4.3.5 Strategy 5: International Relations, Security and Safety

Promoting and enhancing the peaceful use of the oceans

This strategy underlines the peaceful uses of the oceans and elimination of security risks and threats to our oceans - the major source of sustainable livelihoods for PNG communities as well as the Pacific Islands.

Strategic Actions:

- Ensure that all activities carried out in our oceans meet all relevant international and regional standards, and do not cause environmental damage, social or economic hardship in the country.
- Seek remedial action in the event of an incident resulting from non-peaceful use of the oceans.
- Ensure that the ocean is not used for criminal activities nor for other activities that break local, national or international law.
- Encourage cooperation.

CHAPTER 5 INSTITUTIONAL ARRANGEMENTS

5.1 National Oceans Office

The various stakeholder activities and competing interests must be monitored and coordinated by the Oceans Office, through the proposed Committees. An effective governance structure, with sustained leadership and broad inter-agency coordination is required to effectively manage the complex and pressing problems facing the ocean with coordination from the national level, down to the provincial and local levels.

It is proposed that relevant committees be established, to facilitate this tiered level of decision making. A Term of reference (TOR) must be developed, setting out the functions of the NOO and its committees. The proposed governance committees are:

- Ministerial Oceans Committee (Political oversight)
- National Oceans Committee (Steering committee)
- Technical Working Group (Cross cutting issues and competing interests)

5.1.1 Operational Policies

The NOO will work with relevant agencies to continue to develop the necessary operational policies required to implement this policy and the MZA. A *Policy on Cooperation* and *Operational Guidelines* outline areas of cooperation which must be undertaken to address data sharing and resource shortfalls. Information sharing and cooperative arrangements must be developed through the relevant committee.

5.1.2 Ministerial Oceans Committee (MOC)

This Committee will make overall decisions on Policy Development. The Minister for Justice is the Chair to the MOC, in accordance with the oversight mandate provided to it under the MZA. The Co-chair will be the Minister for Foreign Affairs.

5.1.3 National Oceans Committee

The National Oceans Committee (NOC) will be at the Secretary and Deputy Secretary level. Membership will be from a broader forum, from the consultation, implementation and enforcement levels. DJAG and DFAIT are co-chairs of the NOC. The NOC will provide an advisory role to the MOC and will establish sub-committees to work on specific technical issues as and when required.

The proposed membership of the NOC consists of the Core Technical Committee and additional organizations who assist in the implementation and enforcement activities in the ocean space, as well as, legislative and policy implementation, monitoring and reform in PNG.

5.1.4 Core Technical Committee (CTC)

The Core Technical Committee will be at First Assistant Secretary or a Director level. Membership will be drawn from agencies with various mandates to deal with the ocean space. These agencies will deal specifically with technical cross-cutting issues, enforcement powers, and compliance matters. It is envisaged that most of the cooperative mechanisms and processes will be developed by the CTC with appropriate recommendations to NOC for endorsement. Cross-cutting issues may be referred to the NOC for appropriate recommendations to the MOC.

5.1.4 Oceans Office Operational Requirements

Funding is required for the operations of the NOO. Annual work plans must be developed by the NOO with the NOC. Annual funding will be sought through the national government budget process based on submitted annual work plans. During this period of transition, the Oceans Secretariat will be housed under DJAG but will eventually become a stand-alone office to implement and enforce the MZA.

5.1.5 Working Committee to develop Applied Research regimes.

Research is important for informed decision making for environmental protection and economic development. The linkages between activities, their impact on the environment and mitigating the effects on the offshore environment and into the deep sea should be regulated and managed based on scientific advice. A regime for approvals for Marine Scientific Research (MSR) and Applied Research applications will be developed to address these two areas separately.

Two separate committees may be established; one for pure research and the other for applied research. Identification of different stakeholder policies on research within their mandates needs to be carried out and aligned with the MZA and this NOP.

5.1.6 National Advisory Committees

Apart from the National Oceans Committee and its sub-committees, the Oceans Office may coordinate with existing National Coordinating Committees to support the implementation of the NOP goals and objectives.

5.1.7 Resource Implications

The successful implementation of the NOP relies on the timely availability and efficient application of human, financial, material and information resources. The financial resources required must be detailed in the Annual Plan (Strategy) against specific work areas.

