Assessing the Ocean Governance Frameworks Underpinning Deep Sea Minerals Development in the Cook Islands

Alexandrya Herman
UN-Nippon Foundation Fellowship 2015-2016

DISCLAIMER

The views expressed herein are those of the author and do not necessarily reflect the views of the United Nations, the Nippon Foundation of Japan, the University of Queensland or the Government of the Cook Islands.

ABSTRACT

In 2009, the Cook Islands, a small island developing state with a large ocean spanning1.8 million km^2 in the South Pacific, established landmark deep seabed mining legislation to guide sustainable deep sea minerals development in the Cook Islands. Deep sea activities do not occur in a vacuum, and impact other sectors and users in the ocean space. As such, ocean governance provides an all-encompassing framework to ensure the sustainable development of deep sea resources, through policy, legislative and institutional arrangements, and guided by principles for the management of the ocean space. This thesis assesses the existing deep sea minerals (DSM) ocean governance frameworks at the international, regional and national level to examine its robustness, using the following key ocean governance principles as indicators: an integrated approach, cooperation, protection of the environment, common heritage of mankind, marine scientific research and capacity building.

While the existing DSM frameworks incorporate these key ocean governance principles, there are legislative gaps and weaknesses, and implementation challenges across all levels, particularly in the Cook Islands. This is contributed by the inherently complex nature of ocean governance, a traditional fragmented approach to ocean management, and the underlying capacity challenges of a small island developing state. However, awareness and understanding of these issues is increasing, as reflected in recent DSM management efforts.

Ensuring the sustainable development of oceans resources for the Cook Islands to achieve its national vision of 'the highest quality of life consistent with the aspirations of our people, and in harmony with our culture and environment,' requires a collaborative effort at all levels to address this issue in an integrated, coherent and participatory manner.

ACKNOWLEDGEMENTS

Firstly, I give the honour and the glory to God for this thesis: *Philippians 4:13 "I can do all things through Christ who strengthens me."*

This thesis would not have been possible without the support from a range of people and institutions, whom I would like to thank and acknowledge. Much like the concept of the ocean, these people are connected and interrelated along various marine-related sectors in international, regional and national spheres.

I wish to acknowledge the United Nations and the Nippon Foundation of Japan for this fellowship programme, which has enriched my knowledge profoundly, provided unforgettable experiences and allowed me to meet many inspirational people with a passion for ocean governance.

I would like to express my sincere gratitude to the Division for Ocean Affairs and the Law of the Sea, and its staff who generously gave presentations, and their time to discuss issues relating to deep sea minerals and beyond. To Valentina Germani, I cannot thank you enough for your guidance and unwavering support. You are an inspiration to us all. Thank you to Francois Bailet whose presentation on ocean governance challenged me to think beyond the deep sea minerals sector and to consider its management with a wider appreciation of the interconnectedness of ocean affairs. Also, thank you to Simone Dempsey, who is the oil behind the scenes ensuring that all administrative matters ran smoothly.

I wish to acknowledge the University of Queensland for hosting me, and providing me with what I needed during my tenure. Specifically, I wish to thank Professor Craig Forrest for his guidance, for reviewing my drafts and making important corrections and suggestions, and for his patience, which was greatly appreciated. Thank you also to Vu Ngo for the IT support.

To my 2015-2016 fellows, I am grateful to have met a group of like-minded people, with whom I have made life-long friends. Thank you also to the UN-Nippon Fellowship Alumni for the support. I look forward to participating and contributing to the Alumni in the future.

Internationally, regionally and nationally, there are a number of people and institutions to thank and acknowledge that are too many to name individually. Some are colleagues from the Pacific Deep Sea Minerals Project, the Commonwealth Secretariat, the International Seabed Authority, as well as within the Cook Islands Government to name a few. Thank you for responding to my queries, and sharing your views on issues, as well as the general discussions, which continue to develop my own understanding. Thank you to the Cook Islands Seabed Minerals Authority staff who have supported me and held the fort in my absence. Thank you to Paul Lynch for supporting my aspiration to undertake this fellowship, as such capacity opportunities ensure the future sustainability of the Cook Islands.

Finally, I wish to acknowledge and thank my mother Josephine Aumea Herman-Tepai whose passion and perseverance for academic excellence is both exemplary and inspirational. I also acknowledge my late grandparents Metuaiviivitoa Joseph and Mikara Herman for instilling in me the values that have enabled me to become the person I am today. To all my family and friends I have not mentioned, thank you for always believing in me and encouraging me to pursue my dreams. I would not be where I am today without your continued support and I dedicate this thesis to you all.

LIST OF ACRONYMS

ADB	Asian Development Bank
BPOA	Barbados Programme of Action
CBD	Convention on Biological Diversity
CCZ	Clarion Clipperton Fracture Zone
CS	Continental Shelf
CSD	Commission on Sustainable Development
CIIC	Cook Islands Investment Corporation
CIMP	Cook Islands Marine Park
CLCS	Commission on the Limits of the Continental Shelf
CROP	Council of Regional Organisations in the Pacific
DOALOS	United Nations Division for Ocean Affairs and the Law of the Sea
DOSI	Deep Ocean Stewardship Initiative
DSM	deep sea minerals or deep sea mining
DSCC	Deep Sea Conservation Coalition
EBM	ecosystem-based management
EMP	environmental management plan
ECOSOC	United Nations Economic and Social Council
EDF	European Development Fund
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EITI	Extractive Industries Transparency Initiative
EMP	Environmental Management Plan
EU	European Union
FfD	Finance for Development
GOC	Global Ocean Commission
GSD	Geoscience Division
GSR	G-TEC Sea Mineral Resources NV
HLPF	High-level Political Forum on Sustainable Development
ICP	United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea
IEA	Island Environment Authority
IMO	International Maritime Organisation
INDEEP	International Network for Scientific Investigation of Deep-sea Ecosystems
ISA	International Seabed Authority
ILO	International Labour Organisation
LTC	Legal and Technical Commission
ITLOS	International Tribunal for the Law of the Sea
IUU	illegal, unreported and unregulated
IUCN	International Union for Conservation of Nature and Natural Resources
JNAP	Cook Islands Joint National Action Plan for Disaster Risk Management and Climate Change Adaptation
JPOI	Johannesburg Plan of Implementation 2002
KASM	Kiwis against Seabed Mining

MARPOL	International Convention for the Prevention of Pollution from Ships
MCI	Maritime Cook Islands
MDG	Millennium Development Goals
MFAI	Ministry of Foreign Affairs and Immigration
MFEM	Ministry of Finance and Economic Management
MIDAS	Managing Impacts of Deep-Sea Resource Exploitation
MLC	Maritime Labour Convention 2006
MMR	Ministry of Marine Resources
MMT	Marae Moana Taskforce
MoT	Ministry of Transport
MPI	Minerals Policy Institute
MSP	Marine Spatial Planning
MSR	Marine Scientific Research
NBSAP	National Biodiversity Strategy and Action Plan
NEC	National Environment Council
NES	National Environment Service
NIWA	National Institute of Water and Atmospheric Research
NRC	National Research Committee
NSDC	National Sustainable Development Commission
NSDP	National Sustainable Development Plan 2011-2015
NZ	New Zealand
NZEPA	New Zealand Environmental Protection Authority
NZPAM	New Zealand Petroleum and Minerals
OSH	Occupational Health and Safety
OPM	Office of the Prime Minister
OPOC	Office of the Pacific Ocean Commissioner
OPSC	Office of the Public Service Commissioner
PALM7	7th Pacific Islands Leaders Meeting
PANG	Pacific Network on Globalisation
PC	Pacific Community (formerly known as the Secretariat of the Pacific Community)
PFTAC	Pacific Financial Technical Assistance Centre
PIANGO	Pacific Islands Association of Non-Governmental Organisations
PICT	Pacific Islands Country or Territory
PIFS	Pacific Islands Forum Secretariat
PIROF-ISA	Pacific Islands Regional Ocean Framework for Integrated Strategic Action
PIROP	Pacific Islands Regional Ocean Policy
POI	Pacific Ocean Initiative
PSIDS	Pacific Small Island Developing States
REMF	Regional Environmental Management Framework for Deep Sea Minerals
Rio+20	United Nations Conference on Sustainable Development 2012
RLRF	Regional Legislative and Regulatory Framework for Deep Sea Minerals Exploration and Exploitation in the Pacific
SAMOA	SIDS Accelerated Modalities of Action
SDG	Sustainable Development Goal
SEA	Strategic Environmental Assessment

SIDS	Small Island Developing States
SMA	Cook Islands Seabed Minerals Authority
SMS	Seafloor Massive Sulphides
SSCR	Specialist sub-committee on regionalism
SOE	state owned enterprise
SOLAS	1974 International Convention for the Safety of Life at Sea
SPLOS	Meetings of States Parties to the 1982 United Nations Convention on the Law of the Sea
SPREP	Secretariat of the Pacific Regional Environment Programme
TIS	Te Ipukarea Society
UN	United Nations
UNCED	United Nations Conference on Environment and Development 1992
UNCLOS	United Nations Convention on the Law of the Sea 1982
UNCSD	United Nations Conference on Sustainable Development 2012 (Rio+20)
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
VMS	vessel monitoring system
WOC	World Ocean Council
WSSD	World Summit on Sustainable Development

LIST OF FIGURES

TABLE OF CONTENTS

INTRODUCTION

The Cook Islands is an isolated small island developing state in the South Pacific with a narrow export base and relatively small economy that is heavily reliant on tourism, with limited opportunities for economic diversification and expansion. However, the Cook Islands also have one of the largest known reserves of deep seabed manganese nodules within a national jurisdiction, estimated to be around ten billion tonnes. The development of an industry to explore, extract and export these deep sea resources presents an opportunity to significantly increase the gross domestic product of the Cook Islands, with potential economic and social benefits and the creation of a truly independent, economically viable and sustainable future for the people of the Cook Islands.

The government of the Cook Islands has made the development and advancement of its deep seabed minerals industry a national priority and supported the establishment of a regulatory framework, which includes a National Seabed Minerals Policy, and related legislation for the wise management of its deep sea resources. Further, the Cook Islands is also developing and implementing arrangements to be able to benefit from deep sea mining in areas beyond its national jurisdiction, and in 2014, was approved a plan of work for exploration by the International Seabed Authority as a sponsoring State in the Clarion Clipperton Zone, in the Pacific Ocean. This puts the Cook Islands in a unique position of having a beneficial interest both within and beyond its national jurisdiction.

While the Cook Islands has taken steps to ensure that a best practice policy and regulatory framework is in place prior to the active mining of deep seabed minerals, a critical analysis of this framework has not been undertaken. The evaluation and critique of such a mechanism is essential to ensure it is evidence-based and robust, and has taken into consideration potential weaknesses and challenges, and identified mitigating measures to address these. Given the Cook Islands is developing seabed minerals both within and beyond national jurisdiction, there is an added layer of complexity for the national framework to address its international obligations and responsibilities in both areas.

This thesis critically reviews the design and implementation of the Cook Islands deep sea minerals policy, legislative and institutional framework, through the lens of ocean governance frameworks. Ocean governance is concerned with the rules, arrangements, institutions and concepts, which structure the ways in which sea space is used, monitored and assessed. Ocean governance is critical for the sustainable development of the oceans. A key tenet of this and the law of the sea is that the problems of ocean space are closely interrelated and need to be considered as a whole. Deep sea mining (DSM) activities do not occur in a vacuum, and have impacts on other resources and users in the ocean.

Therefore DSM frameworks in the context of ocean governance broadens the scope of the discussion, and means there is a multitude of layers to consider. The ocean does not recognise sovereign concepts such as an Exclusive Economic Zone, and therefore ocean management at the international, regional and national level must be considered together, as they are interconnected. There are various other sectors operating in the ocean, such as fisheries, shipping and environmental protection. Ocean governance also comprises of governing and non-governing bodies such as civil society, industry and scientific research organisations. It is clear that the management of the ocean is an inherently complex issue; however, ocean governance provides the frameworks and key principles for its sustainable development.

Part One of this thesis introduces the concept of ocean governance, and outlines the existing legal, policy and institutional frameworks in place for DSM. It then highlights the key gaps, weaknesses and challenges affecting the Cook Islands DSM development. Chapter 2 discusses the importance of ocean governance to the sustainable development of DSM. It focuses on several key ocean governance principles, namely an integrated approach to management, cooperation, protection and preservation of the environment, the common heritage of mankind, marine scientific research, and capacity building. These key principles serve as the indicators for assessing the frameworks discussed in this thesis. Chapter 3 introduces the international, regional, and national ocean governance frameworks underpinning DSM development. It outlines how the various levels have addressed ocean governance through their various policy, legislative, and institutional frameworks. This analysis highlights the connection between international and regional frameworks, and how it permeates through to the national level and influences Cook Islands policy development. The key findings of this assessment are discussed in Chapter 4, which highlights the gaps, weaknesses and challenges of those frameworks to the sustainable development of the Cook Islands DSM. The common thread in the issues identified is the weak implementation of the key ocean governance frameworks identified. That is, rather than an integrated approach, oceans management is still sectorally focussed and fragmented. There is a lack of cooperation and coordination between governing agencies; there are weaknesses and gaps in the legislative framework for environmental protection; there is a gap in the Cook Islands regulatory framework concerning the area beyond national jurisdiction; there are science and research issues; and finally, perhaps the greatest challenge is in the capacity constraints of the Cook Islands.

Part Two focuses on recommendations towards improving the ocean governance frameworks underpinning DSM development. A key message of Part Two is that, while the issues of ocean management are inherently complex, the modern world is coming to recognise the need to shift

traditional management arrangements and mindsets in order to be able to deal with current issues such as ocean acidification and climate change, as well as to manage upcoming industries such as DSM. In light of this, there are a plethora of opportunities and resources the Cook Islands can access at the international, regional and national level to address its issues. Part Two discusses the current policy; legislative and institutional reform occurring in the Cook Islands, aimed at addressing most of the issues identified, and views this period of flux in the Cook Islands framework as an opportunity to conclusively address issues. However, it is also notes that some issues, such as capacity constraints are deeply rooted, and require long-term efforts to address. The current national reforms suggest that the Cook Islands are heading towards an integrated, robust and coherent management of the oceans. However, it is stressed that the Cook Islands continue to strive towards ocean governance and the implementation of its key principles. This will enable the Cook Islands to realise its national vision of 'the highest quality of life consistent with the aspirations of our people, and in harmony with our culture and environment.'

PART ONE: OVERVIEW OF OCEAN GOVERNANCE FRAMEWORKS UNDERPINNING DEEP SEA MINERALS DEVELOPMENT

1 CONTEXT

1.1 Deep Sea Minerals

For many decades, since the discovery of manganese nodules by the HMS *Challenger* in the 1800s, the deep ocean has held interest of the potential limitless mineral wealth on the seafloor. So much so, that an international legal regime was developed for its management. As of yet, no deep sea mining has taken place, however may change within this generation or the next, as further developments in deep sea exploration continue to progress this frontier industry forward amid concerns of its environmental impact.

There are three main types of deep sea minerals (DSM) of economic interest on the sea floor: polymetallic or manganese nodules, seafloor massive sulphides (SMS), and cobalt-rich ferromanganese crusts. The DSM of interest in the Cook Islands are manganese nodules, small rounded rock concretions of metallic oxides and minerals found between 4000 and 6500 metres depth below sea level.[1] These nodules are formed through a very slow geological process, growing about two

[1] SPC, 'Deep Sea Minerals: Manganese Nodules, a physical, biological, environmental, and technical review' (Vol. 1B, Scretariat of the Pacific Community, 2013).

millimetres every million years.[2] They vary greatly in abundance and have been discovered throughout the world's oceans.[3] Scientific surveys have revealed that the Cook Islands have significant deposits of manganese nodules, making it one of the richest manganese resources within a national jurisdiction.[4]

Manganese nodules contain minerals such as manganese, iron, nickel, copper, cobalt, and rare earth elements (REE) among others, which makes them of considerable economic and strategic importance,[5] particularly for a range of industrial, hi-tech, medical and military applications.[6] Its appeal has revived in recent years due to a number of factors, including increasing material consumption, intense demand for valuable metals pushing up global prices, advancements in technology enabling greater access to the DSM.[7] [8] As such, several Pacific countries, including the Cook Islands, have shown interest in developing DSM within their national jurisdictions and beyond.

Recently, the global minerals industry is in a recession and minerals prices have dropped, thus decreasing the risk appetite of industry for frontier industry's such as DSM.[9] Furthermore, there has been resistance to DSM exploration due to the inherent uncertainties of environmental impacts, from both local communities and the international community at large. There are also concerns about DSM development by Pacific Island countries in recent years noting the lack of adequate governance frameworks.

The deep sea mining process occurs in three stages: Prospecting, exploration, and exploitation or mining. Studies on the potential impacts of mining operations in the deep sea are shedding light on the environmental impacts.[10] The key environmental impacts occur three locations: the sea floor;[11] the water column;[12] and the surface.[13] The technological challenges therefore will revolve around building

[2] 'Manganese Nodules of the Cook Islands ' (South Pacific Applied Geoscience Commission September 1998).
[3] 'Polymetallic Nodules' *International Seabed Authority* <http://www.isa.org.jm/files/documents/EN/Brochures/ENG7.pdf>.
[4] It also has the highest recorded cobalt content nodules. Yoshitaka Hosoi, 'A Record on the Establishment of Phase III of the JAPAN/SOPAC Deepsea Mineral Resources Survey Program and Associated Activities' (Miscellaneous Report 191, South Pacific Applied Geoscience Commission, March 1995).
[5] ISA, 'Workshop on Polymetallic Nodule Mining Technology - Current Status and Challenges Ahead' (Background Document, International Seabed Authority, 2008), 5.
[6] SPC, above n 1.
[7] 'Wealth in the Oceans: Deep Sea Mining on the Horizon? ' (Thematic Focus Report, United Nations Environment Programme, May 2014)
[8] For more on the primary and secondary drivers of deep sea mining, see SPC, 'Deep Sea Minerals: Deep Sea Minerals and the Green Economy' (Vol. 2, Secretariat of the Pacific Community, 2013) [3.1-3.2].
[9] Ibid.
[10] See 'Pacific Island Countries and Territories Regional Guidelines for Deep Sea Minerals Scientific Research' (Draft, Deep Sea Minerals Project, August 2015)
[11] Potential impacts include: Direct physical impact of mining/sampling gear; sediment smothering animals; changes to sediment characteristics post disturbance; toxic effects with metal release (and other contaminants); loss of essential habitat (spawning/nursery grounds).
[12] Potential impacts include: Effects on behaviour of mammals, mesopelagic or migratory fish and plankton through changes in water composition; bioaccumulation of toxic metals though food chain; sediment plume through water column from seafloor operations or midwater discharges.
[13] Potential impacts include: Increased vessel activities and potential pollution; effects on behaviour of surface mammals, fish and birds through changes in water composition and clarity, noise and lights from vessel activity.

a commercially feasible nodule collecting system, which adequately addresses the potential environmental impact. There are other considerations to take into account for the DSM process, such as transportation and onshore logistics for minerals.

Seabed mining will no doubt affect deep seabed ecosystems, although the extent of its impact is yet to be fully understood.[14] However due to the isolated nature of deep sea ecosystems from the influence of mankind, they might be vulnerable to even slight changes caused by the introduction of light, noise, waste, and physical disturbance.[15] Thus, environmental management is a key concern for DSM development. Social issues are not considered as often, but are also important.[16]

1.2 The Cook Islands

The Cook Islands is a small self-governing country with an estimated population of approximately 20,000,[17] comprising fifteen islands scattered over a land mass of 240 km^2 and spanning an Exclusive Economic Zone (EEZ) of approximately 1.8 million km^2.[18] The relatively large EEZ in comparison to its small land mass has led to political leaders recasting the Cook Islands as a 'Large Ocean State.'[19]

On several strategic fronts, the Cook Islands differ from most small island nations of the Pacific. Previously under New Zealand rule, the Cook Islands were annexed and attained self-governance status with free association, through the Constitution Act in 1965. Therefore, Cook Islanders are New Zealand citizens, allowing free movement to New Zealand and Australia. This mobility has socioeconomic impacts, as the resident population continues to decline for access to better education, health and economic opportunities overseas.[20]

The Cook Islands parliament follows a Westminster parliamentary system, with democratic elections held every four years, made up of 24 Members of Parliament. In addition to the national government, the outer islands operate local government under statutory powers devolved by parliament to local councils. Furthermore, the Cook Islands have traditional leaders (*Ariki*) who, though not elected,

[14] Some studies have been undertaken in respect of impact of nodule mining, but there is a lack of sufficient data. Craig R Smith, 'Biodiversity, species ranges, and gene flow in the abyssal Pacific nodule province: predicting and managing the impacts of deep seabed mining ' (Technical Study No 3, International Seabed Authority, 2008), 4

[15] Salvatore Arico and Charlotte Salpin, 'Bioprospecting of Genetic Resources in the Deep Seabed: Scientific, Legal and Policy Aspects' (Institute of Advanced Studies, United Nations University 2005).

[16] Due to the scope of this thesis, social issues will not be considered in depth here.

[17] 'Vital Statistics and Population Estimates: June Quarter 2015' (Cook Islands Statistical Bulletin, Ministry of Finance and Economic Management, 2015).

[18] The Cook Islands has also submitted a claim for an extended continental shelf (ECS) with the UN Commission on the Limits of the Continental Shelf (CLCS).

[19] Editor, 'Pacific 'Large Ocean Island States' Conserve Huge Marine Areas', *International Environment News Service* 3 September 2012 <http://ens-newswire.com/2012/09/03/pacific-large-ocean-island-states-conserve-huge-marine-areas/>

[20] ADB, 'Cook Islands Country Operations Business Plan 2015-2017' (Strategic Analysis, Asian Development Bank, 2014).

maintain considerable influence and control over large areas of communal land in traditional ownership. The legal system of the Cook Islands closely reflects that of New Zealand and most other English common law jurisdictions.

Tourism is the driver of the Cook Islands economy accounting for over 60% of the GDP[21] followed by the fisheries industry, and to a lesser extent financial services, pearl and agricultural exports.[22] This narrow economic base has led to efforts to diversify and explore other avenues of economic growth such as marine resources, including DSM.