It is the responsibility of DJAG with support from DFAIT, to ensure that in this initial stage, the NOO is adequately resourced to carry out the administration, monitoring and updating of the NOP in a timely manner. The Government is committed to the establishment of the NOO and funding of its operations to enable the NOO to properly oversight a wide range of ocean governance matters and priorities including development of sustainable financing mechanisms. The DJAG, as the current custodian of the NOP and manager of the NOC, must seek a capital investment program funding for the short to medium term to urgently commence the implementation of this strategic framework. The needs for immediate interventions in the

integration processes require appropriate sustainability strategies and sustainable financing for long-term purposes. The overall policy intention is a dedicated set of resources and finances at relative higher levels from the norm, to be provided firstly to priority programs at the local-level communities and districts.

5.1.8 Funding Sources

The Government envisages that during its planning and implementation phase(s), it will commence diligent sourcing of Resources and Financing, and investment strategies with international, regional and national financial partners, and include an extension of the domestic taxation regimes and include blue (ocean) taxes and trust funds.

International sources of funding include multilateral banks, bilateral development cooperation agencies, foundations, international NGO's, carbon offset programs, national and global levies, global environment facility, and philanthropic contributions. (National level mechanisms include blue taxes, levies, surcharges and tax incentives, tax deduction schemes, private foundation grants, national environmental funds and debt swaps).

The institutional and governance frameworks must be developed in consultation with the NOC. Institutional arrangements must take into consideration existing and future arrangements and integrate emerging mechanisms under this policy and relevant legislation.

5.3 Organizational Responsibilities

The table below summarizes the roles and responsibilities that are expected to be carried out by the organizations and agencies, principally engaged in the oceans sector service delivery.

Organization	Roles and Responsibilities
National Oceans Office (NOO)	<ul style="list-style-type: none"> • Oversight, coordination and implementation of the MZA 2015. • Maritime Boundary Delimitation Negotiations, meetings and related work. • Marine Scientific Research (MSR). • Secretariat support to Governance Committees. • Any other work identified in relation to the oversight and implementation of the MZA.
Department of Justice & Attorney General (DJAG)- Office of Ocean Affairs.	<ul style="list-style-type: none"> • DJAG will ensure that matters relating to the MZA and the NOP are communicated accordingly to the Oceans Office and addressed in the appropriate committees. • DJAG through its various Branches which have responsibilities in Ocean Governance, will assist the Oceans Office in ensuring reporting obligations to International and Regional Organizations are undertaken and shall work together to produce Ministerial Reporting as required by the MZA. • Political responsibility of NOP Implementation. • Legislation Review and Revision of existing Legislations and drafting of new Legislations as pertains to NOP implementation.

Department of Foreign Affairs and International Trade (DFAIT)	<ul style="list-style-type: none"> • The original NEC Decision 124/96 is a testament that places responsibility for NOP implementation with DJAG noting political responsibility of the NOP is the remit of DFAIT. • DFAIT will provide full support to DJAG to implement NOP
Department of National Planning and Monitoring (DNPM)	<ul style="list-style-type: none"> • Responsible for Budget allocation Reviews. • Sets National Targets against relevant MTDP Goals. • NOP Monitoring and Evaluation. • Formulate Results Framework and M&E framework for NOP. • Support Government Departments to report against NOP results framework as part of annual Department reporting against MTDP III and the SDGs. • Lead NOP Monitoring and Evaluation throughout life of the Policy. • Develop a Theory of Change to provide overarching results-focus for the NOP and track, update and amend ToR with Stakeholders on an annual basis.
Department of Treasury (DOT)	<ul style="list-style-type: none"> • Allocates Financing to support NOP Operational activities. • Allocates development budget to support NOP development. • Allocates Provincial, District and Local Level Government Services Improvement Program (PSIP) funding.
Department Provincial and Local Level Government	<ul style="list-style-type: none"> • Has Statutory Responsibilities over matters of Local Government pursuant to, in accordance with the <i>Organic Law on Provincial Governments and Local-level Governments 1995</i>, <i>Provincial Governments Administration Act 1997</i> and the <i>Local-level Governments Administration Act 1997</i>. • Responsible for the dissemination of Policy to Provinces. • Reports on performance of Provinces and LLGs. • Links top down Strategies with bottom up needs. • Coastal Waters Issues Reporting to DPLLG and vice versa.
Department of Transport	<ul style="list-style-type: none"> • Maritime Transport Policies and Strategies in relation to the <i>Harbours Act</i> and the <i>Merchant Shipping Act</i> and related Regulations. • Works in partnership with NMSA in regard to International Agreements on Maritime (Safety) matters and Registration of Vessels.
PNG Science and Technology Council (PNGSTC)	<ul style="list-style-type: none"> • Alignment of domestic and international research and innovation activities to PNG's national priorities as identified in the NRA. • Coordination of PNG's Science and Technology Cooperation in collaboration with DNPM and DFA; this is inclusive of Initiatives of Capacity Building and Technology Transfer across all fields of Science and Technology,

	<p>including MSR and TMT.</p> <ul style="list-style-type: none"> • Approval of Domestic and International Research across all fields of Science and Technology, including MSR.
Development Partners, Donors, Regional and International Organizations	<ul style="list-style-type: none"> • Provide Technical and Funding Support for the Implementation of NOP. • Provide funding support for Provincial and Community Implementation activities of NOP. • Capacity Building Support.
NGOs	<ul style="list-style-type: none"> • Implementers of Rural and Peri-urban WaSH and Conservation Programs. • Advocacy and Support for participation in the UN decade of Oceans Science for Sustainable Development.



CHAPTER 6 IMPLEMENTATION PLAN

A PNG Action Plan (Action Plan) must be developed to outline how this Policy will be implemented in greater detail, as well as the agencies responsible for each of the actions. The Action Plan must be developed within 12 months of the endorsement of this Policy and must be reviewed every two years. In terms of oversight, the NOC under the leadership of the Co-chairs must be responsible for providing advisory oversight in the implementation of the Action Plan. Any policies relating to the coast and offshore must be endorsed by the Ministerial Ocean Committee before it is taken to NEC for deliberation and final approval.

The PNG Action Plan must incorporate actions to implement the strategies outlined in this Policy. The Action Plan must support integrated ocean management.

Implementation Phase 1:

Implementation Activities	2020 – 2022												Responsible Agency
	2020			2021			2022						
Finalize NOP and submit for NEC approval.													DJAG, DPM, DoT
Establish full office of Office of Ocean Affairs in DJAG													DJAG
Regional awareness on NOP – Phase 1- NGI, Phase 2 – Momase, Phase 3- Southern and Phase 4- Highlands													DJAG
Marine Scientific Research (MSR) Guidelines Review & MSR Committee functioning.													DJAG, DFA, STC

Implementation Phase 2:

Implementation Activities	2020 – 2022												Responsible Agency
	2020				2021				2022				
Drafting of legislation with OSS, to establish NOO, functions and responsibilities, linking to regulations.													DJAG
Commence drafting of Regulations with OSS.													DJAG
Submit draft legislation to Central Agencies Coordinating Committee (CACCC).													DJAG
Submission to NEC for approval													DJAG
Tabling of legislation in parliament Gazettal of Regulations													DJAG

Implementation Phase 3

Implementation Activities	2020 – 2022												Responsible Agency
	2020				2021				2022				
Annual Report													DJAG & DFA
Office of Ocean Affairs contributes to MTDP 2021- 2026													DJAG, DFA &DNPM
Three years NOP review													DJAG & NOC

CHAPTER 7 MONITORING & EVALUATION

This Policy brings to the fore the significant role of Oceans to provide vital resources and services for sustaining humankind including food, recreation, transportation, energy, nutrient cycling and climate moderation, and its substantial contribution to our economy. Thus, it is imperative that Government and other stakeholders must commit and contribute not only to attain the NOP objectives, but also to periodically track its performance and results; and assess the ‘health’ conditions of the oceans around the country. The aim of monitoring, evaluating and reporting of this Policy is to assess the various stakeholders’ contributions in delivering implementation plans, changes in systems and processes and innovative approaches that promote NOP’s goals and objectives, including its contribution to StaRS and SDG 14 (*Life below Water*) that can be carried out over the next 5-10 years.