In 2008, the Cook Islands government sought legal and technical assistance to develop a regulatory framework for the management of DSM. A Seabed Minerals Act was passed in November 2009, and a Seabed Minerals Policy Taskforce set up in June 2010 to enable the implementation of the Act.[23] A Cook Islands Seabed Minerals Authority (SMA) was established in 2012, originally within the Ministry of Marine Resources, and was later moved to function as a standalone agency for DSM development. From then, the SMA development efforts included the passing of a national policy and regulations, recruitment of officers, public consultation and engagement with key stakeholders, participation at regional and international DSM meetings, as well as efforts to open access of the Cook Islands DSM resources to appropriate companies.

Beyond national jurisdiction, the Cook Islands partnered Belgium company G-TEC Sea Mineral Resources NV (GSR) and sponsored an application for an exploration licence in the Area.[24] And in July 2014, the Cook Islands were approved a plan of work by the International Seabed Authority, which provides the Cook Islands access to develop and explore approximately 75,000km^2 of seabed.[25] The contract is yet to be signed, and the Cook Islands and GSR are currently negotiating a joint venture agreement. Further, on 10 August 2015, the Cook Islands opened its first international competitive tender for exploration licences within its EEZ. 10 blocks of approximately 10,000 km^2 were made available for competitive bidding based on best work plan. At the time of publication, the closing date of the tender was the 11 January 2016.[26]

---

[21] The number of visitors to the Cook Islands averages around 120,000 per year. See: 'Migration Statistics: September 2015' (Cook Islands Statistical Bulletin, Ministry of Finance and Economic Management, 2015).

[22] Australian Government Asian Development Bank, 'Cook Islands 2008 Social and Economic Report' (2008).

[23] Helen Greig, 'Minerals taskforce set up', *Cook Islands News* (Rarotonga), 31 August 2010

[24] *Application for approval of a plan of work for exploration for polymetallic nodules by the Cook Islands Investment Corporation* (ISBA/20/LTC/3) (8 November 2013).

[25] *Report and recommendations of the Legal and Technical Commission to the Council of the International Seabed Authority relating to an application for the approval of a plan of work for exploration for polymetallic nodules by the Cook Islands Investment Corporation* (ISBA/20/C/18) (9 July 2014). Other Pacific Island countries that hold contracts in the Area are Nauru, Tonga and Kiribati.

[26] *Seabed Minerals Tender 2015* <http://www.seabedmineralsauthority.gov.ck/>

These actions reflect the serious commitment the Cook Islands has made towards "unlocking the marine potential" of the oceans.[27] Moreover, the Cook Islands is in a unique position of having interests in the seabed both within and beyond national jurisdiction, thus its DSM management will need to reflect this.

2 OCEAN GOVERNANCE

The ocean is vital for planetary survival, producing oxygen for life and absorbing carbon dioxide and waste. It acts as a carbon sink and absorbs 30% of the world's carbon dioxide; while marine phytoplankton generates 50% of the oxygen needed for survival.[28] Thus, the ocean regulates the climate and temperature, making the planet hospitable to diverse forms of life. In addition, the ocean is essential for national and global economic well-being, illustrated by shipping which is responsible for the carriage of approximately 90% of world trade.[29] Furthermore, over 40% of the world's population lives within 100 kilometres of the ocean or sea,[30] and through ocean related activities such as fisheries and ecotourism, rely on the ocean to sustain their livelihoods. This illustrates the centrality of oceans for all three pillars of sustainable development, and vice versa the primary importance of sustainable development in the management of the ocean.

The concept of sustainable development came about at the 1972 UN Conference on the Human Environment, and led to the 1987 Brundtland Report, calling for the integration of economic development, natural resources management and protection, social equity and inclusion.[31] The report defined it as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development, however, has been criticised as being too vague and imprecise in content.[32] Beyond the general vision, operationalisation's are scarce and weak, the practical policy implications of different definitions are usually not elaborated, and the difficult trade-offs involved are therefore not confronted.[33]

[27] *National Sustainable Development Plan 2011-2015*.
[28] Biliana Cicin-Sain, 'Conserve and sustainably use the oceans, seas and marine resources for sustainable development' (2014) 51(4) *UN Chronicle* 32.
[29] *Oceans and the law of the sea: Report of the Secretary-General* (A/70/74/Add.1) (1 September 2015), 7.
[30] Cicin-Sain, above n 28.
[31] It was the defining feature of the 1992 United Nations Conference on Environment and Development (UNCED) also known as the Earth Summit.
[32] Yen-Chiang Chang, *Ocean Governance: A Way Forward* (Springer Netherlands, 2012).
[33] Edward L. Miles, 'The Concept of Ocean Governance: Evolution Toward the 21st Century and the Principle of Sustainable Ocean Use' (1999) 27(1) *Coastal Management* 1.

The essential role of the oceans and seas in sustainable development is emphasised by the United Nations General Assembly (UNGA) through its resolutions on oceans and the law of the sea and in "The future we want" outcome document.[34]

For many decades, it has been recognised that the world's oceans are in crisis. There is mounting concern about the health of oceans and marine biodiversity negatively affected by marine pollution; ocean acidification; fisheries food security; illegal, unregulated and unreported fishing; and the impacts of climate change.[35] The resulting sea-level rise and coastal erosion are serious threats for many coastal regions and islands and particularly of concern to the Pacific Small Islands Developing States (PSIDS). This concern for the health of oceans has led to concentrated efforts towards ocean governance.

It is unsurprising that given the pervasive and extremely complex nature of the ocean, there is no agreed definition on the concept of ocean governance.[36] Ocean governance derives from the concept of good governance, and while there is a great deal of literature considering the issue of 'good governance', what constitutes the elements of good governance varies depending upon the views of different authors or institutions.[37] Rothwell and Stephens define ocean governance as:[38]

> "…those formal and informal rules, arrangements, institutions and concepts which structure the ways in which sea space is used, how oceans problems are monitored and assessed, what activities are permitted or prohibited, and how sanctions and other responses are applied [and] it is therefore a very broad conception oceans management implicating an array of global and regional organisations."[39]

Ocean governance can be viewed as various broad elements which, put simplistically, are concerned with space, actors, resources and activities. In the ocean space, there are various marine sectors, including living resources, non-living resources (DSM), and protection of the environment, shipping, science and research, marine tourism and so on. Underpinning the various maritime sectors, are the policy, legal and institutional frameworks. Governance occurs at multiple scales, from the international (or global), regional through to national levels. The various frameworks, levels and sectors of ocean

[34] *Resolution adopted by the General Assembly on 27 July 2012 - The future we want* (A/RES/66/288)(11 September 2012) 30.
[35] Ibid.
[36] For a comparison of attempts to define ocean governance, see: Cedric Ryngaert, Erik J Molenaar and Sarah Nouwen, *Whats Wrong with International Law?* (Brill, 2015).
[37] Chang, above n 32, 1-29; see also Yen-Chiang Chang, 'Good Ocean Governance' (2009) 23(1) *Ocean Yearbook Online* 89; J. Rochette et al, 'Regional oceans governance mechanisms: A review' (2015) 60 *Marine Policy* 9; J. J. Silver et al, 'Blue Economy and Competing Discourses in International Oceans Governance' (2015) 24(2) *Journal of Environment & Development* 135.
[38] Donald R. Rothwell and Tim Stephens, *The International Law of the Sea* (Hart, 2010) 462.
[39] This definition indicates the extremely complex, multi-dimensional aspect of ocean governance.

governance above highlight the complexity of managing an area that is extremely diverse and enormous in magnitude.

Effective ocean governance relies on operational or institutional interplay between the frameworks and its various instruments. This occurs where deliberate coordination of activities avoids normative conflict or wasteful duplication, and contributes to problem-solving of activities.[40]

The use of the term 'governance' instead of 'government' signposts to several actors involved beyond government, which includes civil society, the private sector (i.e. industry) and the scientific community. Thus, a key element making up the institutional framework is the non-governing bodies, which includes industry, science and research organisations and environmental non-government organisations. Among other things, civil society has contributed in the form of codes of conduct, guidelines and standards.

Much like the ocean itself, ocean governance issues are all inter-connected. Actions in one aspect of a framework will have repercussions on the other sectors. Although the focus of this thesis is on DSM, it does not derogate from the fact that all of the elements making up ocean governance are interrelated and interdependent, and thus ocean governance is only complete when all the elements are integrated. Thus, ocean governance should be pursued in a holistic manner with an understanding of sector interactions and the cumulative effects of human activities on the marine environment, as opposed to operating in silos.[41]

In practice, integrated ocean governance is a key issue, particularly at the national level. It has been recognised that the fragmentation of ocean law and institutions is a major obstacle to effective ocean governance; and legislative, policy and institutional frameworks need to respond to the current needs of the marine environment, through good ocean governance at the national level.[42] However, the challenge for countries, developing or developed, is how to develop effective policy responses that can deal with these issues that are complex, interrelated and cumulative.

The 1982 United Nations Convention on the Law of the Sea[43] (UNCLOS), which provides the legal framework for the management of the ocean, is upheld as integrating the three dimensions of

[40] M. G. Haward and Joanna Vince, *Oceans governance in the twenty-first century: managing the blue planet* (Edward Elgar, 2008).
[41] Chang, above n 37, 57.
[42] Ilie Marian, 'Developing Effective Ocean Governance' (2012) 4(1) *Geopolitics, History and International Relations* 101.
[43] *1982 United Nations Convention on the Law of the Sea*, opened for signature 10 December 1982, 1833 UNTS 397 (entered into force 16 November 1994) (UNCLOS).

sustainable development.[44] Although the UNCLOS makes no specific mention of 'ocean governance,' it provides the vitally important legal framework to enable a shift from a sovereign-rights and sector-specific perspective to an integrated approach to oceans management through its emphasis on key ocean governance principles such as integration and cooperation. However, it also perpetuated the separation of the ocean into national and beyond national jurisdictions, including legal maritime zones, which is arbitrary in the context of the ocean; and mandated separate international organisations to manage various sectors, without a central mechanism to ensure the integration of the various sectors. It is on the basis of the UNCLOS that ocean governance at the regional and national level has developed. It is submitted that this has contributed to the current fragmented state of ocean governance.[45]

The policy, legal and institutional frameworks underpinning ocean governance are crucial to its success. The policy and legal framework refers to the binding and non-binding instruments which set the vision for ocean governance. The institutional framework supports the implementation of the policy and legal framework, and includes the various bodies, programmes, and plans required to achieve the objectives of the policies and laws. It also contains a political aspect of mechanisms required to establish cooperation within and between stakeholders involved in various aspects of ocean governance. An institutional framework must be comprehensive, consistent, trans-sectoral and multidisciplinary, and participatory and bottom-up, rather than top down.[46] Of the frameworks, the institutional framework is one of the most important to successful ocean governance, and given its multi-dimensional character, coordination of the various myriad of mechanisms from international, regional through to national levels is critical. For a small island developing state such as the Cook Islands, it may difficult to ensure this participation and coordination is occurring at all levels amongst governing and non-governing bodies.[47]

Before moving to the reviewing the ocean governance frameworks, it is important to consider the key ocean governance principles. This will provide an analytical basis or measure for assessing the success of the frameworks.

As seen in the definition of ocean governance, while there have been several attempts at providing an overarching list of ocean governance principles, currently a standalone declaration of principles for

[44] *Oceans and the law of the sea: Report of the Secretary-General* (A/70/74/Add.1) (1 September 2015)
[45] Ryngaert, Molenaar and Nouwen, above n 36.
[46] Mann Borgese, 1997, *Sustainable development in the oceans*. International Ocean Institute; See also page 32 of *Securing the Oceans*
[47] Chapter 4.2 discusses this further below.

the oceans does not yet exist. A large number of principles can be derived from the UNCLOS, as well as environmental treaties and customary international law, including soft law sources such as the UNGA resolutions.[48] Efforts to identify overarching groups of principles applicable to ABNJ include Freestone's 'Principles of Modern Ocean Governance'[49] and Elferink's 'Governance Principles for ABNJ.'[50] Another proposal is that eight good governance elements should be adopted which are, the rule of law, participatory, transparency, consensus based decision-making, accountability, equity and inclusiveness, responsiveness and coherence.[51]

While it is not explicitly proclaimed as ocean governance principles, the Regional Legislative and Regulatory Framework for Deep Sea Minerals Exploration and Exploitation in the Pacific (RLRF) lists key international law responsibilities that Pacific States (such as the Cook Islands) are subject to, as well as fundamental principles, including:

- General and unqualified duty to protect and preserve the marine environment[52]
- Duty to prevent, reduce and control pollution from seabed activities or caused by ships[53]
- Duty to prevent trans-boundary harm[54]
- Duty to conserve biodiversity[55]
- The precautionary approach[56]
- Duty to employ best environmental practice[57]
- Prior environmental impact assessment (EIA) of activities likely to cause significant harm and ongoing monitoring of environmental impacts[58]
- Duty to take measures for ensuring safety at sea[59]

[48] Examples of sources include: 1972 Stockholm and 1992 Rio Declarations; the Rio+20 Declaration "The Future We Want" outcome document; as well as the policy statements Agenda 21 and the Johannesburg Plan of Implementation, which all include sections addressing marine issues.
[49] David Freestone, 'Principles Applicable to Modern Oceans Governance' (2008) 23(3) *The International Journal of Marine and Coastal Law* 385. These are: Protection and preservation of the marine environment; Conservation of high seas living marine resources and biodiversity; Conditional freedom of activity on the high seas; Cooperation; Sustainable and equitable use; Precautionary approach (including prior EIA); Ecosystem approach; Transparency; Use of best available science.
[50] See Richard A. Barnes, 'Consolidating Governance Principles for Areas beyond National Jurisdiction' (2012) 27(2) *The International Journal of Marine and Coastal Law* 261. The principles are Protection and preservation of the marine environment; Respect for the law of the sea; International cooperation; Sustainable and equitable use; Precautionary approach; Ecosystem approach; Transparent and open decision-making processes; Public availability of information; Science-based approach to management; Responsibility of states as stewards of the global marine environment; Integrated approach.
[51] Chang, above n 32.
[52] UNCLOS Articles 192 and 194(5), Article 14 of the Noumea Convention.
[53] UNCLOS Articles 194, 208, 209, 211; Noumea Convention Article 8; MARPOL 73/78; the London Convention and the 1996 Protocol thereto.
[54] UNCLOS Article 194; London Convention Preamble; London Protocol Art. 3(3); ITLOS Advisory Opinion.
[55] Convention on Biological Diversity (CBD) Article 3.
[56] Rio Declaration, Principle 15; London Protocol Article 3(1); ITLOS Advisory Opinion; ISA Mining Code
[57] ISA Mining Code and ITLOS Advisory Opinion.
[58] UNCLOS Article 204, 206; CBD; Noumea Convention Article 16.
[59] UNCLOS Article 94, 1974 Convention for the Safety of Life at Sea and other conventions for the safety of ships and crew concluded under the auspices of the IMO.

- Duties not to interfere with rights and freedoms of other States, such as the installation of submarine pipelines and cables, and marine scientific research[60]
- Sustainable economic development and integrated management
- An objective to promote the equitable and efficient development of the economic potential of marine mineral resources[61]
- 'Polluter pays' principle[62]
- Regional cooperation/integration in monitoring, processing and capacity building[63]
- Identifying mechanisms of building capacity and expertise in-country[64]
- Promotion of transparency and accountability, including with regard to revenues[65]

The RLRF, which will be discussed in more detail later, is seen as the guiding regional document for best practice management of DSM in the Pacific. It is highly influential, and is relied upon by Pacific States developing their DSM resources, including the Cook Islands. It is noted however, that other key principles are not mentioned such as 'common but differentiated responsibilities,' the common heritage of mankind (CHM) and the carrying out of marine scientific research (MSR). Although, the RLRF made it clear that the list was non-exhaustive, and refers to these principles elsewhere in the document. It is submitted that the list above represents a comprehensive list of the key ocean governance principles, particularly with regards to DSM.

Given the scope of this thesis, it is not possible to discuss all the ocean governance principles in detail, although they are all highly important to DSM development. Rather, this thesis will focus on certain key principles, and consider some together as one, as these principles are not mutually exclusive, but are interrelated. These are: (1) Integrated approach; (2) Cooperation; (3) Protection and Preservation of the Marine Environment; (4) CHM; (5) MSR; and (6) Capacity Building.[66]

These ocean governance principles are key to achieving the vision of the sustainable development of the oceans, and the discussion of the international, regional and national frameworks will revolve around whether the attempts at realising those principles have been successful.

[60] UNCLOS Articles 58, 78, 79 and 246.
[61] UNCLOS Preamble; and the Pacific Plan).
[62] London Protocol, Article 3(2); Rio Declaration.
[63] UNCLOS Articles 276 and 277; and the Pacific Plan.
[64] UNCLOS Part XI.
[65] Aarhus Convention; and the Extractive Industries Transparency Initiative.
[66] Due to the wide scope of the issues encompassed by the selected ocean governance principles, other important principles such as public participation, transparency and accountability are not discussed at length. This does not diminish their importance to ocean governance, and is closely linked to the ocean governance principles referred to.

2.1 Integrated Approach

It is well established that the fragmented approach of sector-based marine management is a major contributor to deteriorating ocean health.[67] The sector-specific approach is a carryover from a time when ocean resources were viewed as unlimited and ocean uses as independent of one another.[68] That assumption no longer applies, as we begin to understand that even for its magnitude, the oceans resources and its capacity to absorb a proliferation of ocean sectors and activities is finite, these impacts spill over and affect other areas in the ocean ecosystem.

The Preamble to the UNCLOS calls for an integrated approach to the management of the ocean and seas. Although it is submitted that whilst the UNCLOS aspires to an integrated approach, the bulk of its rules and principles retain a highly sectoral focus, and tends to indirectly or partially accommodate an integrated approach.[69] The UNGA has consistently reaffirmed the need to improve cooperation and coordination at all levels, in accordance with the UNCLOS, to support integrated management of the oceans and seas,[70] as well as the need for ecosystem approaches[71] and reaffirmed the need to develop and facilitate the use of diverse approaches and tools for conserving and managing marine biodiversity and ecosystems.[72] Further, the action plan Agenda 21 for sustainable development, developed from the 1992 UN Conference on Environment and Development (UNCED), identified information, integration, and participation as key building blocks to help countries achieve development that recognises these interdependent pillars. It emphasises that in sustainable development everyone is a user and provider of information. It stresses the need to change from old sector-centred ways of doing business to new approaches that involve cross-sectoral coordination and the integration of environmental and social concerns into all development processes.

It is important to distinguish integrated policy approaches from integrated approaches to ocean management. Integrated policy approaches are attempts to realise efficiencies from aligning current sector-based policies such as fisheries and DSM towards overarching societal goals.[73] Whereas integrated ocean management uses specific approaches and tools to assist with marine decision-making, such as marine spatial planning (MSP). Integrated approaches have developed over time,

[67] Julia A. Ekstrom et al, 'A tool to navigate overlaps in fragmented ocean governance' (2009) 33(3) (5//) *Marine Policy* 532; Chang, above n 32, 76.
[68] This dates back to the 17th century, where Hugo Grotius, one of the forefathers of the law of the sea, viewed the oceans resources as inexhaustible: Peter Jacques and Zachary A. Smith, *Ocean politics and policy: a reference handbook* (ABC-CLIO, 2003). See also Biliana Cicin-Sain et al, 'Education and training in integrated coastal management: lessons from the international arena' (2000) 43(4) *Ocean and Coastal Management* 291.
[69] Barnes, above n 50.
[70] Resolution 69/245, preamble. (see para. 139 below)
[71] Ibid., preamble and paras. 200-202 and 230
[72] Ibid., para. 226. See also paras. 223 and 225
[73] Mark Zacharias, *Marine policy: an introduction to governance and international law of the oceans* (Earthscan from Routledge, 2014) 279.

initially through Coastal Zone Management, which then extended to include the oceans.[74] Then later, there was an emphasis on ecosystem-based approaches to management. At its core, ecosystem-based management (EBM) is about acknowledging connections. Instead of focusing on the impacts of single activities on the delivery of individual ecosystem services, EBM focuses on the array of services provided by marine systems, the interactive and cumulative effects of multiple human activities on these coupled ecological and social systems, and the importance of working towards common goals across sectors.[75]

By approaching a problem holistically rather than sectorally, integrated policies can be the drivers for overcoming policy overlap, conflict, inefficiencies and inconsistencies.[76] Only through such an approach can we assess and address the cumulative impacts of human activities such as shipping and fishing activities.[77] Integration is required at all scales: international, regional, and national (including local). Thus, integrated approaches are characteristically multi-sector, forward-looking, inclusive, transparent and attempt to inform durable decisions.[78]

2.2 Cooperation

The duty to cooperate is considered one of the central principles of customary international law,[79] featuring in various international instruments. Principle 24 of the Stockholm Declaration reflects a general political commitment to international cooperation in matters concerning the protection of the environment. And Principle 27 of the Rio Declaration states rather more succinctly that "States and people shall cooperate in good faith and in a spirit of partnership in the fulfilment of the principles embodied in this Declaration and in the further development of internal law in the field of sustainable development." Consequently, there should be an exchange of information, notification, consultation and other forms of cooperation regarding shared natural resources, carried out on the basis of the principle of 'good faith and in the spirit of good neighbourliness,' as expressed in Article 4 of the ILC's draft Articles on Prevention of Transboundary Harm.[80] This applies particularly in the context of DSM, amid concerns of transboundary impacts from DSM activities. The UNCLOS, reinforces this

[74] See Adalberto Vallega, *Fundamentals of integrated coastal management* (Kluwer Academic Publishers, 1999).
[75] The precise definition of the ecosystem-based approach to management also lacks consensus on its definition. For more on this, see: Karen McLeod and Heather Leslie, *Ecosystem-based management for the oceans* (Island Press, 2009); Mary Ruckelshaus et al, 'Marine Ecosystem-based Management in Practice: Scientific and Governance Challenges' (2008) 58(1) *BioScience* 53.
[76] Charles N. Ehler et al, 'Guidelines to assist policy makers and managers of coastal areas in the integration of coastal management programs and national climate-change action plans' (1997) 37(1) *Ocean and Coastal Management* 7.
[77] Barnes, above n 50.
[78] Zacharias, above n 73.
[79] Jon Van Dyke and Sherry P Broder, 'International Agreements and Customary International Principles providing Guidance for National and Regional Ocean Policies' in Biliana Cicin-Sain, David L VanderZwaag and Miriam C Balgos (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge, 2015) 49, 54.
[80] *International Law Commission Draft Articles on Prevention of Transboundary Harm* (2001), Article 4.

principle, and requires States to cooperate on a global, and where appropriate, on a regional basis for the protection and preservation of the marine environment,[81] and can be seen as a requirement in regimes and parts of the UNCLOS, including the Area and for MSR.[82]

The development of collaborative arrangements and formal intergovernmental linkages is clearly an important element of ocean governance, including the strength of those intergovernmental linkages.[83] For DSM, the consideration of cumulative and transboundary impacts requires coordinated interaction between all the levels,[84] particularly between national and regional levels, as it provides opportunities for information exchange and peer learning.[85]

2.3 Protection and Preservation of the Marine Environment

The protection of the marine environment is a major concern to virtually all stakeholders in ocean governance; though there may be some variance in the way and manner, they advocate such protection. The general obligation to protect and preserve the marine environment both within and beyond national jurisdiction is clearly set out in the UNCLOS,[86] and other various international and regional instruments.[87] It is one of the key tenets to the UNCLOS and ocean governance, and also reflects one of the pillars of sustainable development.

Couched within the protection and preservation of the marine environment are key environmental principles underpinning ocean governance, already referred to**Error! Reference source not found.**. P rinciple 15 of the Rio Declaration advocated the precautionary principle stating, "Where there are threats of serious of irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."[88] Agenda 21 of the 1992 United Nations Conference on the Environment and Development (UNCED) reaffirmed key environmental principles including: the precautionary approach, integrated management, the polluter/user-pays principle and public participation. The requirement of EIAs has become widely accepted as an indispensable instrument to manage and control negative impacts of human activities

[81] UNCLOS, Article 197.
[82] See Part VII. High Seas; Part IX. Enclosed or Semi-enclosed Seas; Part X. Right of Access of Land-locked States to and From the Sea and Freedom of Transit; Part XI. The Area; Part XIII. Marine Scientific Research; Part XIV. Development and Transfer of Marine Technology.
[83] Marcus Haward and Joanna Vince, 'Australian Ocean Governance - Intiatives, Challenges and Opportunities' (Paper presented at the Australian Political Studies Association Conference, University of Newcastle, 2006) 10.
[84] *International Law Commission Draft Articles on Prevention of Transboundary Harm* (2001).
[85] RLRF, 'Pacific-ACP States Regional Legislative and Regulatory Framework for Deep Sea Minerals Exploration and Exploitation' (Regional Framework, SPC-EU EDF10 Deep Sea Minerals Project, 2012) [23.3]; *Report of the Intergovernmental Committee of Experts on Sustainable Development Financing* (A/69/315)(15 August 2014).
[86] Article 192.
[87] Including the CBD and the Noumea Convention which the Cook Islands are a party to.
[88] Principle 15 of the Rio Declaration (1992), United Nations Conference on Environment and Development (UNCED)

on the environment,[89] and is required under UNCLOS for DSM activities.[90] The same applies for the best environmental practices requirement.[91] An ecosystem approach has been widely advocated as necessary for the protection of marine biodiversity, as it recognises the interrelatedness of ecosystem goods and services.[92] Further, the management of transboundary impacts are particularly important in the consideration of DSM activities.

2.4 Capacity Building

Tangible solutions to enhance good governance in the oceans lies in the development of the necessary personnel and technical capabilities so that States, especially developing States, may give effect to their rights and responsibilities. Capacity building is considered so important, that it has been characterised as the fourth pillar, after a legal, political and institutional, towards achieving effective ocean governance.[93] Capacity building in ocean governance is a priority for Pacific Island Small Island Developing States (PSIDS), which face major challenges in the sustainable management of their marine resources under the UNCLOS and the various conventions and agreements stemming from the UNCED, including Chapter 17 of Agenda 21. Limitations in capacity not only hinder countries from benefiting from oceans and seas and their resources under the UNCLOS, such limitations may also create opportunities for others to divert the benefits to themselves, such as seen in illegal, unreported and unregulated (IUU) fishing. The promotion of capacity building to enable the developing States to implement the UNCLOS and to reap the benefits thereof is a major concern for international and regional organisations alike, as reflected in the constant statements of concern about lack of capacity and the consequent need for capacity building in the UNGA resolutions.[94]

2.5 Marine Scientific Research

Marine scientific research (MSR) is critical to enhancing human understanding of the marine environment and respond to challenges facing ocean governance.[95] Achieving and maintaining a balance between development and environmental protection means continued investment in scientific

[89] Alex G. Oude Elferink, 'Environmental Impact Assessment in Areas beyond National Jurisdiction' (2012) 27(2) *The International Journal of Marine and Coastal Law* 449.
[90] Article 206 of the UNCLOS. See also ISA Regulations.
[91] This is expressed in the ISA Regulations, Regulation 31: *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area* (International Seabed Authority); *Regulations on Prospecting and Exploration of Polymetallic Sulphides in the Area* (International Seabed Authority); *Regulations on Prospecting and Exploration of Cobalt-Rich Crusts in the Area* (International Seabed Authority).
[92] *Resolution adopted by the General Assembly on 29 December 2014: Oceans and the law of the sea* (A/RES/69/245) (24 February 2015), preamble and paragraphs [221]-[222].
[93] Annick de Marffy, 'Ocean Governance: A Process in the Right Direction for the Effective Management of the Oceans Ocean Governance' (2004) 18 *Ocean Year Book* 162.
[94] UNGA Resolution (A/RES/69/245):"Emphasises that capacity-building is essential to ensure that States, especially developing countries, in particular the least developed countries and small island developing States, as well as coastal African States, are able to fully implement the Convention, benefit from the sustainable development of the oceans and seas and participate fully in global and regional forums on ocean affairs and the law of the sea"
[95] Harriet Harden Davies, 'The Regulation of Marine Scientific Research: Addressing Challenges, Advancing Knowledge' in Robin Warner and Stuart Kaye (eds), *Routledge Handbook of Maritime Regulation and Enforcement* (Routledge, 2015) 212, 214.

research, particularly in the case of DSM where ocean dynamics are still unknown and the need for site-specific knowledge is also great.[96]

The importance of MSR for addressing various global challenges such as eradicating poverty, conserving and managing the marine environment and resources, and promoting sustainable development has been recognised by the UNGA,[97] with repeated calls for efforts to continue improving understanding and knowledge of the oceans and the deep sea by increasing MSR activities in accordance with the UNCLOS.[98] The 2030 Agenda highlighted the importance of increasing scientific knowledge, developing research capacity and transferring marine technology in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, such as SIDS.[99] Further, the S.A.M.O.A Pathway explicitly mentions MSR.[100] At the regional level, this is emphasised through the various policy instruments including the PIROP and Pacific Oceanscape, and has resulted in the development of various scientific guidelines. Nationally, the Cook Islands have a 2008 National Research Policy, and the importance of MSR is emphasised in the DSM Policy,[101] and the Marine Resources Act 2005 also makes provision for the conduct of MSR.[102]

The UNCLOS Preamble promotes the study of the marine environment, and its content provides the legal framework for the regulation of MSR, complemented by other international, regional and national legal instruments, such as the 1992 Convention on Biological Diversity (CBD).[103] Suggested principles for good practice in research capacity strengthening are: (1) Network, collaborate, communicate and share experiences; (2) Understand the local context and accurately evaluate existing research capacity; (3) Ensure local ownership and secure active support; (4) Build in monitoring, evaluation and learning from the start; (5) Establish robust research governance and support structures, and promote effective

[96] Miles, above n 33, 24.
[97] UNGA Resolution (A/RES/69/245).
[98] *Oceans and the law of the sea: Report of the Secretary-General* (A/70/74/Add.1) (1 September 2015), [60].
[99] *Resolution adopted by the General Assembly on 25 September 2015 - Transforming our world: the 2030 Agenda for Sustainable Development* (A/RES/70/1)(21 October 2015), Annex, goal 14, para. 14a. For example the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organization (UNESCO) have developed Criteria and Guidelines on the Transfer of Marine Technology to assist developing countries.
[100] *Resolution adopted by the General Assembly on 14 November 2014: SIDS Accelerated Modalities of Action (SAMOA) Pathway* (A/RES/69/15) (15 December 2014), 14. "To undertake marine scientific research and develop the associated technological capacity of small island developing States, including through the establishment of dedicated regional oceanographic centres and the provision of technical assistance, for the delimitation of their maritime areas and the preparation of submissions to the Commission on the Limits of the Continental Shelf."
[101] *Cook Islands National Seabed Minerals Policy 2014*, Policy objective 9.
[102] *Marine Resources Act 2005*, s 36.
[103] *Convention on Biological Diversity 1992*.

leadership; (6) Embed strong support, supervision and mentorship structures; (7) Think long-term, be flexible and plan for continuity.[104]

For countries such as the Cook Island intent on reaping the benefits from managing its ocean resources, while protecting and preserving the marine environment; this requires substantial national investment in developing MSR capabilities and the capacity to monitor the effects of natural events and anthropogenic activities in its EEZ.[105]

2.6 Common Heritage of Mankind and the Area

The UNCLOS provides a set of governing principles for development of the Area,[106] most of which relate to the aforementioned ocean governance principles, but perhaps the key principle, is the common heritage of mankind (CHM), which sets the foundation for the management of resources in the Area.[107] The beginnings of the CHM principle can be sourced from the pivotal speech of Ambassador Arvid Pardo of Malta to the UNGA in 1967 when he asserted that the seabed and the ocean floor are a common heritage of mankind and should be used and exploited for peaceful purposes and for the exclusive benefit of mankind as a whole.[108]

The CHM principle is increasing recognised as significant principle in facilitating useful and sustainable human activity with respect to DSM resources in the Area, particularly for a complex legal regime such as the UNCLOS in which norms relating to economic development and environmental protection can be effectively and rationally balanced.[109]

[104] 'Seven Principles for Strengthening Research Capacity in Low- and Middle-income Countries: Simple Ideas in a Complex World' (Good practice document series, Essence on Health Research, 2014).
[105] Miles, above n 33.
[106] These are: Article 136: Common heritage of mankind; Article 137: Legal status of the Area and its resources; Article 138: General conduct of States in relation to the Area; Article 139: Responsibility to ensure compliance and liability for damage; Article 140: Benefit of mankind; Article 141: Use of the Area exclusively for peaceful purposes; Article 142: Rights and legitimate interests of coastal States; Article 143: Marine scientific research; Article 144: Transfer of technology; Article 145: Protection of the marine environment; Article 146: Protection of human life; Article 147: Accommodation of activities in the Area and in the marine environment; Article 148: Participation of developing States in activities in the Area; Article 149: Archaeological and historical objects.
[107] Its significance is underscored by Article 311(6), which provides that there will be no amendments to the basic principle relating to the CHM.
[108] See John E. Noyes, 'The common heritage of mankind: past, present, and future' (2011) 40(1-3) *Denver Journal of International Law and Policy* 447.
[109] Peter Holcombe Henley, 'Minerals and mechanisms: the legal significance of the notion of the 'common heritage of mankind' in the advisory opinion of the Seabed Disputes Chamber' (2011) 12(2) *Melbourne Journal of International Law* 373.

Although, no fully agreed definition of the CHM exists, and Wolfrum posits that it is not intended to,[110] given its application varies in the different legal regimes referring to it.[111] However, for the purposes of the UNCLOS, the CHM consists of four elements. It (1) prohibits States from proclaiming sovereignty over any part of the deep seabed,[112] and requires that States (2) use it for peaceful purposes,[113] (3) share its management[114] and (4) the benefits of its exploitation.[115]

3 OCEAN GOVERNANCE FRAMEWORKS

This Chapter describes the ocean governance frameworks underpinning DSM development at the international, regional and national levels. The diagram below is a useful illustration of the three elements of ocean governance:[116]

[110] See Rudiger Wolfrum, 'Common Heritage of Mankind' (2009) *Max Planck Encyclopedia of Public International Law* , Wolfrum explains that it is possible to consider the CHM principle as a label synthesising existing rules rather than as a general concept.
[111] It is referred to in the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (Outer Space Treaty) and the Protocol on Environmental Protection to the Antarctic Treaty. The Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto Protocol), refers to the 'common interest', which indicates common responsibility and cooperation, but does not reach the threshold of institutionalised cooperation as under the common heritage principle
[112] UNCLOS, Article 137(1) and (3).
[113] UNCLOS, Article 141.
[114] UNCLOS, Article 137(2).
[115] UNCLOS, Article 140(2).
[116] Francois Bailet, 'Ocean Governance ' (UN-Nippon Foundation Presentation, Division of Ocean Affairs and the Law of the Sea, April 2015).

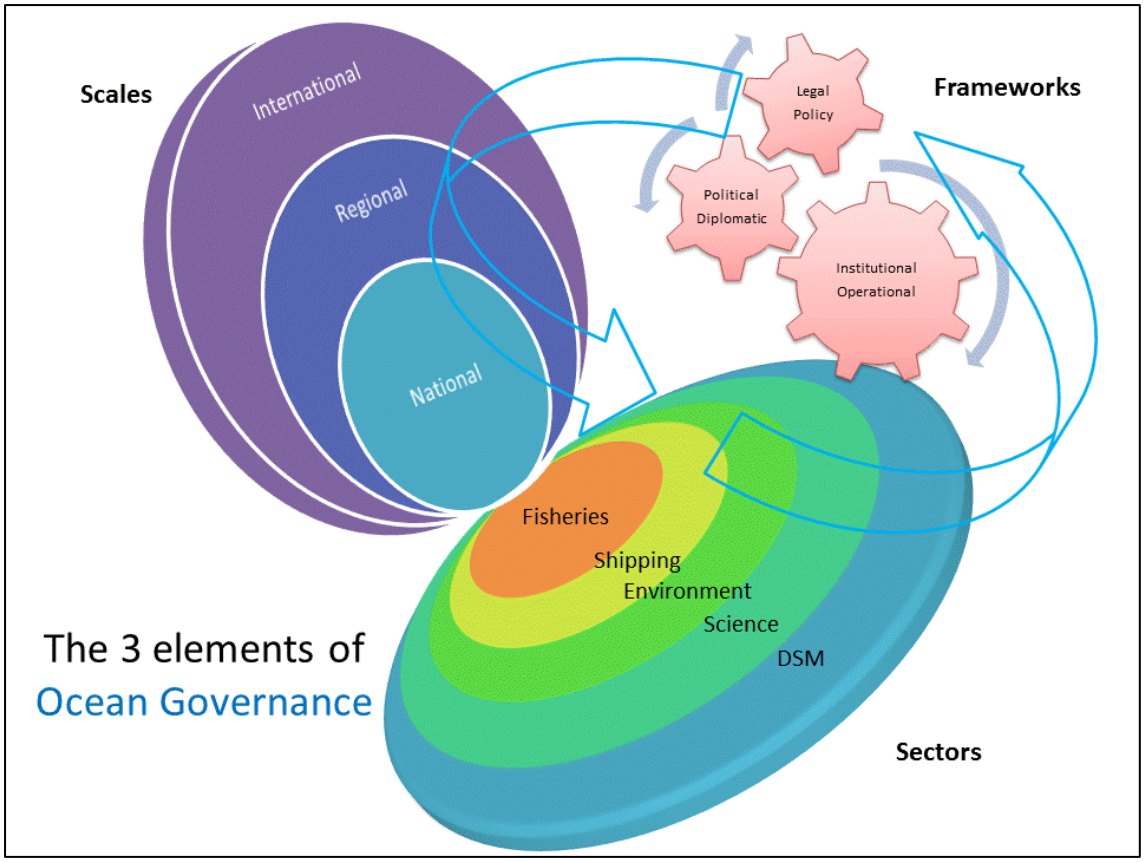

Figure 1: The three elements of Ocean Governance

3.1 International

3.1.1 International Legal and Policy Regime

1982 United Nations Convention on the Law of the Sea

The 1982 United Nations Convention on the Law of the Sea[117] (UNCLOS) is the primary international legislative instrument for the governance of the seas, often referred to as the constitution of the ocean.[118] Combined with the 1994 Agreement relating to the implementation of Part XI of the Convention (1994 Agreement), it represents a deliberate attempt to design a comprehensive, integrated package containing a balance of interests between coastal states and the international community,[119] and between the enjoyment of rights and benefits and the concurrent duties and obligations conferred to States Parties. It is of strategic importance as the basis for national, regional and global action and cooperation in the marine sector. One of its aims is to provide a framework to harmonise the rights and

[117] *UNCLOS* above n 43, opened for signature 10 December 1982 (entered into force 16 November 1994).
[118] See Albert W. Koers, Bernard H. Oxman and Norway Law of the Sea Institute. Conference Oslo, *The 1982 Convention on the Law of the sea: proceedings, Law of the Sea Institute seventeenth annual conference, Co-sponsored by Friedtjof Nansen Institute, July 13-16, 1983, Oslo, Norway* (Law of the Sea Institute, University of Hawaii, 1984); E. D. Brown, *Sea-bed energy and minerals: the international legal regime* (Martinus Nijhoff, 1992); Donald R. Rothwell et al, *The Oxford handbook of the law of the sea* (Oxford University Press, 2015).
[119] Including landlocked and geographically disadvantaged states.

duties specified in the pre-existing conventions into a single text, re-enforced by a common system for settling disputes. It also provided legally defined zonal ocean areas being the Territorial Sea, Contiguous Zone, Exclusive Economic Zone (EEZ), Continental Shelf (CS) and the Area.

The UNCLOS took some time to enter into force, largely due to objections over Part XI relating to the Area. At the time, there were radically different interpretations of the CHM principle with some developed States concerned that the balance was skewed.[120] This lead to the development of the 1994 Agreement, which resolved States reservations, and led to UNCLOS entering into force. These included modifications on the mandatory transfer of technology, training of personnel, and the decision-making process of the International Seabed Authority. While the 1994 Agreement does not alter the content of the CHM principle, it has been argued that the modifications have effectively watered down the concept of the CHM.[121]

Under the UNCLOS, a State may exercise the right to develop DSM resources within its national jurisdiction.[122] As mentioned, this right is not unequivocal, and come with certain obligations, which reflect one of the key ocean governance principles on the protection and preservation of the marine environment.[123]

States also have the right to develop DSM resources in the Area.[124] Exploration and exploitation activities in the Area may be carried out by States parties or State enterprises or natural or juridical persons. In order to be able to carry out such activities requires sponsorship by States parties. In recent years, the number of licenses issued by the Authority has increased, and consequently so has the number of sponsoring States.[125]

The CHM principle recognises the economic and technological imbalance between developed and developing countries, and as such effective participation of developing States in activities in the Area is promoted having due regard to their special interests and needs.[126] With that, a special regime of

[120] Edwin Egede, *Africa and the deep seabed regime: politics and international law of the common heritage of mankind* (Springer, 2011) 242.
[121] See Edward Guntrip, 'The Common Heritage of Mankind: An Adequate Regime for Managing the Deep Seabed?' (2003) 4(2) *Melbourne Journal of International Law* 376.
[122]Coastal States have sovereign rights to explore and exploit their own natural resources (UNCLOS Art. 56 & 77); to authorise structures for economic purposes in the EEZ, or drilling on the CS (UNCLOS, Art. 60, 80 & 81)
[123] These include: Art. 208(2) a duty to prevent, reduce and control pollution from DSM activities; Art. 208(4) a requirement to endeavour to harmonise their policies at the appropriate regional level; Art. 94(5) a requirement to ensure that flag states take all necessary measures for ensuring safety at sea and conform to 'generally accepted international regulations, procedures and practices'; a requirement to enforce their laws and regulations adopted in accordance with Article 208 and to take other measures to implement applicable international rules, regulations and standards.
[124] Under Part XI of the Convention and the 1994 Agreement, which establishes the International Seabed Authority (ISA) to organise and control activities in the Area.
[125] The most recent approval for a plan of work was that of China Minmetals Corporation: *Decision of the Council relating to an application for the approval of a plan of work for exploration for polymetallic nodules submitted by China Minmetals Corporation* (ISBA/21/C/17)(20 July 2015).
[126] UNCLOS, Art 148

reserved sites was developed,[127] which provided developing States the opportunity to access mineral resources in the Area, and they have done so.[128] In particular, Pacific countries have accessed these reserved sites including Tonga, Nauru, Kiribati, and more recently the Cook Islands in 2014. These four countries have DSM legislation in place, or are in the process of doing so, in order to meet their obligations.[129] While this reflects an achievement of the UNCLOS in achieving a goal of the CHM principle, it also underscores the critical importance of the regional and national frameworks of these countries.

On the face of it, the UNCLOS clearly applies the ocean governance principles previously discussed.[130] It is recognised as essential for achieving sustainable development, given that the integration of the economic, social and environmental dimensions is at the core of its provisions.[131] Further, it explicitly supports the need to view the ocean as a whole and to take into account the interrelationship of the activities conducted therein.[132] As such, the UNCLOS arguably calls for a shift to towards an integrated national ocean policy, however this has been difficult to achieve. Regardless of the purported shortcomings of the implementation of the UNCLOS, it plays a key role towards achieving ocean governance. The concept of ocean governance calls for; inter alia, the incorporation of emerging approaches and the establishment of robust institutions in coordination with other relevant institutions. Some of these functions cannot be swiftly executed through the UNCLOS, which, due to its consensual nature, is difficult to modify. However, the UNCLOS is a powerful tool as it sets minimum requirements that States parties must abide by. Both the UNCLOS and the concept of ocean governance seek to shape the behaviour of stakeholders in ocean affairs, and have different merits. While the concept of ocean governance would be instrumental in mobilising support for 'best practice' from like-minded partners, the UNCLOS ensures the minimum common ground for cooperation by providing the framework within which ocean governance must operate and substantive rules for conduct by all stakeholders.[133]

International Policy and Legislative Instruments for Sustainable Development

In addition to the UNCLOS, there are a number of relevant international instruments relevant to ocean governance and sustainable development. The Earth Summit in 1992 was a major success in raising

[127] Known as 'site-banking.' UNCLOS, Annex III

[128] An issue beyond the scope of this thesis is a consideration of what constitutes a 'developing State'.

[129] Other Pacific countries also have DSM legislation in place, such as Fiji and Tuvalu, which indicates that more Pacific countries may join in activities in the Area.

[130] See Chapter 2.

[131] *Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its sixteenth meeting* (A/70/78) (16 April 2015), [11].