At the national level, the NOP M&E processes will determine how PNG mobilizes the national, regional, and global ocean community to develop an integrated oceans management, address key policy gaps, enhance ocean science and technology, and connecting ocean science with the country’s population needs, and assessing the following national outcomes:

Table 7.1: The NOP National Outcomes

TRANSFORMING	National, Regional, and Global knowledge systems on Ocean Science and Technology to support sustainable development are developed progressively.
BOLSTERING	National Ocean observing and data systems are in place and evolving.
MEASURING	Cumulative outcomes and impacts for effective solutions are documented and reported regularly.
DELIVERING	Best available knowledge, data system, and technologies are available and utilized by decision-makers.
REDUCING	Vulnerability to ocean and coastal hazards are reduced in concert with all stakeholders.
ACCELERATING	Transfer of marine technology, training, and education are delivered and accelerated.

To achieve the above NOP outcomes and processes, specific contributions to NOP plans and targets will be required from Ministries, Departments, Agencies, Academia, Provinces, Districts and other Parties, such as Private Companies, Research Organisations, Multilateral and Bilateral Development Partners, and other International Partners. The National Oceans Office (NOO) in collaboration with Department of National Planning and Monitoring (DNPM) and the Interagency Working Group on NOP (IWG-NOP) will track the progress of implementation of the NOP using the MTDP III, StaRS, and SDG 14 Monitoring and Evaluation Framework (see Table 7.2).

Table 7.2: PNG SDG 14 Targets and Indicators

Localized SDG Targets	Localized SDG Indicators
14.1 Prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.	14.1.1 Index of coastal eutrophication and floating plastic debris density.
14.4 Regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.	14.4.1 Proportion of fish stocks within biologically sustainable levels.
14.5 Conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.	14.5.1 Proportion of protected areas in relation to marine areas in PNG.
14.7 Increase the economic benefits from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture, and tourism.	14.7.1 Sustainable fisheries as a percentage of GDP in PNG.
14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to PNG.	14.a.1 Proportion of total research budget allocated to research in the field of marine technology.
14.b.1 Provide access for small-scale artisanal fishers to marine resources and markets.	14.b.1.1 Existence of instruments that specifically target or address the small-scale fisheries sector (Yes = 40; No = 0)
	14.b.1.2 Existence of specific initiatives to implement the Small-Scale Fisheries Guidelines (Yes = 30; No = 0)
	14. b.1.3 Existence of mechanisms enabling small-scale fishers and fish workers to contribute to decision-making (Yes = 30; No = 0) processes

NOP annual progress reporting shall be focused on the above outcomes, targets, and indicators and the Papua New Guinea Action Plan. The Office of Ocean Affairs will carry out periodic reviews of the Policy and make appropriate recommendations to the Ministerial Oceans Committee. Additionally, progress in PNG's Action Plan is reviewed at annual events to coincide with the MTDPs annual reviews. All NOP reports and other information materials are posted on DNPM's website.

The specific Monitoring, Evaluation and Reporting requirements for each of the various agencies and organizations are outlined below.

7.3 Government Agencies

- 1) Use the targets and indicators from relevant policy instruments in the annual business plan and budget submission as a basis for Internal Government Monitoring and Management.
- 2) Indicate which of the actions within their annual business plan, budget submission and performance reports contribute to the implementation of the Action Plan.
- 3) Provide Annual Business Plan, budget and performance reports to the Office of Ocean Affairs for compilation into the Papua New Guinea Annual Progress Report (Progress Report).

7.4 Papua New Guinea Office of Ocean Affairs

1. Shall provide a consolidated Annual Progress Report for the Ministerial Oceans Committee which includes:
 - a) Results achieved including (as appropriate) the impact of implementing the action plan in relation to the achievement of Policy goals and the relevant MTDP indicators;
 - b) Lessons learned;
 - c) Actions taken to improve performance and address issues or risks arising from the implementation of the Action Plan; and
 - d) Forecast the Office of Ocean Affairs programme for the next twelve months.
2. Submit required Regional and International Reports to relevant Development Partners.

Annex 1: National Oceans Office Structure





Department of Justice & Attorney General
P.O. Box 591, Waigani, National Capital District
Phone: 301 2819 / 3012847 - Fax: 325 4613 - Website: www.justice.gov.pg