[132] See the UNCLOS Preamble.

[133] Ryngaert, Molenaar and Nouwen, above n 36.

public awareness on the need to integrate environment and development, and led to a number of crucial international agreements. One was a non-binding declaration of principles known as the Rio Declaration on Environment and Development (Rio Declaration).[134] The Rio Declaration intended to guide sustainable development through promoting generally accepted principles for global governance of the environment, including the precautionary principle, and the duty to conduct an environmental impact assessment (EIA). In addition, several conventions were introduced at the Earth Summit, including the Convention on Biological Diversity (CBD) that sets out to achieve conservation and sustainable uses for biological diversity.[135] The main objective of the CBD is to encourage sustainable environmental activities for the future. Another key agreement adopted was the United Nations Framework Convention on Climate Change (UNFCCC) whose objective is to "stabilise greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[136] This climate-change agreement led to the development of the Kyoto Protocol, and States Parties will be meeting at the end of 2015 to complete a legally binding and universal agreement on climate.The Cook Islands is a party to both of these Conventions. The Earth Summit also saw the development of Agenda 21, an action plan for addressing a number of environmental issues.[137] In particular, Chapter 17 of Agenda 21 provided for the protection of the marine environment, including the oceans and seas, which forms an integrated whole that is an essential component of the global life-support system and a positive asset that presents opportunities for sustainable development. Agenda 21 identified information, integration, and participation as key building blocks to help countries achieve development that recognises these interdependent pillars. It emphasises that in sustainable development everyone is a user and provider of information. It stresses the need to change from old sector-centred ways of doing business to new approaches that involve cross-sectoral coordination and the integration of environmental and social concerns into all development processes. Furthermore, Agenda 21 emphasises that broad public participation in decision-making is a fundamental prerequisite for achieving sustainable development.

In 2002 the UNGA adopted the Johannesburg Plan of Implementation (JPOI), introduced at the World Summit on Sustainable Development (WSSD), to advance the mainstreaming of the three dimensions of sustainable development in development policies at all levels.[138] The JPOI highlighted the need to

[134] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3–14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex I.
[135] *Convention on Biological Diversity 1992*.
[136] Article 2 of UNFCCC.
[137] Agenda 21, 'Programme of Action for Sustainable Development' (1992) Chapter 17 Protection of the Oceans, all kind of Seas, including Enclosed and semi-Enclosed Seas and Coastal Areas and the rational use and development of their living Resources
[138] *Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August–4 September 2002* (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap. I, resolution 2, annex.

enhance the integration of sustainable development in the activities of all relevant United Nations agencies, programmes and funds, and the international financial institutions, within their mandates, through its Institutional Framework for Sustainable Development (IFSD). The IFSD discussion thus also encompasses the role of institutions comprising the economic and social pillars, for example considering how to step up efforts to bridge the gap between the international financial institutions, and the multilateral development banks, and the rest of the UN system. The JPOI also identified a set of priority actions for the sustainable development of SIDS, which led to discussion of the issues and challenges in achieving that, and resulted in two action plans: the Programme of Action for the Sustainable Development of Small Island Developing States (Barbados Programme of Action – BPOA)[139] and the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (Mauritius Strategy).[140]

In 2012, the United Nations Conference on Sustainable Development (Rio+20) was held, which generated new momentum for achieving sustainable development. Oceans featured prominently throughout the conference, reflected in the non-binding outcome document 'The Future We Want,' which contains clear and practical measures for implementing sustainable development.[141] It was also here, where member States decided to launch a process to develop a set of Sustainable Development Goals (SDGs), to build upon the Millennium Development Goals (MDGs)[142] and converge with the post 2015 development agenda.[143] The MDGs faced criticism for not sufficiently covering the environmental dimension in development, and for not addressing inter-linkages between the three dimensions of sustainable development. The SDGs approach is to integrate the social, economic and environmental dimensions in a truly sustainable development agenda.[144] Also, Pacific leaders saw Rio+20 as a positive springboard to build on as it reaffirmed the special case for Small Island Developing States (SIDS) for sustainable development; acknowledged climate change as one of the

[139] *Report of the Global Conference on the Sustainable Development of Small Island Developing States, Bridgetown, Barbados, 25 April–6 May 1994* (United Nations publication, Sales No. E.94.I.18 and corrigenda), chap. I, resolution 1, annex II

[140] *Report of the International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, Port Louis, Mauritius, 10–14 January 2005* (United Nations publication, Sales No. E.05.II.A.4 and corrigendum), chap. I, resolution 1, annex II.

[141] The future we want (A/RES/66/288) above n 34.

[142] The Millennium Development Goals (MDGs) are the eight international development goals, established in 2000, to help galvanise development efforts and guide global and national development priorities. However, an ECOSOC review noted that progress was uneven, particularly in Africa, least developed countries, landlocked developing countries and SIDS. Further efforts and a strong global partnership for development was needed to accelerate progress, and it initiated consideration of a post-2015 development agenda.

[143] Rio+20 initiated an inclusive intergovernmental process to prepare a set of sustainable development goals (SDGs). The objective behind the SDGs was to produce a set of universally applicable goals that balances the three dimensions of sustainable development: the environmental, social, and economic. There was broad agreement on the need for close linkages between the two processes to arrive at one global development agenda for the post-2015 period, with sustainable development at its centre.

[144] With that, the ECOSOC underwent the preparations for the transition from the MDGs to the post-2015 development agenda, which resulted in the 2030 Agenda for Sustainable Development (2030 Agenda). This is discussed further below.

greatest global challenges; and gave very significant emphasis to the importance of the conservation and sustainable use of the oceans and seas and their resources.[145]

In 2014, States endorsed the SAMOA (SIDS Accelerated Modalities of Action) Pathway.[146] Introduced at the third international conference on SIDS, the SAMOA Pathway represents the sum total of SIDS key challenges and the means of addressing them. The SAMOA Pathway reaffirms that SIDS remain a special case for sustainable development, recognising SIDS's ownership and leadership in overcoming these challenges. Its preamble acknowledges that the further implementation of the BPOA and Mauritius Strategy and the implementation of the SAMOA Pathway requires consideration in the post-2015 development agenda, and recognises that SIDS progress in attaining internationally agreed development goals has been uneven and some SIDS have regressed economically. It is hoped that the SAMOA Pathway will assist to garner support from the international community towards SIDS sustainable development needs.[147] The SAMOA Pathway reaffirms the UNCLOS as the legal framework for the conservation and sustainable use of oceans and their resources. It strongly supports national and regional efforts on research and the implementation of strategies on coastal zone management and ecosystem-based management, and enhancing national legal and institutional frameworks. At the 2014 SIDS meeting, it was noted that sustainable economic development required integrated planning activities and enhanced capacity building in information technology and financial services, particularly with many SIDS having large EEZs with economic potential in fisheries, tourism and seabed exploration.[148] However, such dialogue needed to include climate change. Particularly as it was recognised that oceans have an intrinsic role in the life of SIDS, and thus SIDS were urged to implement integrated, holistic and global policies.[149] He noted the wide range of projects, saying that in order for them to be successful they should have clear objectives, set achievable goals, and have access to relevant and accurate data.

In September 2015, the UNGA formally adopted a new framework, 'Transforming Our World: the 2030 Agenda for Sustainable Development,'[150] which is composed of the 17 Sustainable Development Goals (SDGs) and 169 targets to wipe out poverty, fight inequality and tackle climate change over the next 15 years. The SDGs provide measurable 'tangible goals' for sustainable development that would,

---

[145] 'Opening speech of the 43rd Pacific Island Forum by the Prime Minister of the Cook Islands, Hon. Henry Puna', *Cook Islands Herald* (Rarotonga), 21 March 2012. Also, the Rio+20 outcome document reaffirmed that SIDS are a special case for sustainable development in view of their unique and particular vulnerabilities, including their small size, remoteness, narrow resource and export base, and exposure to global environmental challenges and external economic shocks, including climate change and natural disasters: The future we want (A/RES/66/288), [178-180].

[146] *SAMOA Pathway* (A/RES/69/15)

[147] See website: <https://www.sprep.org/climate-change/samoa-pathway-on-the-right-track-for-small-island-developing-states-sids>.

[148] Prime Minister Freundel Stuart, Barbados.

[149] Milan Jaya Meetarbhan, Mauritius

[150] 2030 Agenda for Sustainable Development (A/RES/70/1) above n 99.

inter alia, address the Agenda 21 aims.[151] Its intention was to act as a complementary, successor framework to the MDGs, to spread more evenly the focus from only the poverty reduction pillar of the MDGs to better account for the environmental and social pillars of sustainable development.[152] The process of arriving at the 2030 agenda was member State-led with broad participation from governments, civil society, philanthropic organisations, academia and the private sector. The UN Secretary-General Ban Ki-moon said:[153]

> "These goals are a blueprint for a better future. Now we must use the goals to transform the world. We will do that through partnership and through commitment. We must leave no-one behind."

He also said that the 2030 Agenda compelled countries to look beyond national boundaries and short-term interests and act in solidarity for the long-term, rather than thinking and working in silos.[154] To achieve the 2030 Agenda, institutions will have to become 'fit for purpose.'[155] Of particular note is SDG 14 targeted specifically at conserving and sustainably using the oceans, seas and marine resources for sustainable development.[156] In the development of the SDGs, there was a strong push for a stand-alone SDG on oceans. It recognises that social and economic development depends on the sustainable management of the planet's natural resources, including oceans and seas.

It is accepted that a key corollary to achieving sustainable development is a supportive financing framework for development. This led to several UN conferences on Financing for Development (FfD).[157] The '*Future We Want'* recognised the need for significant mobilisation of resources from a variety of sources and the effective use of financing, in order to give strong support to developing countries in their efforts to promote sustainable development, including through actions undertaken in accordance with the 2030 Agenda, including achieving the SDGs. As a result, the Addis Ababa Action Agenda (Action Agenda) was adopted at the Third International Conference on FfD[158] and subsequently endorsed by the UNGA in July 2015.[159] The Action Agenda establishes a strong foundation to support the implementation of the 2030 Agenda for Sustainable Development. It

---

[151] Felix Dodds, Kirsty Schneeberger and Farooq Ullah, 'Sustainable Development in the 21st century (SD21): Review of implementation of Agenda 21 and the Rio Principles' (United Nations Department of Economic and Social Affairs Division for Sustainable Development, January 2012).
[152] Ibid.
[153] See <http://www.un.org/apps/news/story.asp?NewsID=51968#.VlmNZd8rKt8>.
[154] This view resonates with the theme of this thesis, which is that the consideration of DSM management cannot be viewed in a vacuum, the whole governance frameworks must be considered.
[155] UN, 'United Nations Summit on Sustainable Development 2015: Informal Summary' (70th Session of the General Assesmbly, United Nations, 2015). The 2030 Agenda must be supported by targeted institutional reforms to make the UN system 'fit -for-purpose' and reflect today's realities. Further, the UN system needs to realign itself to effectively support the implementation of the SDGs. There was also a call for reforms to address regional dimensions.
[156] SDG 14 contains 10 targets: three on means of implementation, including the commitment to enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the UNCLOS.
[157] Out of which came the Monterrey Consensus in 2002 and the Doha Declaration in 2008. For more on the history of the UN International Conference Financing for Development, see website: <http://www.un.org/esa/ffd/ffd3/conference/history.html>.
[158] Addis Ababa, Ethiopia, 13-16 July 2015
[159] UNGA Resolution 69/313 of 27 July 2015.

provides a new global framework for financing sustainable development by aligning all financing flows and policies with economic, social and environmental priorities. It includes a comprehensive set of policy actions, with over 100 concrete measures that draw upon all sources of finance, technology, innovation, trade, debt and data, in order to support achievement of the SDGs.[160] On that note, there are clear and specific linkages between the three means of implementation of the SDG 14 and the Action Agenda,[161] which reflects the appreciation of the role of financing in supporting the implementation of sustainable development frameworks.[162]

3.1.2 International Governing Bodies

Institutions and Processes Established under the UNCLOS

These include the International Seabed Authority (ISA), the International Tribunal for the Law of the Sea (ITLOS), the Commission on the Limits of the Continental Shelf (CLCS), and the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (ICP).

The ISA is an autonomous international organisation established to administer and manages the Area, and is responsible for the development and implementation of global rules, regulations and procedures for the exploration and extraction of seabed mineral resources as well as the protection of the seafloor environment in the Area. The primary policy-making organ of the Authority is the Assembly, comprising all States Parties. Executive authority is vested in the 36-member Council.[163] The Legal and Technical Commission (LTC) is the subsidiary body to the Council, made up of experts elected in their personal capacity.[164] The ISA has established a mining code, which refers to the set of rules, regulations and procedures to regulate prospecting, exploration and exploitation of DSM minerals in the Area. Thus far, the Authority has issued Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area,[165] Polymetallic Sulphides,[166] and Cobalt-Rich Crusts.[167] Furthermore, the ISA has issued recommendations for the guidance of contractors on matters such as the assessment of the environmental impacts of exploration for polymetallic nodules.[168] Because of

[160] See UNGA Resolutions 68/204 and 68/279.
[161] See <http://www.un.org/esa/ffd/ffd3/wp-content/uploads/sites/2/2015/07/SDG-MoIs_AAAA.pdf>.
[162] Another key agreement is the recent Paris Agreement on Climate Change.
[163] To ensure a balance of interests, the council is divided into five chambers, representing: major consumers of the metals derived from seabed minerals; major investors in seabed mining; major net exporters of the metals derived from seabed minerals; special interests (including SIDS, states with large populations, and land-locked and geographically disadvantaged states); and a chamber elected on the basis of equitable geographic distribution.
[164] The primary functions of LTC are to formulate the rules, regulations, and procedures for prospecting, exploration, and exploitation, to review the performance of contractors with the Authority, and to advise the Council on matters related to protection of the marine environment from the harmful impacts of mining.
[165] *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area* (International Seabed Authority).
[166] *Regulations on Prospecting and Exploration of Polymetallic Sulphides in the Area* (International Seabed Authority).
[167] *Regulations on Prospecting and Exploration of Cobalt-Rich Crusts in the Area* (International Seabed Authority).
[168] *Recommendations for the guidance of contractors for the reporting of actual and direct exploration expenditures as required by annex 4, section 10, of the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area* (ISBA/15/LTC/7) (25 May 2009); *Recommendations for the guidance of contractors on the content, format and structure of annual reports* (ISBA/21/LTC/15) (4 August 2015); *Recommendations for the guidance*

growing interest in DSM minerals in the Area, 27 plans of work for exploration in the Area have been approved by the ISA, contributing to a further increase in its workload with respect to contracts administration and supervision. In addition to this, the ISA is currently developing its draft framework on the regulation of the exploitation of the Area.[169] Also, with the first seven contracts approved by the ISA due to expire between March 2016 and March 2017, the Council adopted a decision relating to the procedures and criteria for the extension of an approved plan of work for exploration.[170] The ISA also agreed to undertake its first periodic review pursuant to article 154 of the UNCLOS.[171]

The ITLOS is an independent judicial body established by the UNCLOS to adjudicate disputes arising out of the interpretation and application of the Convention. It is notable for its Seabed Disputes Chamber delivering an advisory opinion on the responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area.[172] The CLCS facilitates the establishment of the outer limits of the continental shelf beyond 200 nautical miles, through recommendations to coastal States.[173] The Cook Islands currently has a submission establishing its extended continental shelf under consideration by the CLCS. The ICP was established in order to facilitate the annual review by the United Nations General Assembly (UNGA) of developments in ocean affairs and the law of the sea by considering the report of the Secretary-General on oceans and the law of the sea and by suggesting particular issues to be considered by it, with an emphasis on identifying areas where coordination and cooperation at the intergovernmental and inter-agency levels should be enhanced.[174] Most recently, the ICP facilitated proposals to assist in the review of SDG 14.[175] Finally, there is also an inter-agency mechanism, the UN-Oceans, established to enhance the coordination, coherence and effectiveness of competent organisations of the United Nations system and the ISA, within existing resources, in conformity with the UNCLOS, the respective competences of each of its participating organisations and the mandates and priorities approved by their respective governing bodies.[176]

---

of the Contractors for the assessment of the possible environmental impacts arising from exploration for polymetallic nodules in the Area (ISBA/19/LTC/8) (1 March 2013).

[169] *Report of the Secretary-General of the International Seabed Authority under article 166, paragraph 4, of the United Nations Convention on the Law of the Sea* (ISBA/21/A/2) (3 June 2015). The Council adopted a list of priority deliverables at its 21st Annual Session in 2015.

[170] Press Release: *Council agrees on criteria for approved contract extension, takes note of plans for exploitation regulations, adopts recommendation of finance committee* (SB/21/15) (23 July 2015). There was heated discussion on whether expanded requirements would be expected in renewed contracts, as States were divided over extending contracts as originally conceived, while others pushed for additional requirements.

[171] *Decision of the Assembly regarding the first periodic review of the international regime of the Area pursuant to article 154 of the United Nations Convention on the Law of the Sea* (ISBA/21/A/9/Rev.1) (29 September 2015).

[172] 2011 Seabed Disputes Chamber Advisory Opinion on the 'Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area' Case No. 17 of the International Tribunal of the Law of the Seas.

[173] In accordance with the UNCLOS article 76(8), the Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State based on these recommendations shall be final and binding. Annex II to the UNCLOS contains the provisions governing the Commission.

[174] See UNGA Resolution 54/33.

[175] Such as the proposal for triennial oceans and seas global conferences. See A/70/78, para. 41.

[176] The UN-Oceans is mandated to (1) Strengthen and promote coordination and coherence of UN system activities related to ocean and coastal areas; (2) Regularly share ongoing and planned activities of participating organisations within the framework of relevant UN and other mandates with a view to identifying possible areas for collaboration and synergy; (3) Facilitate, as appropriate, inputs by its participating organisations to the annual reports of the

United Nations system

The United Nations system consists of the United Nations (UN), its subsidiary organs (including separately-administered funds and programmes), the specialised agencies, and affiliated organisations.[177] The main organs of the UN are the UNGA, [178] the Security Council, the Economic and Social Council (ECOSOC),[179] the Trusteeship Council, the International Court of Justice, and the UN Secretariat. The organisations of the UN system play a critical role in implementing outcomes and advancing sustainable development goals. Thus, it is important that they work together at the international, regional, and national levels. Cooperation helps to avoid duplication among agencies, ensures synergies, and ultimately enhances the support of the United Nations system to developing countries. The High-level Political Forum on Sustainable Development (HLPF), which is convened under the auspices of the UNGA and the ECOSOC is the main UN platform on sustainable development.[180] It addresses new and emerging challenges; promotes the science-policy interface and enhances the integration of economic, social and environmental dimensions of sustainable development. Other relevant UN programmes include the United Nations Environment Programme (UNEP), which is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the UN and serves as an authoritative advocate for the global environment.[181] There is also the United Nations Development Programme (UNDP).[182]

Secretary-General on oceans and the law of the sea and on sustainable fisheries to be submitted to the Secretariat; and (4) Facilitate inter-agency information exchange, including sharing of experiences, best practices, tools and methodologies and lessons learned in ocean-related matters.

[177] For a useful diagram of the complete UN system, see: <http://www.un.org/en/aboutun/structure/pdfs/UN_System_Chart_30June2015.pdf>.

[178] The United Nations General Assembly (UNGA) is the main deliberative, policymaking and representative organ of the UN. Its functions include overseeing the budget of the UN, appointing the non-permanent members to the Security Council, receiving reports from other parts of the United Nations and making recommendations in the form of General Assembly Resolutions. These Resolutions are generally non-binding on member states, but carry considerable political weight, and are legally binding towards the operations of the General Assembly.

[179] The United Nations Economic and Social Council (ECOSOC) is responsible for coordinating the economic, social and related work of 14 UN specialised agencies, their functional commissions and five regional commissions. It is responsible for mobilising, facilitating and partnering within the UN system to ensure its expertise, programmes and resources support global, regional and national strategies to address the building blocks of sustainable development. Given the ECOSOC's key role in achieving a balanced integration of the three pillars of sustainable development, world leaders have committed to strengthening the ECOSO to ensure that it can effectively follow-up on progress on the agreements made at the UN relating to sustainable development.

[180] The HLPF provides political leadership, guidance and recommendations, follows up and reviews the implementation of sustainable development commitments and, as of 2016, the 2030 Agenda and the SDGs. See A/69/L.85, paras. 47 and 82. See also resolution 67/290, para. 3.

[181] The UNEP's work encompasses assessing global, regional and national environmental conditions and trends; developing international and national environmental instruments; and strengthening institutions for the wise management of the environment. UNEP has collaborated with the Pacific Community to produce Pacific Marine Minerals Assessment Reports, which are informative publications on DSM and sustainable DSM development with a particular focus on the Pacific. UNEP's role in the Post-2015 and SDGs process was to give voice to the environment, and provide knowledge and understanding to better inform member States and UN entities debates on the 2030 Agenda.

[182] The United Nations Development Programme (UNDP) works with people at all levels of society to help build nations that can withstand crisis and drive and sustain the kind of growth that improves the quality of life for everyone. It has three main focus areas: sustainable development; democratic governance and peacebuilding; and climate and disaster resilience.

It is important to note that the Cook Islands are not a member of the UN, due to its relationship with New Zealand as a self-governing country. Although, the Cook Islands is able to, and is, become a party to numerous key international conventions including the UNCLOS and the CBD.

Other International Institutions

There are various international organisations and mechanisms that warrant mention, including the the International Maritime Organisation (IMO), the UN Division for Ocean Affairs and the Law of the Sea (DOALOS) and the Commonwealth Secretariat. The IMO is the UN Specialised Agency responsible for improving maritime safety and preventing pollution from ships, and has developed numerous treaties and arrangements dealing with safety issues related to cargo, safety of life at sea, search and rescue procedures, dumping of substances into the ocean, ship construction standards (for example double hull tankers), pollution from vessels, and abatement of terrorism.[183] The DOALOS is the main body inside the UN responsible for the UNCLOS. The core responsibilities for the Division are to provide legal advice and technical services, i.e. information, advice and assistance for the General Assembly and the public. It also administers trust funds, and help with training and research conducted in the area of ocean affairs. Finally, there is the Commonwealth Secretariat which provides, inter alia, oceans related advice to member countries, of which the Cook Islands has received assistance for both its national ocean policy and DSM management.

The discussion above was a brief overview of the international institutional framework, and it is clear that the breadth and complexity of the myriad of institutions is enormous, and this bears consideration for the likes of SIDS such as the Cook Islands in attempting to access support, participate and engage at the international level.[184]

3.1.3 International Civil Society

Science and Research Organisations

One of the key requirements to good ocean governance is the need for decision-making based on scientific evidence. Non-governmental science and research organisations help fulfil this role, and the following is a cursory list of international organisations whose research, studies and papers are relevant to DSM development:

[183] The 3 key IMO instruments are:
1. 1974 International Convention for the Safety of Life at Sea (SOLAS);
2. 1973 International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1997 (MARPOL)
3. International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), including the 1995 and 2010 Manila Amendments

[184] The challenges for the Cook Islands in engaging at the international level is discussed in Chapter 4.4.

The Deep Ocean Stewardship Initiative (DOSI), established in 2013, seeks to integrate science, technology, policy, law and economics to advise on ecosystem-based management of resource use in the deep-ocean and strategies to maintain the integrity of deep-ocean ecosystems within and beyond national jurisdiction.[185] Another initiative associated with DOSI is the International Network for Scientific Investigations of Deep-Sea Ecosystems (INDEEP) whose aim is to develop and synthesise the understanding of deep-sea global biodiversity and functioning and provide a framework to bridge the gap between scientific results and society to aid in the formation of sustainable management strategies. INDEEP and DOSI are very active in terms of work and publications.[186] In Europe, several research initiatives have been set up to build understanding of the deep-sea marine environment, as well as sustainable methods for DSM development. The Managing Impacts of Deep-Sea Resource Exploitation (MIDAS) project - is a multidisciplinary research programme established in November 2013 to investigate the environmental impacts of extracting mineral and energy resources from the deep-sea environment.[187] The project has undertaken DSM research cruises, published research findings and papers, and organised meetings bringing together marine scientists from around the world to share their latest research on deep-sea ecosystems and environments, their management and conservation, in order to contribute to the current knowledge of the potential environmental impacts of deep-sea mining.[188] Another European initiative is the Blue Mining project.[189] The Blue Mining project will address all aspects of the value chain in DSM, from resource discovery to resource assessment and from exploitation technologies to the legal and regulatory framework. The Blue Mining project and the MIDAS project interact with one as they fall under the same EU funded initiative. Other relevant international initiatives include the Scripps Institution of Oceanography[190] and JPI Oceans.[191]

Industry

It is generally the case that mining companies from the private sector have the resources required to undertake DSM development commercially. Therefore, they play a key role in the sustainable development of DSM. Research undertaken by the DSM industry is vital to contributing to scientific knowledge of the marine environment. There are some State-owned enterprises and research

[185] DOSI has several working groups relevant to DSM, including Minerals, Deep-Sea Genetic Resources, Deep-Sea Tailings Placement, Capacity Development, and Knowledge Gaps & Global Ocean Assessments.
[186] See the DOSI Project outputs on its website: http://dosi-project.org/dosi-outputs.
[187] The MIDAS project is comprised of a combination of scientists, industry, social scientists, legal experts, NGOs and SMEs from across Europe.
[188] See website <http://www.eu-midas.net/news/midas-dsbs-2015>.
[189] It is a consortium made up of 19 large industry and research organisations on various maritime fields of expertise, aimed at developing solutions that will bring sustainable DSM a step closer. See website <http://www.bluemining.eu/>.
[190] See website: <https://scripps.ucsd.edu/about>.
[191] See website <http://www.jpi-oceans.eu/about>.

organisations that also undertake DSM exploration, particularly in the Area,[192] but for the most part it is privately owned mining companies that are the most active. Industry has also contributed to DSM development through codes of conduct and guidelines. For example, industry produced a voluntary code of for environmental management, which identifies operating principles and guidelines for application.[193]

One of the most recognised DSM companies is Nautilus Minerals,[194] which holds various exploration concessions in the Pacific region, both within national jurisdictions and in the Area.[195] It is notable for being the first company in the world awarded an exploitation licence for DSM activities in Papua New Guinea (PNG) in 2011.[196] It also conducted one of the first EIAs for DSM mining activities, as well as an Environmental and Social Benchmarking Analysis for its DSM activities.[197] However, these efforts have been subject to criticism from environmental NGOs.[198] Development in Nautilus's extraction project was delayed due to disagreements with the PNG government,[199] and the development overall has been subject to criticism.[200] Currently, Nautilus is building the necessary machinery for exploitation and it recently signed an offtake agreement a Chinese smelting company.[201]

As mentioned, the Cook Islands have partnered with GSR in applying for a title in the CCZ, with plans to explore the Cook Islands EEZ. GSR is a private company incorporated in Belgium, with its head office located at Ostend. In conjunction with the area held with the Cook Islands, the company has another seabed exploration licence which was approved in 2012, and is sponsored by the Government of Belgium.[202] There are various other DSM companies undertaking exploration and/or are developing capacity for exploitation, which include in no particular order: COMRA, IFREMER, IHC, Lockheed Martin, Odyssey, GEOMAR, KIOST, China MinMetals, and Kenex. Some of these companies such as Kenex serve to provide GIS mapping and modelling, and other services to support exploration

[192] STATE the State Enterprises in the Area.
[193] 'Code for Environmental Management of Marine Mining' (Voluntary Code, International Marine Minerals Society, 2011).
[194] See website <http://www.nautilusminerals.com/IRM/content/default.aspx>.
[195] This includes exploration licenses in PNG, Tonga, and the CCZ. Nautilus also applied for exploration licenses in Fiji and New Zealand. It was successful in Fiji, see: Nautilus Minerals, 'Nautilus granted exploration tenements in Fijian waters', *News Release* (Vancouver, British Columbia), 11 August 2011. However, New Zealand recently established the Kermadec marine sanctuary in its EEZ, which prevents DSM activities in that area, see: NZME, 'Kermadec marine sanctuary announced', *Otago Daily Times* (Otago), 29 September 2015.
[196] 'Nautilus Minerals shares surge on deep sea-mining lease', *Mineweb* 11 January 2011.
[197] David Batker and Rowan Schmidt, 'Environmental and Social Benchmarking Analysis of Nautilus Minerals Inc. Solwara 1 Project' (Earth Economics, May 2015).
[198] See Richard Steiner, 'Independent Review of the Environmental Impact Statement for the proposed Nautilus Minerals Solwara 1 Seabed Mining Project, Papua New Guinea' (Bismarck-Solomon Seas Indigenous Peoples Council 10 January 2009).
[199] Cecilia Jamasmie, 'Nautilus dispute with Papua New Guinea authorities threatening underwater mining future', *Mining.com* (Online), 18 June 2012.
[200] See Lisa W Drew, 'The Promise and Perils of Seafloor Mining: Vol 47, No 3', *OceanUs Magazine* 20 November 2009; Cecilia Jamasmie, 'NGOs question Nautilus Minerals report on seafloor mining 'minimum' impacts', *Mining.com* (Online), 16 June 2015.
[201] 'Nautilus Minerals signs offtake agreement with Tongling for Solwara 1 deposit', *Mining-technology.com* (Online), 14 December 2015.
[202] International Seabed Authority, 'G-Tec Sea Mineral Resources Nv (GSR) Of Belgium Signs Exploration Contract' (2012) <https://www.isa.org.jm/news/g-tec-sea-mineral-resources-nv-gsr-belgium-signs-exploration-contract>.

efforts. The Cook Islands engage with these other DSM companies operating the Area and in other national jurisdictions, with a view to consider whether such DSM companies would be appropriate to undertake activities in the Cook Islands EEZ. And recently the World Ocean Council (WOC) was formed to create an international, cross-sectoral industry leadership alliance based on 'Corporate Ocean Responsibility,' bringing the ocean business community together to collaborate on stewardship of the seas.[203]

International Environmental Non-Governmental Organisations

There are also environmentally focussed non-governmental organisations (NGOs) that play a key role in ocean governance.[204] The International Union for Conservation of Nature (IUCN) is one of the largest global environmental organisations, with a mission to conserve biodiversity. IUCN's work focuses on valuing and conserving nature, ensuring effective and equitable governance of its use, and deploying nature-based solutions to global challenges in climate, food and development. IUCN supports scientific research, manages field projects all over the world, and brings governments, NGOs, the UN and companies together to develop policy, laws and best practice. Other relevant international NGOs include Greenpeace International, the Global Ocean Commission (GOC),[205] the Deep Sea Conservation Coalition (DSCC),[206] and the Minerals Policy Institute (MPI).[207]

3.2 Regional

3.2.1 Pacific Legal and Policy Regime

Pacific Islands Regional Oceans Policy and Pacific Oceanscape Framework

The Pacific Islands Regional Ocean Policy (PIROP) provides a framework that promotes the sustainable development, management and conservation of marine and coastal resources in the Pacific region. Its vision is "a healthy ocean that sustains the livelihoods and aspirations of Pacific Island communities."[208] One of the major drivers for the PIROP was the need to coordinate and integrate all

[203] The aim of the WOC is working to improve ocean science in support of safe and sustainable operations, educate the public and stakeholders about the role of responsible companies in addressing environmental concerns, more effectively engage in ocean policy and planning, and develop science-based solutions to cross-cutting environmental challenges that cannot be solved by one company or industry. Therefore, it is unique in that engages a wide range of ocean industries, including: DSM, shipping, oil and gas, fisheries, aquaculture, tourism, renewable energy (wind, wave, tidal), ports, dredging, cables and pipelines, carbon capture and storage, as well as the maritime legal, financial and insurance communities, and others.

[204] See Rémi Parmentier, 'Role and Impact of International NGOs in Global Ocean Governance' (2012) 26(1) *Ocean Yearbook Online* .

[205] The GOC focusses on examining key threats and challenges relating to Areas Beyond National Jurisdiction (ABNJ) or the 'high seas'.

[206] The DSCC's objective is to protect vulnerable deep-sea ecosystems and conserve deep-sea species, recognising important precedents set for wider ocean conservation. Therefore, it follows negotiations occurring at the ISA, with a view to ensuring that an adequate framework of precautionary measures, systems of protected areas, the application of best available science and management practices, are used to protect the deep-sea environment.

[207] The MPI operates largely in the Pacific region, with a focus on assisting communities affected by specific mining projects and on achieving industry reform through improvements to policy, law and practice.

[208] *Pacific Islands Regional Ocean Policy*

marine sectors in order to fully implement UNCLOS as a precondition to achieve sustainable development of the marine environment.[209] The Policy reflects a regional commitment to taking care of the ocean as its custodians, and draws upon the close link between the Pacific Islands forefathers and the survival of current and future generations, to that of the ocean and its resources.[210] The PIROP is widely accepted by the Pacific region, and recognised internationally, being the first policy framework developed at a regional scale with other SIDS encouraged to develop regional initiatives collaboratively in a similar fashion.[211]

Concurrently, the Pacific Islands Regional Ocean Framework for Integrated Strategic Action (PIROF-ISA) was developed in 2002 to assist in the implementation of the PIROP. It identified the need for a central coordinating agency to streamline marine sector development and conservation to achieve the aspirations of PIROP through national ocean policies.[212] However, a lack of funding and resources at the regional and national levels, limited the implementation of the PIROP-FISA. Subsequent developments at the international and regional level regarding marine biodiversity conservation such as the CBD, has led to the development of an updated Pacific Oceanscape Framework for implementing the guiding principles of the PIROP and the Pacific Plan (in relation to ocean issues).[213] The Framework for a Pacific Oceanscape consists of regional actions and initiatives, designed to catalyse action in support of the PIROP, to protect, manage and sustain the cultural and natural integrity of the ocean for present and future generations and for the broader global community. The overall intent of the Framework for a Pacific Oceanscape is to foster stewardship at all levels "…to ensure in perpetuity the health and wellbeing of our oceans and ourselves". It functions to protect, manage and sustain the cultural and natural integrity of the ocean for present and future generations, and for the broader global community.[214]

---

[209] Its five guiding principles are: (1) Improving our Understanding of the Ocean; (2) Sustainably Developing and Managing the use of Ocean Resources; (3) Maintaining the Health of the Ocean; (4) Promoting the Peaceful Use of the Ocean; (5) Creating Partnerships and Promoting Cooperation.

[210] Joeli Veitayaki, Nathan Evans and G. Robin South, 'The Pacific Islands Regional Ocean Policy: The Quest for Good Ocean Governance' (2004) 18(1) *Ocean Yearbook Online* 558.

[211] United Nations, 'Report of the International Meeting to Review the Implementation of the Programme of Action for Sustainable Development of Small Island Developing States Port Louis, Mauritius 10-14 January 2005' (United Nations, 2005).

[212] For further discussion, see: Mary Power and Anama Solofa, 'The Pacific Islands Regional Ocean Policy and the Framework for a Pacific Oceanscape: 'Many Islands - One Ocean'' in Biliana Cicin-Sain, David L VanderZwaag and Miriam C Balgos (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge, 2015) 504; Martin Tsamenyi and Joytishna Jit, 'Evaluation of the Pacific Oceanscape to Manage the Pacific Islands and Ocean Environment' (Paper presented at the Proceedings of 2nd International Seminar on Islands and Oceans, November 2010 2010).

[213] See *Pacific Oceanscape Framework 2010*.

[214] The Pacific Oceanscape Framework has three broad objectives to be implemented through six strategic priorities, which are: (1) Integrated ocean management that responds to nations aspirations and priorities; (2) Adaptation to environmental and climate change through the development of baselines and monitoring; (3) Liaising, listening, learning and leading through facilitative and collaborative processes, systems and research to achieve the first two objectives.

In 2014, Pacific Islands Forum leaders emphasised the key role the Pacific Islands play as stewards of the Pacific Ocean, through the Palau Declaration.[215] The Palau Declaration reinforces the particular threat that climate change poses to the vulnerable nations, which it is argued compounds other development concerns, such as overfishing, urbanisation and fossil fuel dependency. The Declaration also called for the importance of the oceans to be cemented by a dedicated goal to oceans within the UN's Sustainable Development Goal (SDG), and therefore supported the calls for a standalone SDG for oceans. In May 2015,[216] the leaders again reaffirmed the critical importance of ocean resources and the marine environment, and the need for its sustainable development. In this regard, the Leaders took note of the Palau Declaration, the Pacific Oceanscape Framework and the Pacific Islands Regional Ocean Policy. Further, Pacific leaders underscored their resolve to continue to enhance both bilateral and multilateral cooperation in such areas as marine environment, maritime security, maritime safety, maritime surveillance, marine scientific research and observations, conservation of ocean resources, and sustainable fisheries management to promote economic growth and to improve livelihoods and food security.

Regional Legislative and Regulatory Framework for Deep Sea Minerals

In 2012, the DSM Project introduced a Regional Legislative and Regulatory Framework (RLRF) to help countries to develop the national policy, legal and regulatory frameworks needed to improve the management of their marine mineral resources. Building on from the Madang Guidelines,[217] the RLRF provides clear and comprehensive guidance intended to be a template to inform governments and to contribute to the development of a harmonised legislative and regulatory regime for such activities in the Pacific region. The RLRF outlines the requirements for a State to develop a proper regulatory regime for DSM activities, and includes, inter alia, environmental, fiscal, revenue, and social considerations. The RLRF was well received by Pacific Leaders noting that "it highlights the need for a precautionary approach and addresses economic, social and environmental aspects to ensure sustainable resource use prevails."[218] The RLRF contains a Regional Model DSM Law that many Pacific countries have based their DSM legislation upon, attaining its harmonisation objectives, including Fiji, Tonga, Tuvalu, Nauru, and soon to include the Cook Islands and Kiribati who are currently reviewing their DSM legislation.

Regional Environmental Management Framework and Guidelines for Deep Sea Minerals

[215] The Ocean: Life & Future – Chartering a Course to Sustainability.
[216] At the Pacific Islands Leaders Meeting (PALM7).
[217] *The Madang Guidelines : Principles for the Development of National Offshore Mineral Policies*.
[218] 43rd Pacific Islands Forum Communiqué (2012)

Similar to the RLRF, the Regional Environment Management Framework (REMF) provides guidance to Pacific countries on environmental management, and includes an EIA template specifically developed for DSM activities.[219] The DSM Project collaborated with SPREP to develop the REMF. In addition to REMF, Regional Deep Sea Minerals Scientific Research Guidelines were developed by the DSM Project, in collaboration with the National Institute of Water and Atmospheric Research (NIWA), to be used for developing national marine science guidelines or regulations. These documents are intended to assist Pacific countries to ensure that marine scientific research, prospecting, exploration and mining activities relating to deep sea minerals are well managed and performed in accordance with international standards and best environmental practice. The documents were recently discussed at the regional environmental workshop in October 2015, and the DSM Project is currently in the process of taking into account further comments and suggestions and expects to release the documents in early 2016, with endorsement planned for later in the year.

Regional Financial Management Framework for Deep Sea Minerals

The Regional Financial Management Framework (RFMF) was first introduced at the regional DSM financial workshop in 2014, and raised at the next financial workshop in August 2015.[220] The key elements of the RFMF are institutional, legal and transparency arrangements; a fiscal revenue framework; public financial management and fiscal policy frameworks; and a wealth management framework. The RFMF was developed in collaboration with the Pacific Financial Technical Assistance Centre (PFTAC).[221] PFTAC are currently in the process of reviewing the RFMF since the latest workshop and it is expected to be ready in early 2016.[222]

Noumea Convention

The Convention for the Protection of Natural Resources and Environment of the South Pacific Region (the Noumea Convention) and its Protocols obliges States parties to endeavour to take all appropriate measures to prevent, reduce and control pollution from any source and to ensure sound environmental management and development of natural resources, using the best practicable means at their disposal and in accordance with their capabilities. Ten Pacific countries are a party to the Noumea Convention, including the Cook Islands. The Convention lists the source of pollution which require specific control

[219] SPC, 'Pacific countries discuss environmental management options for deep sea minerals development' (Media Release, Deep Sea Minerals Project, 5 October 2015).
[220] SPC, 'Pacific countries discuss financial management options for deep sea minerals development' (Media Release, DSM Project, 26 August 2015 2015).
[221] The Pacific Financial Technical Assistance Centre (PFTAC) is not a CROP agency, but rather an offshoot of the International Monetary Fund, and is responsible for providing technical assistance and training to pacific island countries. It is a collaborative venture between the IMF, the recipient countries, and bilateral and multilateral donors. PFTAC's guiding objective is improved economic management and sustainable economic growth across the Pacific Island Countries. This is achieved through providing technical assistance and training relevant to country demand.
[222] For more on RFMF, see <http://www.sopac.org/dsm/images/nadi_workshop/day4/2015_08_DSM_Financial_Framework.pdf>.

from the countries, including pollution from DSM activities.[223] Thus the Cook Islands, not only has an obligation to take appropriate measures as required by the UNCLOS, but it is also has similar obligations under the Noumea Convention in the Pacific region. The adoption of appropriate measures includes the establishment of laws and regulations for the effective discharge of the obligations of the Noumea Convention, and the co-operation between countries in order to undertake activities that prevent, reduce and control pollution.

Framework for Pacific Regionalism

In 2004, Pacific Leaders called for the development of a 'Pacific Plan' to strengthen regional cooperation and integration as the main instrument for realising their Pacific Vision.[224] Its aim was to support Pacific countries in working closely together on areas requiring collective action in order to do more than they could separately, to manage shared resources, and to achieve the shared goal of a "a region of peace, harmony, security and economic prosperity, so that all of its people can lead free and worthwhile lives."[225] The Pacific Plan established four priority goals: economic growth, sustainable development, good governance and security. In 2012, Pacific leaders recognised a need for the Pacific Plan to be revised in light of changes to the approach to regionalism, and a review was undertaken with the conclusion that the future framework should be advance "the political principle of regionalism through a robust, inclusive processes of political dialogue, the expression of political values about regionalism and sovereignty, and the decisive implementation of key, game-changing, drivers of regional integration."[226] The Framework was formally endorsed in the 2014 Pacific Islands Forum Communiqué, and Leaders encouraged its early implementation.

The vision of the Framework for Pacific Regionalism draws from the Leaders Vision of 2004, with some updates to reflect today's context, is as follows:[227]

> "Our Pacific Vision is for a region of peace, harmony, security, social inclusion, and prosperity, so that all Pacific people can lead free, healthy, and productive lives".

The Framework for Pacific Regionalism presents four high-level strategic objectives for regionalism, which continue on from the four pillars of the Pacific Plan: sustainable development, equitable and

[223] Article 8 POLLUTION FROM SEABED ACTIVITIES: The Parties shall take all appropriate measures to prevent, reduce and control pollution in the Convention Area resulting directly or indirectly from exploration and exploitation of the seabed and its subsoil.
[224] *The Pacific Plan for Strengthening Regional Cooperation and Integration 2005*.
[225] As set out in the Forum Leaders Vision 2004.
[226] For more on the background to the Pacific Plan review and the development of the Framework for Pacific Regionalism, see: *Framework for Pacific Regionalism 2014* (Pacific Islands Forum Secretariat)
[227] Ibid.

inclusive economic growth, strengthened governance, and security. Taking on board the lessons of the review of the Pacific Plan, the Framework aims to streamline the regional agenda and ensure that Pacific Islands Leaders have high level, political conversations on the Pacific's regional priorities. Ultimately, the Framework aims to change the development paradigm to ensure that Pacific Islands Leaders are determining and driving the regional development agenda in order to deliver the kinds of public goods and services that ensure that people are living healthy and fulfilling lives. The Framework sets out a range of options for pursuing regionalism, including coordination, cooperation, collaboration (which includes service pooling), harmonisation, economic integration, and institutional integration.[228]

3.2.2 Pacific Governing Bodies

In terms of the implementation of regional policy and legislation, the Council of Regional Organisations in the Pacific (CROP) agencies take a lead role.[229] The Pacific Island Forum Leaders established the CROP in 1988 with the mandate to improve cooperation, coordination, and collaboration among the various intergovernmental regional organisations to work toward achieving the common goal of sustainable development in the Pacific region.[230] The Marine Sector Working Group of the CROP agencies (CROP-MSWG) led the development of the PIROP and Pacific Oceanscape Framework and maintains the lead role for implementing policy at the regional level. At the national level, various CROP agencies assist governments with incorporating the principles and objectives of PIROP into their national development process, by means appropriate to local institutional framework and policy framework.[231]

Pacific Island Forum Secretariat

The Pacific Islands Forum Secretariat (PIFS) is directly responsible to the Forum Leaders and its mandate is delivered through the annual Leaders' Communiqués and high-level ministerial meeting decisions. PIFS is also mandated to coordinate the implementation of the Framework for Pacific Regionalism. Its mission is to ensure the effective implementation of the Leaders' decisions for the

[228] At the time of this thesis, the specialist sub-committee on regionalism (SSCR) had received 68 submissions for regional initiatives to be assessed and recommendations. These recommendations will ultimately be considered at the annual Pacific Leaders Forum, where they will be invited to identify a small number of regional initiatives for the region to focus, with no more than five, ongoing or new, to be selected at any one time, and provide directions on further policy development, implementation, and reporting. The SPC made a submission in terms of "Empowering Pacific Island Countries and Territories for Sustainable Deep Seabed Minerals Management" and referred to a draft DSM Regional Agreement recently prepared. However, given such a small a number of regional initiatives that will be selected in comparison to the large number of submissions, there is a real concern that, with all the competing issues demanding attention, DSM might not prioritised in the Framework for Pacific Regionalism. Although, the DSM Project is working closely with PIFS on this.

[229] There are nine CROP agencies: PIFS; the FFA; the Pacific Islands Development Programme (PIDP); the PC; the SPREP; the South Pacific Tourism Organisation (SPTO); the USP; the Fiji School of Medicine (FSchMed); and the South Pacific Board of Education Assessment (SPBEA).

[230] The Pacific Islands Forum is a political grouping of 16 independent and self-governing states. CROP comprises the heads of the intergovernmental regional organisations in the Pacific. The Secretary General of the Pacific Islands Forum Secretariat is the permanent chair of the CROP.

[231] Power and Solofa, above n , 513.

benefit of the people of the Pacific, and its goals are to stimulate economic growth and enhance political governance and security for the region, through the provision of policy advice; and to strengthen regional cooperation and integration through coordinating, monitoring and evaluating implementation of Leaders' decisions.

Pacific Ocean Alliance

Established under the Framework for a Pacific Oceanscape in 2014, the Pacific Ocean Alliance (POA) aims to bring about strengthened coordination and collaboration across and between the ocean stakeholders. It is an open-ended and voluntary information-sharing and coordination partnership between stakeholders with a genuine interest in the sustainable development, management and conservation of the Pacific Ocean and its resources.[232] The POA is not a decision-making body, however, it may develop recommendations that relevant governments and/or POA partners may choose to progress and/or implement. The POA will provide, inter alia, a mechanism for inclusive consultation in the development and implementation of policy and programs, provision of technical advice as it relates to the sustainable development, management and conservation of the Ocean.[233] The POA is facilitated by the Pacific Ocean Commissioner, who heads the Office of the Pacific Ocean Commissioner (OPOC).[234]

Deep Sea Minerals Project

The Deep Sea Minerals Project is a collaboration between the PC and the European Union (EU). It was established in 2011 due to rapidly growing commercial interest in DSM resources identified in Pacific EEZs, and the concern that many Pacific countries did not have the necessary legal or management systems needed to ensure the responsible management of DSM resources.[235] The DSM Project's objective is to assist Pacific Island countries to improve the governance and management of their deep-sea minerals resources in accordance with international law, with particular attention to the protection of the marine environment and securing equitable financial arrangements for Pacific Island

[232] The POA is aimed at filling the need for a central coordinating agency with a mandate for: strengthening ocean governance, improving understanding of challenges and opportunities in the region; building support for the region's efforts to sustainably develop, managing and conserving the ocean; strengthening coordination and collaboration between ocean stakeholders; and evaluating progress made against the FPO and other ocean related policies and decisions.

[233] See website: <http://www.forumsec.org.fj/pages.cfm/strategic-partnerships-coordination/pacific-oceanscape/pacific-ocean-alliance/>.

[234] This position is held by the Secretary General of the Pacific Islands Forum Secretariat, who is currently Dame Meg Taylor. Technical and scientific support for the Commissioner is also provided by the CEOs of relevant Pacific regional organisations (CROP Agencies), particularly the Pacific Community (PC), the Forum Fisheries Agency (FFA), the Secretariat of the Pacific Regional Environment Program (SPREP), and the University of the South Pacific (USP).

[235] The DSM Projects key outcomes are to develop regional frameworks for DSM, to assist in the development of national laws and policies, to develop national capacities, and to assist in the effective management of DSM activities.

countries and their people.[236] The DSM Project encourages and supports participatory decision-making in the governance and management of national DSM resources.

In the few years since its inception, the DSM Project has been prolific in achieving each of these key result areas, save for the final key area as to date no DSM mining activities have taken place yet. The DSM Project has organised eight technical regional training workshops dealing with geological, legal, environmental, and fiscal issues. It has provided advice to numerous Pacific countries leading to the development of national legislation and policies. Further, it provides training and capacity building opportunities such as legal and environmental internships, funding to participate at the various international meetings including the ISA annual sessions, and supports nationally organised debates aimed at raising awareness on DSM issues. It has also developed publications on various DSM related issues, for example the precautionary approach, and public participation.[237] In addition, the DSM Project has sought to strengthen cooperation with other relevant DSM institutions, including the ISA where it recently signed a memorandum of understanding on behalf of the PC.[238] One of its key achievements has been the development of regional and national policy, legal and institutional frameworks for DSM. All of the Regional Frameworks developed by the DSM Project underwent intensive consultations with the relevant international and regional organisations as well as relevant stakeholders, including the private sector, NGOs, and research organisations. The Regional Frameworks are discussed at the regional technical workshops before receiving endorsements, which further strengthens its patronage and the likelihood for it to be implemented nationally.

Deep Sea Minerals Community of Practice for the Pacific

A recent initiative set up in 2015 was the formation of a Deep Sea Minerals Community of Practice for the Pacific, which is a virtual community connecting policy officers and legislative drafters across the Pacific to enable them to share experiences and discuss the future development of DSM regulatory frameworks.[239] It is intended to enhance regional cooperation in the Pacific, and as Ambassador of the European Union for the Pacific, Andrew Jacobs, said, "it is another effort to ensure that deep sea minerals in the Pacific are managed sustainably and we are supportive of such efforts."[240] It is still too

[236] SPC, 'Deep Sea Minerals (DSM) Project Overview' (Information Brochure 1, SPC-EU EDF10 Deep Sea Minerals (DSM) Project, 2012).
[237] At the time of this thesis, the DSM Project had published 18 information brochures. See website: <http://gsd.spc.int/dsm/index.php/resources>.
[238] *Memorandum of understanding between the International Seabed Authority and the Pacific Community* (ISBA/21/C/11) (4 June 2015). The MOU expresses the mutual interests of SPC and ISA in developing regional and national frameworks that support the interests of both organisation's Pacific member states, and efforts to regulate and manage deep sea mineral activities in ocean areas beyond national jurisdiction; conducting marine scientific research and analysis results; and participating in capacity-building initiatives and sharing seabed resources information.
[239] SPC, 'Deep sea minerals community of practice for the Pacific' (Media Release, Deep Sea Minerals Project, 27 May 2015).
[240] Ibid.

early to determine the effectiveness of the DSM Community of Practice, but it is hoped that this initiative is utilised to its full potential.

Pacific Regional Geoscience Steering Group

GSD recognised the need to build its geoscience capacity, particularly in light of future DSM developments and initiated a Pacific Regional Geoscience Steering Group, with the aim of raising the profile of applied geoscience as a key tool for sustainable development, and awareness of the contribution of geoscience to collaborative development across the Pacific region.[241] Another objective of the Steering Group is to develop a strong network of national, regional and international geoscience professionals and share relevant information.

Pacific Community (PC)

The Pacific Community (also known as the Secretariat of the Pacific Community) was established in 1948 to encourage and strengthen international cooperation in promoting the economic and social welfare and advancement of the peoples in the South Pacific region.[242] The mission of the PC is to help the Pacific Islands to position themselves to respond effectively to the challenges they face and make informed decisions about their future and the future they wish to leave for the generations that follow. It has seven technical divisions,[243] including the Geoscience Division. The purpose of the GSD is to ensure the earth sciences are utilised fully in order to fulfil the PC mission, and within the GSD is the Deep Sea Minerals Project.

Secretariat of the Pacific Regional Environment Programme

The Secretariat of the Pacific Regional Environment Programme (SPREP) is responsible for the protection and sustainable development of the environment in the Pacific region. SPREP's vision is "The Pacific environment, sustaining our livelihoods and natural heritage in harmony with our cultures." Its four strategic priorities are climate change; biodiversity and ecosystem management; waste management and pollution control; and environmental monitoring and governance.

3.2.3 Pacific Civil Society

Science and Research Organisations

[241] SPC, 'Geoscience skills a critical need in Pacific countries' (Deep Sea Minerals Project, 16 April 2015).
[242] *Canberra Agreement 1948*.
[243] The divisions are: Geoscience Division; Economic Development Division; Social Development Division; Fisheries, Aquaculture and Marine Ecosystems Division; Land Resources Division; Public Health Division; Statistics for Development Division.

In the Pacific, there is a Pacific Ocean Initiative (POI), which aims to critically underpin science and technology so that it can be brought together to inform decision making processes and educate communities on how best to ensure sustainable use of a healthy Pacific Ocean. Currently POI is producing scientific research on a broad range of subjects, including land-sea interactions, marine bio-security, the economics of biodiversity, and humpback whales. In New Zealand, it is worth noting the National Institute of Water and Atmospheric Research (NIWA), whose mission is to conduct leading environmental science to enable the sustainable management of natural resources for New Zealand and the planet. NIWA and the SMA have an informal association, and have been looking for opportunities to develop the Cook Islands DSM capacity.[244]

Regional NGOs

The Pacific Islands Association of Non-Governmental Organisations (PIANGO) is a regional network of NGOs in the Pacific. PIANGO's primary role is to be a catalyst for collective action, to facilitate and support coalitions and alliances on issues of common concern, and to strengthen the influence and impact of NGO efforts in the region. Pacific NGOs include the Pacific Network on Globalisation (PANG), Act Now. These Pacific NGOs have been active in opposing DSM development for several years, particularly in PNG.[245] Another NGO opposed to DSM development due to its potential environmental impacts is the Kiwis against Seabed Mining (KASM) initiative based in New Zealand.

It is clear from the above description that the Pacific region has been very active in terms of advancing ocean governance in general and DSM development in particular. While SIDS face significant challenges, it is impressive to see the efforts undertaken to not only address those issues, but also to take a proactive approach in setting regional standards and guidelines that the international community might take note of.

3.3 National

3.3.1 Cook Islands Legal and Policy Regime

The Cook Islands legal and policy framework for DSM activities comprises of the following key instruments:[246]

[244] This is discussed further in Part Two.

[245] See the PNG Mine watch website <https://ramumine.wordpress.com/>.

[246] For more on the background and history to the Cook Islands development of its regulatory framework see: Paul Lynch, *Towards the Development of a National Regulatory Framework for Deep Sea Mining in the Cook Islands* (Masters Research Paper Thesis, University of the South Pacific, 2011); Alexandrya Herman, *Towards a Better Future? An Analysis of the Cook Islands Seabed Minerals Regime* (Honours dissertation Thesis, University of Auckland, 2011).

1. Te Kaveinga Nui – 'Living the Cook Islands Vision – A 2020 Challenge'
    a. National Sustainable Development Plan (NSDP) 2011-2015
2. National Seabed Minerals Policy 2014;[247]
3. Seabed Minerals Act 2009;[248]
    a. Seabed Minerals Licensing Regulations 2015
4. Seabed Minerals Amendment Act 2015
5. National Environment Strategic Action Framework 2005-2009
    a. National Biodiversity Strategy and Action Plan
6. Environment Act 2003
    a. *Draft Environment Permits and Consents Regulations 2015/2016*[249]
7. Income Tax Amendment Act 2013
    a. Seabed Minerals Royalties Regulations 2013

Other relevant instruments include the National Transport Policy 2014, Marine Transport Act 2008, Maritime Rules 2014, Employment Relations Act 2012, Prevention of Marine Pollution Act 1998, and Public Service Act 2009. International shipping conventions apply to vessels undertaking DSM activities, which includes the IMO Conventions the Cook Islands are a party to, as well as the UNCLOS obligations on States parties to ensure safety at sea.[250]

***Te Kaveinga* Nui – 'Living the Cook Islands Vision – A 2020 Challenge'**

Te Kaveinga Nui sets out the Cook Islands pathway for sustainable development, and is a 15 year framework that provides guidance for the realisation of the long-term hopes and dreams of the Cook Islands people.[251] It is likened to "a voyage towards the future that we as a nation desire",[252] which resonates with the close ties and history that the Cook Islands people have with voyaging across the ocean, and again brings the oceans metaphor to the fore. *Te Kaveinga Nui* reaffirms the Cook Islands international and regional commitments through the World Summit on Sustainable Development (WSSD), Mauritius Declaration, Millennium Development Goals (MDGs), CEDAW, Multilateral Environmental Agreements (MEAs), Pacific Plan, amongst other Conventions.[253] Its vision is: "to enjoy the highest quality of life consistent with the aspirations of our people, and in harmony with our

[247] As per the Madang Guidelines, a seabed policy should form the basis for the development of a legal and regulatory framework: SOPAC, 'The Madang Guidelines' (1999) *SOPAC Miscellaneous Report 362*
[248] Passed in Parliament on 25 November 2009.
[249] Currently still in draft form.
[250] *UNCLOS*, above n 117, Articles 58, 94, 217.
[251] *Te Kaveinga Nui: Living the Cook Islands Vision - A 2020 Challenge.*
[252] Former Cook Islands Prime Minister Jim Marurai.
[253] *Te Kaveinga Nui: Living the Cook Islands Vision - A 2020 Challenge*. Note that as *Te Kaveinga Nui* was developed in 2004, there are several international and regional instruments that not mentioned, however this is reflected in the more recent NDSP.

culture and environment". *Te Kaveinga Nui's* vision and the 2020 strategic outcomes brings together social, economic and environmental priorities that are underpinned by good governance, culture and effective partnerships.

National Sustainable Development Plan 2011-2015

The National Sustainable Development Plan (NSDP) is the medium term strategic framework for achieving the strategic outcomes and national vision of *Te Kaveinga Nui*.[254] The objective of the NSDP reflects the international sustainable development norms, which is:

> "To build a sustainable future that meets our economic and social needs without compromising prudent economic management, environmental integrity, social stability, and our Cook Islands Maori culture, and the needs of future generations."

The NSDP 2011-2015 identifies the Cook Islands medium term goals and objectives; presents national and sector strategies for achieving these goals and objectives; proposes outcome indicators to measure performance over the medium term; identifies actions for the medium term; and presents a framework for its implementation, monitoring and evaluation. Several of the seven strategic priorities pivot around DSM development including economic development, ecological sustainability and governance. These include the objective "to ensure that we wisely utilise our seabed mineral resources for economic development, maximise the long term benefits from money generated, while minimising the impacts to the environment caused by extraction."[255] However this is tempered with the recognition of the critical need to conserve the ecosystems of the ocean in order to safeguard national vision and "any activities in our oceans must be conducted in a sustainable manner underpinned by the principles of precaution, conservation and effective management, and shared responsibility".[256] Both *Te Kaveinga Nui*'s and the NSDP's vision is carried through and referred to in subsequent national polices including the Seabed Minerals Policy and National Environment Strategic Action Framework, which highlights the filtering of sustainable development and ocean governance through from international, to regional, to national levels.

Cook Islands National Seabed Minerals Policy 2014

The Cook Islands National Seabed Minerals Policy (DSM Policy) sets the rationale and vision for the high-level policies that will guide the planning and implementation of the management of DSM. The

[254] Developed every four years, for 2007-2010, 2011-2015, the next iteration is currently under development.
[255] NSDP 2011-2015, Key Priority Area 1, Key Objective 2. Unlock our Potential from our Marine Resources.
[256] Ibid.

vision of the DSM Policy is "to provide for the wise regulation and management of SBM Resources under the jurisdiction of the Cook Islands for the benefit of present and future generations."[257] It reflects a sustainable development premise, and contains 9 policy objectives.[258] The DSM Policy substance follows best practice of what is required for a national DSM policy,[259] and extends the Cook Islands regulation and management of DSM activities to include both its national jurisdiction and the Area.

Cook Islands Seabed Minerals Act 2009

The Cook Islands Seabed Minerals Act 2009 (Seabed Minerals Act), along with its Amendment Act 2015 and subsidiary regulations make up the regulatory and management framework for DSM. Mineral resources are vested in the Crown to be managed on behalf of the people of the Cook Islands.[260] The Seabed Minerals Act adopts a standardised licensing system under which appropriately qualified parties can apply for licences to be authorised to carry out seabed prospecting, exploration and exploitation operations in return for the performance of explicit and enforceable obligations. The objective of the licensing system is to ensure that mineral rights are allocated only to mining companies that possess the requisite finance, expertise, experience and reputation to support the conduct of seabed mineral exploration and exploitation in the Cook Islands. A standardised licensing system enables mineral operations to be conducted in a stable, predictable, efficient and transparent manner and ensures equal treatment of participants. This, in turn, forms the basis for accountability to the people of the Cook Islands. There are currently three seabed areas that can be allocated for exploration; these are general areas;[261] tender areas;[262] strategic reserved areas.[263]

National Environment Strategic Action Framework 2005-2009

The National Environment Strategic Framework (NESAF) is the leading framework for management of the Cook Islands natural environment. The framework aims to provide a pathway to manage and exploit resources in a sustainable manner whilst from growing environmental awareness to protect, conserve and manage the environment. The 2005-2009 NESAF was mindful of the growing

[257] *Seabed Minerals Policy*.
[258] These are: (1) Administration of seabed minerals activities cooperatively with the community, within our Government and across the region; (2) Sustainable environmental management; (3) Minimisation of social impacts from seabed minerals activities; (4) Offering internationally competitive investment and fiscal conditions to attract potential investors while safeguarding the nation's earnings from SBM Resources; (5) Sound revenue management practices, and other social measures, that benefit current and future generations; (6) Maximising the benefits of Cook Islands SBM Resources; (7) Establishment and administration of a sound regulatory framework – national jurisdiction; (8) Establishment and administration of a sound regulatory framework – the Area; (9) Maximising the benefits of MSR.
[259] It reflects the *Madang Guidelines*, RLRF, and the UNCLOS.
[260] *Seabed Minerals Act 2009*, s 5.
[261] Ibid, s 109.
[262] Ibid, s 101.
[263] Ibid, s 53.

environmental concerns such as unchecked tourism development, increasing waste, contaminated lagoons and was linked to the NSDP process, the National MDGs programme for poverty alleviation and the World Summit on Sustainable Development programmes.[264] A National Capacity Self-Assessment is undertaken from time to time, to assess national capacity needs in addressing priority environmental issues as an aid towards the implementation of the NESAF.[265] The NESAF is currently under review.[266] Furthermore, a National Biodiversity Strategy and Action Plan (NBSAP) was developed to manage and implement national biodiversity resource protection, conservation and providing for their sustainable use. It was one of the first completed in the Pacific Region, towards the requirements of the CBD to develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity.[267]

Environment Act 2003

The Environment Act 2003 is the key piece of environmental legislation in the Cook Islands. Although the Act is intended to apply throughout the Cook Islands (including the EEZ), it adopted an 'opt-in' approach so that the islands may choose to be subject to the Environment Act.[268] One of the key provisions of the Environment Act is that "no person shall undertake any activity, which causes or is likely to cause significant environmental impacts except in accordance with a project permit issued under this section."[269] An EIA must be undertaken in this instance. The Seabed Minerals Act makes clear that the Environment Act governs environmental impact assessments and permits for undertaking DSM activities that affect the marine environment. However, the Environment Act does not currently refer to DSM activities. Although a review of the Environment Act is currently underway which will, inter alia, specifically include DSM activities under its purview.

3.3.2 Cook Islands Governing Bodies

The following is a non-exhaustive list of agencies that play a role in ocean governance. It is arguable that as ocean governance is a cross-cutting issue, all national agencies play a role, however this list will be limited to agencies with direct involvement in DSM management at this time.[270]

Cook Islands Seabed Minerals Authority

[264] '*Draft National Strategic Framework for the Environment 2013-2017*' (National Environment Service, 2014), 4.
[265] T T Upoko, 'National Stocktake Report - National Capacity Self Assessment for Global Environment Project' (National Environment Service, 2005).
[266] *Draft NESAF* above n 264.
[267] *Convention on Biological Diversity 1992*, Art 6.
[268] Given financial constraints from the requirements of the Environment Act, the islands currently under the Act are Rarotonga, Aitutaki, Atiu, Manihiki, Mitiaro and Mauke.
[269] *Environment Act 2003*, s 36.
[270] Other relevant agencies not listed include Crown Law, the Ministry of Health and the Office of the Public Service Commissioner (OPSC).

The primary agency responsible for the regulation of DSM activities is the Cook Islands Seabed Minerals Authority (SMA) as per the Seabed Minerals Act 2009. While the Minister for Minerals and Natural Resources has responsibility for the overall management of the seabed minerals sector, the day-to-day regulation of seabed minerals activity is the responsibility of the Seabed Minerals Authority, headed by the Seabed Minerals Commissioner. In addition, the Act establishes a Seabed Minerals Advisory Board - a body created to operate as the formal avenue for consultation between the Government and society on matters concerning the regulation and management of the DSM sector.[271]

National Environment Service

The primary agency for environmental management is the National Environment Service (NES) established under the Environment Act 2003. Its mandate includes preventing, controlling and correcting the pollution of air, water, and land; monitoring and evaluating activities which significantly affect the environment; recommend and advise on regulations to be made; enforce the Environment Act 2003 and any regulations made under it; and ensure environmentally sound disposal of toxic chemicals and wastes. NES provides environmental policy and regulation support, and education and awareness to Aitutaki, Atiu, Mauke, Mitiaro, and Rarotonga.

Cook Islands Investment Corporation

The Cook Islands Investment Corporation (CIIC) is state owned entity SOE), and its functions are to administer and manage Crown assets and shareholding interests; control and manage the undertakings of SOEs; and negotiate and facilitate the disposal of assets and any property or undertaking of an SOE.[272] The CIIC applied for and were approved a work of plan in the Area, as part of a government joint venture with GSR.[273]

Office of the Prime Minister

The Office of the Prime Minister (OPM) is the Government's central policy and planning office, and is the primary architect of the *Te Kaveinga Nui* and the NSDP 2011-2015. The OPM also plays a key role in leading national environment policy, this includes: chairing the National Climate Change Country Team and the National Disaster Risk Management Council, and more recently the Marae Moana Taskforce (MMT). Its vision is "Good Governance for the maximum benefits of sustainable

[271] *Seabed Minerals Act 2009*, s 33.

[272] MFEM, 'Cook Islands Government Budget Estimates 2015/2016' (Book 1: Appropriation Bill, Appropriations and Commentary, Ministry of Finance and Economic Management, 2015)

[273] *Report and recommendations of the Legal and Technical Commission to the Council of the International Seabed Authority relating to an application for the approval of a plan of work for exploration for polymetallic nodules by the Cook Islands Investment Corporation* (ISBA/20/C/18) (9 July 2014).

development," through providing "sound leadership and direction in the pursuit of sustainable development and national well-being."[274] There are various bodies and divisions within the OPM that are relevant to ocean governance and sustainable development including the National Sustainable Development Committee,[275] the Marae Moana Taskforce,[276] the Climate Change and Disaster Risk Management division,[277] and the National Research Committee.[278]

Ministry of Transport

The Ministry of Transport (MoT) is responsible for shipping and maritime issues including administration of IMO conventions and prevention of pollution. It is, inter alia, responsible for regulating the maritime transport system under the Maritime Transport Act 2008 and associated legislation, and is the key agency for marine pollution response. The MoT recently passed its National Maritime Transport Policy 2014, as well as Maritime Rules 2014 in order to implement the IMO Conventions that the Cook Islands have adopted.[279] Further, there is the Maritime Cook Islands (MCI), which is a private organisation that works in conjunction with MoT and is responsible for the maintenance of the Cook Islands Register of Ships, and therefore undertakes monitoring and compliance to ensure all vessels comply and operate within national and international laws and conventions.

Ministry of Finance and Economic Management

The Ministry of Finance and Economic Management (MFEM) is the key fiscal and economic advisor to government. The MFEM's vision is to be a competent and professional organisation, inspiring

[274] See OPM website: <http://www.pmoffice.gov.ck/index.php?option=com_content&view=article&id=27&Itemid=28>.

[275] The National Sustainable Development Committee (NSDC) is the body responsible for oversight of the implementation of the National Sustainable Development Plan (NSDP). It includes participation from the OPM, the MFEM, the Ministry of Foreign Affairs and Immigration (MFAI), Crown Law, and the OPSC. All national policies derive from the NSDP, thus the role of the NSDC for oversight of the implementation of national policies and their resultant actions and initiatives is important.

[276] In 2012, Government created the Cook Islands Marine Park (CIMP), comprised of half of the Cook Islands EEZ. Initially, Government established a Marine Park Steering Committee made up of various stakeholders including government, traditional leaders and NGOs, to guide the development of the CIMP. However, progress was slow and the MMT was created with representation by key government departments to continue developments.

[277] Under these divisions, a Joint National Action Plan for Disaster Risk Management and Climate Change Adaption (JNAP) was developed which provides a roadmap for the implementation of the NSDP 2011–2015. It identifies 4 strategic areas: governance; monitoring; disaster management and risk reduction; and climate change adaptation. The Cook Islands have targeted 50% power generation from renewable energy sources by 2015, and 100% by 2020.

[278] The National Research Committee (NRC) of the Cook Islands is comprised of government agencies and some NGOs. The role of the committee is to approve any and all research carried out in the Cook Islands, including the marine environment, and maintains a registry of research activities. The NRC screen and assess all in-coming research to ensure national returns and benefits. The objectives of the NRC are to:

- Safeguard the interest of the Cook Islands people and their unique resources.
- Improve the management of cross-sectoral research activities in the Cook Islands.
- Ensure that research outcomes enhance the cultural, social and spiritual wellbeing of Cook Islands people.
- Encourage the uptake of research findings to further enhance environmental management, social and economic development.
- Engage Cook Islanders in research activities and processes to increase research capacity and capability.

See OPM wwebsite: <http://www.pmoffice.gov.ck/index.php?option=com_content&view=article&id=57%3Acook-islands-national-research-committee&Itemid=18>.

[279] A review of the National Maritime Transport Policy is beyond the scope of this thesis. For more, see *Cook Islands National Maritime Transport Policy 2014*.

public trust in managing public finances in pursuit of our national development aspirations, through its mandate for providing responsible economic and financial advice, including the annual budgets for the whole of government and its oversight role for external funding for government activities. The MFEM is well-placed to be a key player in mainstreaming environmental considerations across government.[280] The MFEM will be administering the revenues from DSM activities.[281] The MFEM also administers the Cook Islands Development Partners Policy. As mentioned, funding support for the implementation of frameworks plays a key role in sustainable development at all levels, which has led to the alignment of the 2030 Agenda with the Action Agenda, so that international financial institutions support will align with the SDG goals of countries.[282] The Cook Islands government relies heavily on external donors to implement sustainable development.[283] As a developing country, the challenge for government is prioritising the many issues competing for a limited budget, and as its tax base narrows due to depopulation and other issues, this problem compounds.

Ministry of Marine Resources

The Ministry of Marine Resources (MMR) is responsible for the sustainable management of marine resources under the Marine Resources Act 2005 and Ministry of Marine Resources Act 1984. The MMR's vision is "working in partnership with communities, businesses and other agencies so that, throughout the nation, the people of the Cook Islands are receiving maximum long-term benefits from the sustainable development and utilisation of marine resources throughout the nation."[284] The MMR works with the Cook Islands Policy Service on maritime policing to monitor the Cook Islands EEZ, in particular illegal, unreported and unregulated (IUU) activities.[285] The MMR currently has a mandate for DSM management under the Marine Resources Act 2005; however since the passing of the Seabed Minerals Act and the establishment of the SMA, it no longer has an active role in DSM.

Ministry of Foreign Affairs and Immigration

The Ministry of Foreign Affairs and Immigration (MFAI) is responsible for the efficient and effective conduct of the Cook Islands external relations and provision of an effective national immigration service.[286] Its vision is to protect and advance the interests of the Cook Islands through targeted engagement and coordinated interventions in bilateral and multilateral for partnerships, as well as a

[280] *Draft NESAF* above n 264, 69.
[281] This is through the Seabed Minerals Royalties Regulations 2013, and a Sovereign Wealth Fund currently under development..
[282] 2030 Agenda for Sustainable Development (A/RES/70/1).
[283] Kelvin Passfield and Teariki Rongo, 'Cook Islands 4th National Report to the Convention on Biological Diversity' (National Environment Service, 2011).
[284] MFEM, 'Cook Islands Government Budget Estimates 2014/2015' (Book 2: Ministry Budget Statements, Ministry of Finance and Economic Management, 2014) 210.
[285] Ibid 254.
[286] Ibid, 120.

national immigration policy and legislation that positively influences and improves quality of life in the Cook Islands. It manages the Cook Islands relations with New Zealand and the Pacific region, the broader international community, international trade policy, the United Nations and Treaty matters and immigration. It also plays an advocacy role by ensuring that national priorities are reflected in regional and international initiatives. The MFAI is the political focal point for a number of international treaties, including the UNCLOS, and participates at the ISA annual sessions on behalf of the Cook Islands.

3.3.3 Cook Islands Civil Society

Cook Islands Traditional Leaders

The Cook Islands traditional leaders known as *Ariki* (high chiefs) are vital stakeholder in the Cook Islands sustainable development. Within Parliament, there is the House of Ariki, which has an advisory role, and is composed of chiefs. Below it is the Koutu Nui who are a separate advisory group of traditional leaders. The House of Ariki and Koutu Nui are actively involved in environmental and conservation issues, including with the Marae Moana and DSM development in the Cook Islands

Cook Islands Science and Research Organisations

In the Cook Islands, there are some non-government research organisations; however, it is not clear what linkages there are in terms of bolstering government's science and research capability in ocean governance. Although, the Cook Islands Natural Trust collects and collates biodiversity information has established a Cook Islands Biodiversity database as the principal source of information of plants, animals, including marine species in the Cook Islands. There is also the Cook Islands Whale Research Project which has undertaken scientific research in the Cook Islands for decades. Further efforts are needed in terms of linking research organisations to the relevant governing agencies.

Cook Islands Environmental NGOs

In the Cook Islands, the main environmental NGO is Te Ipukarea Society (TIS),[287] whose mission is "to promote the balance and harmony, which should characterise the relationship of the Cook Islands people with other components of our environment."[288] TIS are actively involved in ocean governance related developments such as the Marae Moana, and in DSM development nationally and regionally.

Concluding Remarks

[287] For more on other Cook Islands environmental NGOs, see the *Draft NESAF* above n 264.
[288] For more, see TIS website: <http://tiscookislands.org/aboutus.php>.

The description of the ocean governance frameworks underpinning DSM gives an indication of complexity and sheer vastness of ocean governance, and this analysis only focussed on one sector. The proliferation of policies, plans, laws and institutions relating to ocean governance and DSM management reflects the significance given to ocean related issues, particularly in the past 10 years. Thus, it is important for SIDS like the Cook Islands to be aware of and engaged in the ocean governance frameworks at the international, regional and national levels.

4 GAPS, WEAKNESSES AND CHALLENGES

Now that the ocean governance frameworks underpinning Cook Islands DSM development have been identified, the next step is to discuss the weaknesses, gap and challenges in the implementation of these frameworks. Given the scope of this thesis, the discussion will focus mostly on the Cook Islands challenges, with some references to international and regional issues as it relates to Cook Islands DSM development. Furthermore, it is not an exhaustive list of gaps and weaknesses, but rather focuses on issues to achieving the key ocean governance principles identified in Chapter 2.

4.1 Lack of Integrated Approach

Currently, the Cook Islands organisational structure for ocean governance is sector-based and fragmented among a range of policies, laws and agencies with marine responsibilities. The Cook Islands does not currently have an overarching framework for ocean governance cutting across sectors, values, and interests, that addresses spatial conflicts between users and ecosystem values. This lack of a national ocean policy exacerbates other issues relating to the implementation of ocean governance frameworks such as lack of coordination and cooperation. Furthermore, it increases the chances of multiple-use conflicts, overlapping of jurisdiction and duplication of efforts. The conflicts between Cook Islands fisheries and environmental conservation efforts illustrate this.

There is a lack of integration in policy and legislative instruments as well as the institutional arrangements. The Seabed Minerals Act overlaps with other laws and institutions, through its provisions on environmental protection as well as maritime Occupational Health and Safety (OHS) provisions, which should be addressed by the primary environmental and maritime safety laws respectively. While it is acceptable to refer to the relevant legislation, this needs to be integrated and harmonised to avoid overlaps. This requires integrated management, which is discussed further in Chapter 5.

Issues with the management of OHS specifically illustrate fragmented and duplicated efforts in the DSM sector due to a lack of integration. While the Seabed Minerals Act refers to OSH, it does not give sufficient detail on the management of OSH. It creates new institutions and positions including OHS inspectors and an on-scene commander to carry out the Seabed Mining Environmental Emergency Contingency Plan.[289] However, the SMA is not adequately staffed or resourced to implement this. It is important to have an OHS programme in place as part of good ocean governance, and resources to implement that. However, to expect a recently formed agency without the institutional capacity to undertake this is impractical and does not properly take the Cook Islands context into account. Further, another piece of legislation, the Employment Relations Act 2012 refers to health and safety in employment;[290] and would appear to be applicable to DSM activities, however it is not comprehensive and is in need of subsidiary regulations to flesh out the details intended by the Act. Furthermore, its health and safety provisions are not adequate to manage an extractive begging the question as to whether they are the appropriate avenue to be considering this issue, particularly when there is already a framework in place responsible for maritime safety issues. That is the Maritime Division of the MoT, which administers the IMO Conventions domestically through the Marine Transport Act 2008 and its associated Maritime Rules 2014. Therefore, the Maritime Division is a key player in the effective OSH management of DSM activities, and the maritime regulatory system as a whole. While the DSM Policy notes the role of the MoT,[291] there have not been any further steps to put an implementing mechanism in place to integrate the work of the SMA and the MoT for the regulation of DSM vessels to ensure they comply with the relevant maritime safety obligations.[292] The Seabed Minerals Act and lack of integrated management has contributed to this.

This raises a wider issue of the need to clarify the roles of agencies and avoid overlaps, and in some instances, whether functions are placed with the most appropriate agency. This issue is not limited to DSM, but also affects other marine related users.[293] Fragmented sector management can create major gaps and overlaps in the achievement of ocean management goals. However, strategically developed, overlaps can provide benefits, such as resource sharing or complementary skills. However, without coordination or consistency, overlaps can create obstacles to effective and efficient regulation of the

[289] *Seabed Minerals Act 2009*, s 310.
[290] *Employment Relations Act 2012*, s 70-75.
[291] Also, the Seabed Minerals Regulations notes that the SMA may consult with other government agencies when assessing exploration licence applications: *Seabed Minerals (Exploration Licensing) Regulations 2015*.
[292] A relevant issue for OSH is the nexus between DSM activities and the regulation of DSM vessels, in terms of safety and environmental aspects, as per the IMO regime. However, it is beyond the scope of this thesis.
[293] The overlapping of roles between MMR and NES, as well as issues as to which functions should sit with either agency is a current issue. This is discussed further in Hannah Lily, 'Review of the Cook Islands Environment Act: Summary of Initial Issues and Recommendations' (Commonwealth Secretariat, 2015).

marine environment.[294] Not just marine management is fragmented. Reviews of the public sector confirm that the government development efforts are fragmented and costly, and that public sector structures and systems need to be streamlined in order to improve public sector performance efficiency.[295] It further found that the fragmented structural design of the institutional framework of government created confusion in mandates, authority and accountability.[296] This fragmentation, inter alia, affects the Cook Islands ability to meet international obligations. Its biodiversity requirements under the CBD, illustrates this point. The responsibility for managing the environment, including biodiversity, is divided among several government ministries, agencies and councils, with NGOs also assisting in addressing biodiversity concerns. However, the different agencies dealing with biodiversity do not aggregate information generated, and as a result, exposure of biodiversity activities in global reports tends to be inclined towards the group who is reporting. [297]

A piecemeal and disjointed approach contributes to weak implementation, enforcement, monitoring and management of strategies, programmes and activities. There is a need to ensure partnerships are established with clear expectations requirements and resources through formal agreements, such as integrated management plans.

The lack of a DSM integrated management plan (or overarching oceans management plan for that matter) means that there are no operational mechanisms to give effect to policy and legislation. There needs to be coordination between agencies with regulatory functions aimed at strengthening enforcement, administration, and operations in the ocean, as well as resource sharing to improve performance and compliance. As it stands, there are no formal mechanisms for how the SMA, NES and MOT interact with one another on DSM management. While the SMA and NES have been working closely together on DSM related matters,[298] this is largely on an ad hoc basis. There is no formal avenue for coordinating efforts between SMA and NES.

The PSIDS were lauded for their endorsement of the PIROP to provide a principled approach to ocean governance in the region, however this has not translated to any pacific country with a national ocean

[294] Ekstrom et al, above n .
[295] PSC, 'Cook Islands Government Public Service Strategy 2016-2025' (Strategy Paper, Office of the Public Service Commissioner, 2015); ADB, 'The Cook Islands: Stronger Investment Climate for Sustainable Growth' (Asian Development Bank, 2015).
[296] PSC, 'Consultation Panel Report on the Draft Cook Islands Government Public Service Strategy 2015-2025' (Office of the Public Service Commissioner, 2015).
[297] Passfield and Rongo, above n 283.
[298] This includes capacity building efforts as well as for sourcing technical resources to assist NES, such as the NZEPA secondment and DSM Project environment internship.

policy.[299] Thus, this is a regional issue for other Pacific countries, and not just the Cook Islands. In recognition of the need to harmonise use of and sustainably manage its marine environment, the Cook Islands announced the Marine Park (or Marae Moana) in 2012 with a view of a zoned, multi-use space of activities carried out sustainably in line with the precautionary principle. This later led to the decision to extend the Marae Moana beyond solely conservationist and establish a national oceans policy, although progress has been slow, and is discussed further in Chapter 5.1.

4.2 Lack of Cooperation and Coordination

The importance of cooperation and coordinated efforts cannot be emphasised enough. The lack of it, particularly in environmental management, has resulted in the failure to achieve the vision aimed for.[300] Even though the need for coordination and cooperation is reiterated at all levels,[301] there are still numerous instances of where this is lacking, and the resulting problems. One example of this occurring at the international level is the lack of coordination between intergovernmental agencies over the management of the Area.[302] It was recently discovered that at least one submarine cable overlapped with a DSM exploration zone in the Area.[303] Given that the UNCLOS requires that DSM development give 'due regard' to other users, such as submarine cabling, this is not realised if there is no interaction between the various ocean users and regulators.[304]

The absence of formal coordination and cooperation plans has also affected the sharing of information in the Cook Islands. Given the complexity of ecosystems, the collection, sharing and distribution of information is critical. A lack of coordinated information exchange between groups has resulted in ignorance of what others are doing.[305] Cooperation and coordination is implied in the Seabed Minerals Act and explicit in the DSM Policy, but without a formal mechanism in place, the management and coordination with other relevant agencies has been ad hoc. In the EEZ, the MMR largely coordinate with the Maritime Police for monitoring and surveillance, however its coordination activities with the

[299] Peter Nuttall and Joeli Veitayaki, 'South Pacific and Small Island Developing States: Oceania is Vast, Canoe is Centre, Village is Anchor, Continent is Margin' in Hance D Smith, Juan de Vivero and Tundi S Agardy (eds), *Routledge Handbook of Ocean Resources and Management* (Routledge, 2015) 560, 567.

[300] See Passfield and Rongo, above n 283; See also *Draft NESAF*, above n 264: "While the coordination of biodiversity policy and initiatives, institutional structures, facilities and local technical capacity have made some progress, there remains room for improvement. Systematic information management and communication amongst key stakeholders for cooperation and coordination, and public awareness remains poor."

[301] *Oceans and the law of the sea: Report of the Secretary-General* (A/70/74/Add.1) (1 September 2015).

[302] In particular, the seafloor of the Clarion Clipperton Fracture Zone (CCZ), which the ISA manages.

[303] *Oceans and the law of the sea: Report of the Secretary-General* (A/70/74/Add.1) (1 September 2015).

[304] Ibid, paragraph [9]. Recently, the ISA and International Cable Protection Committee held a workshop to address the potential for interaction between the laying of submarine cables and DSM activities in the Area, with a view to ensure that activities in the Area are carried out in accordance with 'due regard' obligations. In addition, it was further suggested that the ISA and the Cable Protection Committee facilitate communication between ISA contractors and cable owners.

[305] Passfield and Rongo, above n 283.

NES or MoT are limited,[306] and they do not share surveillance data between agencies. There is a need to increase cooperation and coordination between agencies, and this is discussed further in Chapter 7.

This issue is not limited to the Cook Islands. At the regional and international level, there are no clear mechanisms or policy approaches in place to foster cooperation and coordination in a way that could comprehensively and effectively address the conservation of marine ecosystems.[307] Given this situation, it is very difficult to implement good ocean governance policy at the national, regional and global levels. It has been submitted that the concept of good ocean governance should be incorporated into the governing bodies decision-making processes, with a need for change in terms of attitude, legal authority and institutional structure, for an integrated ocean management that is not disjointed along national jurisdictions, but rather focuses on distinct marine ecosystems.[308] This again re-emphasises that the problems of ocean space are closely interrelated and need to be considered as a whole.

4.3 Gaps and Weaknesses in Protection of the Marine Environment

Currently, both the Seabed Minerals Act and the Environment Act have gaps in the provisions on the protection of the marine environment.[309] Firstly, the Seabed Minerals Act does not enshrine certain key environmental principles such as the precautionary approach, and lacks in some areas in terms of integrated management. While the 2014 DSM Policy espouses such principles, the Act needs to reflect this. In addition, the NESAF 2005-2009 is out of date in terms of addressing recent environmental related issues including DSM.[310]

The Environment Act also has several issues in relation to DSM, and a legislative review is underway to address this. The biggest issue is that the Environment Act does not specifically address DSM activities. Consequently, the general permitting regime applies,[311] thus DSM activities, be it prospecting, exploration or exploitation will either require a permit (and an EIA) if it is likely to cause 'significant impact' or have no requirement at all.[312] This 'either/or' situation is unsatisfactory, as it does not follow international practices,[313] and does not adequately take into account the stages of DSM

[306] The MMR and the NES mainly cooperate for inshore issues such as water quality testing. However, the MMR does not coordinate with the MoT on fishing vessel movements.
[307] Chang, above n 32.
[308] Biliana Cicin-Sain, *Ocean governance : a new vision : the work program of the Ocean Governance Study Group* (1992).
[309] This section focusses on issues relating to the legislative and policy weaknesses of the protection of the marine environment. Discussion on the challenges in implementation of the relevant environmental obligations is in Chapter 6.6.
[310] NES is currently developing the next iteration of the NESAF with the assistance of SPREP. A draft NESAF, dated 1 July 2014, was circulated for consultation to relevant stakeholders, including the SMA.
[311] Under the Environment Act, there are requirements for consents and permits, consents do not apply to DSM activities, only permits can.
[312] *Environment Act 2003*, s 36.
[313] ISA Recommendations (ISBA/19/LTC/8).

activities. Exploration activities do not normally require an EIA; however, DSM activities still require conditions as part of environmental management such as for monitoring and evaluation, and baseline studies.[314] However, this requirement would not be activated in the Environment Act for certain exploration activities that do not meet the 'significant impact' threshold, and therefore do not require a permit. A permit, contains an environmental management plan and with it the conditions for monitoring and data collection. This means that DSM operator will not need to work with the NES during exploration activities, but mainly the SMA, nor will they need to submit essential baseline information, or undertake monitoring for the NES. That is, until such activities begin to have a 'significant impact', and by then a DSM company may have already spent years and substantive amounts of money, and there is a real risk that the NES may not be satisfied with the information and monitoring undertaken. Whereas, if conditions are set at the outset for DSM activities, perhaps the DSM operator and the environment authority will be clearer on what is the necessary level of baseline information and monitoring. For the moment, the Seabed Minerals Act is being used to fill this legislative gap, with certain conditions regarding environmental baseline information and monitoring to be imposed as part of the seabed mining licence conditions, based on the REMF. This is a temporary measure, and will need to be rectified in the environment legislative review.

Another significant gap of the Environment Act is its application only to the islands that have adopted, and undermines the environmental management of seabed mineral activities in the EEZ.[315] Consultations during the Environment Act review have highlighted concern amongst stakeholder on this issue.[316] Another relevant issue is the National Environment Council (NEC), which has never been convened. Currently the Island Environment Authorities (IEA) determines its composition, which again is limited as it only includes the islands under the Environment Act. Further, it is questionable whether the composition of the NEC should depend on IEAs, as the role of the NEC is on the consideration of issues occurring in the EEZ, which is outside the scope of islands, and would include DSM, and the Marae Moana. Such issues are of national importance, and thus the NEC should be a crosscutting group made up of relevant stakeholders.[317] This is discussed further in Chapter 5.3. There is also a wider issue of the lack of incorporation of environmental considerations into other relevant policies and initiatives towards achieving sustainable development.[318] Such gaps at the policy level mean that environmental considerations for coordination and cooperation are not filtered through to

[314] Ibid.
[315] Or a national marine park for that matter.
[316] Lily, above n 293.
[317] This has been suggested in the legislative review, along with other suggestions including the NEC comprising of an MP from each island; or a Board of independent technical experts; or all islands having a representative. It is suggested that the first, main option would be the best approach.
[318] *Draft NESAF*, above n 264.

implementation plans. Although recent policies are integrating environmental considerations with references to the NES, including the DSM Policy and Maritime Transport Policy.[319] The issue then becomes translating environmental considerations into an integrated management plan.

4.4 Capacity Constraints

This is a major issue, if not the most critical issue, for the successful management of DSM in the Cook Islands.

Lack of Technical Labour and Institutional knowledge

Implementation capacity in the Cook Islands is severely limited, with scarce technical capacity, compounded by the challenge of people moving to New Zealand and Australia.[320] The lack of capacity and depopulation remains one of the key concerns to implementing sustainable development in the Cook Islands,[321] and continues to be a top priority for government and development partners to address.[322]

The lack of labour capacity is a particular challenge for the Cook Islands in regulating a technical industry like DSM both within its EEZ and as a sponsoring State in the Area. DSM is not yet an established industry, thus experience and expertise is still building up around the world, and for a SIDS like the Cook Islands, this will be particularly difficult given it already has a technical skills shortage. Although, as DSM is an extractive industry, there are cross-competencies for countries with mining experience, such as PNG,[323] which enables them to transition to DSM, more easily. Unfortunately, the Cook Islands do not have extractive industry experience. Thus, the Cook Islands DSM development will be a slower process of building institutional knowledge and capacity of the SMA, NES, and the MoT among others.[324] Regulators will need competencies in licensing, compliance and monitoring, environmental and safety management, and currently, all of the key agencies face capacity challenges in these areas. As a new entity, the SMA does not have adequate experience in DSM management, and neither do the NES. Further, there are concerns over the NES capacity to oversee existing environmental issues on land, let alone in the deep sea. In addition, it has been noted that the MoT is not currently adequately resourced to have the capability and capacity to implement maritime safety

[319] *Cook Islands National Maritime Transport Policy 2014*.
[320] ADB, above n 295.
[321] PSC, above n 295.
[322] ADB, above n 295.
[323] PNG has undertaken terrestrial mining for decades, has a well-established minerals department, and qualified, experienced regulators.
[324] Although, when the SMA was established, external technical assistance, through a Natural Resources Advisor, was brought in to help the Cook Islands build capacity. This is partially funded by the Commonwealth Secretariat.

and security policies and monitor their effectiveness,[325] which is concerning considering the added layer of complexity owing to specialised DSM machinery on board vessels.[326] In the Area, the ISA raised the issue of whether developing States can exercise effective control over sponsored parties, given their lack of capacity and resources to oversee contractors.[327] The ITLOS Advisory Opinion referred to this issue, and said it required 'regulatory control' on the part of the sponsoring State; however, it is questionable whether this is adequate to ensure contractor compliance.[328] Thus, further efforts are required to ensure these regulatory agencies will have the capacity to oversee DSM activities. In response to this, there are various international, regional and national capacity building opportunities available to build the Cook Islands labour capacity and institutional knowledge, and will be discussed in Chapter 8.

Lack of Resourcing

Along with a lack of technical capacity, there is a lack of adequate resourcing to enable effective regulation of DSM activities, such as monitoring and compliance, well-established GIS systems, as well as participating at international fora such as the ISA.

When the DSM activities in the EEZ are underway, the SMA will require more resourcing than it currently has for monitoring and compliance. The SMA Business Plan 2015-2016 reflects this with proposed expanded organisational staffing structures as DSM development progresses. However, the budget appropriations for the future years do not reflect this; therefore, the SMA will not have extra funding to support its expansion.[329] Further, weak monitoring, evaluation and reporting mechanisms have been identified as a key constraint to managing environment related priorities and activities.[330] The Cook Islands do not have many resources for surveillance and monitoring of activities in its EEZ.[331] Although, technologies such as vessel monitoring systems (VMS) are used frequently in

[325] *Cook Islands National Maritime Transport Policy 2014*.

[326] It has been suggested that DSM vessels undertaking DSM activities in the Cook Islands EEZ should be flagged in the Cook Islands, however this is cautioned against. As mentioned, MCI manages the Cook Islands Register of Ships, however it is currently on the black list of flag states in the Paris MoU, with a number of its flagged vessels detained for failing to meet the required standards. MCI has begun to develop a quality management system and risk assessment tools for flagged vessel management. However, at this current time, the requirement on DSM vessels, is probably best left to being registered with a reputable register. Furthermore, requiring the flagging of ships in the Cook Islands may not be well received by other relevant stakeholders, including the industry themselves. See: Paris Memorandum of Understanding on Port State Control (https://www.parismou.org/inspections-risk/white-grey-and-black-list) and http://www.cookislandsnews.com/item/13551-two-dead-after-ship-collision/13551-two-dead-after-ship-collision; http://www.cookislandsnews.com/national/local/item/48158-poor-record-for-cook-islands-flagged-ships/48158-poor-record-for-cook-islands-flagged-ships

[327] See discussion in *Issues related to the sponsorship by States of contracts for exploration in the Area and related matters* (ISBA/21/LTC/12) (9 June 2015).

[328] Alexandrya Herman, 'Assessing the Adequacy of Sponsoring States Measures in Order to Meet their Obligations and Responsibilities with Respect to Activities in the Area' (LLM Research Paper, University of Queensland, 2015)246.

[329] Although, if annual licence fees incorporate the costs of the SMA as expected, then some of that funding could be directed to the SMA to enable it to carry out its functions.

[330] Draft NESAF, above n 264.

[331] There is one police patrol boat that monitors the Cook Islands waters, particularly for preventing IUU fishing. This alone is not adequate for monitoring the Cook Islands large EEZ.

fisheries, however the SMA does not currently have VMS capacity.[332] Regulation of DSM activities also requires specialist software and technical infrastructure.[333] Underpinning this is a need for major improvement in telecommunications infrastructure in the Cook Islands. Information storage and management systems, which are capable of collecting, analysing and communicating data, are essential to assist regulators decision-making. The ISA found this a challenge for some years, as it did not have adequate data management systems in place, which affected its ability to be able to utilise information, such as environmental data received from contractors, for environmental management decisions.[334] The Cook Islands does not currently have adequate systems in place.[335]

Another issue is the lack of resourcing for the Cook Islands to participate in DSM related meetings and workshops such as the annual ISA sessions. Cook Islands participation at international fora is generally limited due to budgetary constraints, and relies on political will or external donors. This affects the Cook Islands representation at the ISA, and its ability to participate and engage in decision-making of the DSM management at the international level. The Cook Islands lack of UN membership further compounds this issue. Many of the international decisions are facilitated and negotiated at the UN headquarters in New York, which the Cook Islands do not have a permanent presence at. This seriously hinders the Cook Islands ability to engage at the international level on various international issues including DSM.[336] In addition, this affects the Cook Islands access to international support and assistance. Some international organisations require UN membership before granting full access to funding for training courses, participation in regional conferences, and other benefits. In some instances, the Cook Islands are granted associate or observer status, which does entail some benefits.[337]

4.5 Science and Research Issues

As mentioned in Chapter 2.5, Marine scientific research (MSR) is critical in building knowledge of the marine environment and thereby understanding how to respond to challenges facing ocean governance. However, the Cook Islands do not have adequate measures in place to capture MSR from DSM activities. The DSM Policy recognises the importance of MSR, and lists it as one of the policy

[332] MMR has VMS capacity in place. The SMA could coordinate with the MMR to share this resource. This is discussed further in Part Two.
[333] For example, ArcGIS. The Cook Islands is currently working with development partners to obtain the rights for this software.
[334] *Summary report of the Chair of the Legal and Technical Commission on the work of the Commission during the twentieth session of the International Seabed Authority* (ISBA/20/C/20) (16 July 2014).
[335] Although there are regional and international opportunities it may access to put them in place, discussed in Part Two.
[336] The Cook Islands is not always able to participate at ocean fora such as the ICP or the annual meeting of states parties to the UNCLOS (SPLOS). This affects the Cook Islands ability to participate in discussing issues that affect its national interests, including its current ECS submission to the CLCS.
[337] For example, the Cook Islands is interested in developing its information and communications technology (ICT), and aspires to join the Asia-Pacific Telecommunity (APT) which opens up capacity building opportunities, however membership is limited to UN members, and the Cook Islands is limited to Affiliate Membership.

objectives; however, there are no further measures in terms of MSR management. It is not referred to in the Seabed Minerals Act, and the 2015 Seabed Minerals Regulations do not deal with MSR either.

As mentioned, the NRC approves all research occurring in the Cook Islands, which therefore includes MSR.[338] A National Research Policy was developed in 2008, however it does not appear to provide the robust framework necessary for the requirements of MSR, let alone overall research in the Cook Islands. Further analysis of science and research in the Cook Islands reveals this to be a major problem. There are two major issues, being the weak content of the policy, and secondly, lack of support for its implementation.

First, its substantive content needs to be revised in order to become a comprehensive, robust policy suitable for strengthening science and research. Therein lies the root issue, which is that there appears to be more emphasis on the process of collecting research in the Cook Islands rather than to strengthen science and research in the Cook Islands. Furthermore, the Research Policy does not include or reference the relevant international obligations relating to science and research that the Cook Islands are subject to, or the multi-stakeholder involvement necessary for this crosscutting issue.

The policy also lacks clarity in certain areas. There are no clear terms of reference for the NRC, and it meets ad hoc for determining research permit applications. If the NRC is to be the body for strengthening or enabling science and research, then there should be further clarification on this. Furthermore, concern has been raised that researchers are not clear as to their responsibilities, or the rights to intellectual property under the Research Policy, and there has been no ongoing oversight to ensure that external researchers and organisations have met their obligations.[339] In addition, the Research Policy does not refer to the appropriate format of submitted research. This needs to be clear, especially in the case of marine activities, so that data collected can then be utilised in GIS software, and for mapping purposes. Further, while there is an obligation for all research to be undertaken through the NRC, this is not enforced. The National Research Policy does not refer to international obligations, which it should if an integrated management approach is taken, so that the policy does not operate in a silo.

In terms of DSM, research gathered from cruises undertaken in the Cook Islands EEZ is important in building up the scientific knowledge of deep sea ecosystems, and affects the quality of decision-

[338] The SMA is not currently part of the NRC, so will not be involved in assessing MSR.
[339] 'Draft National Research Policy' (Draft Policy, Cook Islands Office of the Prime Minister, 2015).

making by policy makers. This is where the absence of clear research policies and formalised planning has an adverse effect. For example, the SMA were not notified of a recent bathymetric cruise in the Cook Islands EEZ,[340] and it has become apparent that this cruise is not listed under the NRC's Research Register, which may be one-off or suggests that information systematically falls through the cracks. A 2013 report confirms the latter, and submits that around 76% of research undertaken in the Cook Island is not recorded on the NRC Research Register.[341]

There is no integration of the Research policy across the various sectors, which has resulted in overlaps such as the research functions of the NRC and MMR. The Marine Resources Act 2005 gives the Minister for Marine Resources the power to approve a research plan for MSR,[342] which appears to contradict with the NRC being the body that approves all research occurring in the Cook Islands. While the specific MSR provisions in the Marine Resources Act ensure that the MMR receive the MSR undertaken for fisheries, it may lead to a fragmentation of information scattered across agencies, and should be centralised with the NRC to build up the Cook Islands science and research capacity as a whole. The fact that the MMR have exercised this power under the Marine Resources Act supports this, as at times, the NRC was not in a position to assess research permit applications in a timely manner. It is unclear whether there is a formal mechanism between MMR and NRC for the sharing of MSR data. It is clear however, that the NRC is not functioning as it should be.

There is a further challenge in the access to research undertaken.[343] In the past few years, the SMA have been assembling data from MSR activities in the EEZ, to assist with its marine spatial planning (MSP). This MSP is vital for enabling the SMA to determine the appropriate areas to designate for DSM activities, so that it does not conflict with other ocean users. As such, the data sought included fisheries, whale information, shipping lanes and traffic. This exercise has proven difficult and yielded mixed results. Some information was readily available upon request, although some information could not be shared for commercially sensitive reasons, or required permission from several other entities before access was granted. Some shared data in a format not easily transferrable to Geographic Information Systems (GIS) software.

[340] The most recent example was that of the German bathymetric cruise undertaken in 2012.
[341] Teina Rongo, 'Climate Change Research in the Cook Islands' (Climate Change Cook Islands Division, Office of the Prime Minister, 2013).
[342] *Marine Resources Act 2005*, s 36.
[343] Access to data is also an acknowledged issue for the ISA, as there are calls from States and the international community for environmental data to become more readily available to the public, such as the scientific community to enable them to build knowledge and understanding of marine environment and the impacts of DSM activities. The ISA is currently looking into coordinating the public availability of environmental data, while leaving proprietary information private.

This leads to the second major issue, which is the lack of funding and political support for the implementation of the policy towards achieving its vision of "Maximum benefits for the Cook Islands through Research".[344] For several years, the Cook Islands public service has borne budget cuts as part of fiscal measures, and research has been no exception. Currently, the only funding directed towards the NRC is for secretarial support and maintaining the Research Register.[345] While prudent fiscal management is desirable for any country, it is argued that science and research will always be a vital component to the long-term sustainable growth of a country. It leads to innovation and discoveries, which build a country's capacity and understanding, but too often is not given priority. However, this is understandable as SIDS face the difficult challenge of how best to allocate its limited resources. It is argued that there should be further reconsideration as to the current priority given to strengthening science and research.

Without a clear research policy or legislative framework in place that, inter alia, takes into account MSR, the Cook Islands risks not being able to utilise the full benefits of MSR. However, this is clearly a larger national issue beyond the marine sector, which is the management of Cook Islands science and research in general.

The Cook Islands does not appear to have a strong science and research capacity. As identified above, the science and research capacity of the Cook Islands is scattered amongst several governing and non-governing bodies. The main higher education institute in the Cook Islands is the USP campus, which offers a range of courses and qualifications in order to build up the Cook Islands research capacity.[346] There does not appear to an overall strategy or institution focussed on building up the science and research capability of the Cook Islands as a whole.[347] Further, a lack of technical capacity is a recurring theme in the management of all the sectors, and there is perhaps a correlation between the need for strong science and research capacity and addressing technical capacity issues in the Cook Islands. It is suggested that there is a mind-set of relying on external agencies for technical capacity, and similarly science and research capacity. While there are efforts to ensure that external assistance must also build national capacity, in practice this does not always happen. Some development programmes have tried to address this by explicitly requiring national capacity building by external TAs;[348] however, there

[344] *Cook Islands National Research Policy*.
[345] MFEM, above n 284, 277. That is to say, one person currently administers the register, and provides secretariat services to the NRC.
[346] The model the USP is trying to develop involves: (a) increasing the number of Cook Islands students qualified to do post graduate studies; (b) prepping them with Masters by coursework if necessary; (c) offering a 400 level Research Methods course periodically in the Cooks as summer school; (d) building up a group of Adjunct Professors (in-country and overseas) able to provide supervision to our post grad students in their research area, in addition to those available through USP Faculties; (e) providing tutorial support and advice; (f) identifying possible scholarship opportunities.
[347] Science and research capacity is not emphasised in the Ministry of Education strategic policies, although this may be because the OPM appear to have taken the lead role through the NRC. Although, as discussed, this requires further support and improvements to the current policy.
[348] For example the Cook Islands Technical Assistance Fund.

does not appear to be the same emphasis on building national science and research. Overall, science and research capacity is weak.

It is important to reiterate the international, regional, and national emphasis on the key role of science in policy decision-making, and the need to build science and research capacity for sustainable development. This applies especially in the case of ocean governance. Building the Cook Islands science and research capacity is a long-term aspiration that should be a priority, and is discussed further in Chapter 9.

4.6 Lack of Governance Framework for the Area

The Advisory Opinion delivered by the Seabed Disputes Chamber (Chamber), made it clear that sponsoring States have due diligence obligations and other direct responsibilities under the UNCLOS.[349] A sponsoring State is absolved from liability only if it put in place laws and regulations, and administrative measures reasonably appropriate to secure effective compliance by the sponsored entity of its obligations.[350]

The Seabed Minerals Act does not reflect the Cook Islands recent status as a sponsoring State, and its scope is currently limited to the Cook Islands EEZ.[351] Fortunately, the Seabed Minerals Act is currently under review, and will inter alia address this issue. Further, the Cook Islands already have an appropriate regulatory body in place (the SMA), as well as a state commercial body responsible for the JVA with GSR (the CIIC). However, as it stands the Cook Islands is in a risky position, particularly once its sponsored party begins exploration activities, until the planned legislative changes go ahead.[352] Another issue to consider is the CIIC, which will establish a state owned enterprise (CI-GSR) to collaborate with GSR in a JVA holding the exploration licence.[353] However, the required CIIC SOE policy or legislation has not yet been established, which is another gap in the national framework for the Area. Furthermore, an ADB report identified governance and legislative weaknesses within

[349] Advisory Opinion, above n 172. For more on key obligations, see: Robert Makgill and Ana Linhares, 'Deep Seabed Mining: Key Obligations in the Emerging Regulation of Exploration and Development in the Pacific' in Robin Warner and Stuart Kaye (eds), *Routledge Handbook of Maritime Regulation and Enforcement* (Routledge, 2015) .
[350] *UNCLOS*, Annex III, Article 4, paragraph 4.
[351] And does not refer to the Area or sponsorship.
[352] As activities in the Area develop, other regulatory agencies such as the NES will need to be involved to provide environmental management to ensure compliance by the sponsored entity.
[353] There are also plans for the JVA to apply for an exploration licence in the Cook Islands EEZ.

existing CIIC SOEs,[354] and identified several priority issues and recommendations[355] in order to improve the financial and operational performance of SOEs.[356]

This raises a related issue on the national frameworks governing in the Area, which affect the Cook Islands, and speaks to implementation of the ocean governance principles. That is, the disjointed regime of national laws in the Area, which arguably affects the adequacy of domestic legal systems and measures to ensure contractor compliance in the Area. It is unsurprising that in the aftermath of the Advisory Opinion, several States have adopted regulatory changes in order to meet their obligations.[357] However, an unintended consequence is varying approaches to regulation.

Of the 27 approved exploration work plans to date, the sponsoring States and States contractors in the Area have taken differing levels of regulatory and administrative measures.[358] The varying approaches can be categorised as follows:

a) States with no seabed mining laws and only terrestrial mining laws in place;[359]
b) States with seabed mining laws which only apply nationally and not to the Area;[360]
c) States with outdated seabed mining laws;[361]
d) States with seabed mining laws applicable to the Area.[362]

For those sponsoring States that are within categories (a) to (c), they already fall short of their obligations under the UNCLOS.[363] Although, this does not tell the picture entirely, as there are several States who are currently in the process of drafting legislation.[364] As for those States who do have DSM laws for the Area, there are inconsistencies in terms of the content of legal systems. It is questionable whether in fact some legal systems are effectively discharging their obligations under the

[354] ADB, above n 295, 51.
[355] These were: (1) Clearly define the principal objective of a state-owned enterprise (SOE) as maximising the public investment's net worth; (2) Establish clear rules to identify and fund community service obligations; (3) Establish transparent, skills-based criteria to select and appoint SOE directors; (4) Formally require SOEs to always investigate options to contract out activities and
services they provide, and to look for opportunities to work with the private sector through joint arrangements.
[356] These governance issues affect the operational performance of the CIIC SOEs, and will need to be taken into consideration when developing the SOE policy for the CI-GSR. There have been suggestions to involve the private sector through public–private partnership (PPP) arrangements, which could be considered. The focus of this thesis is on the legislative framework and capacity of the public sector regulatory bodies, as opposed to the commercial arm of government, however, this issue requires further consideration.
[357] It is interesting to note that a large number of the recent legal reforms have come from developing States in the Pacific region. Currently, the Pacific States with DSM laws are the Cook Islands, Fiji, Nauru, Tonga, and Tuvalu, with Kiribati due to pass legislation shortly. Singapore is another developing state who has recently passed DSM legislation. It is clear that these developing States have taken a proactive approach towards meeting their obligations.
[358] See Bibliography for various DSM legislation.
[359] Brazil, India, Kiribati, Peoples Republic of China, Republic of Korea, Russian Federation.
[360] Cook Islands.
[361] France, Japan.
[362] Belgium, Czech Republic, Germany, Nauru, Singapore, Tonga, United Kingdom.
[363] It is interesting to note that there are both developed and developing countries that do not have current seabed mining laws for the Area. Particularly given the concerns directed at whether developing countries would be able to meet their obligations.
[364] See *Laws, regulations and administrative measures adopted by sponsoring States and other members of the International Seabed Authority with respect to the activities in the Area* (ISBA/21/C/7) (1 June 2015).

Convention.[365] There also does not appear to be a clear practice for sponsoring States administrative measures. Thus, we currently have a disjointed framework of domestic legal systems and administrative measures, which leaves room for improvement.

This issue impedes good ocean governance in the Area, in particular the need for an integrated approach as well the application of the CHM principle. It is yet another example of the friction between State sovereignty in implementing national laws and an integrated approach to ocean governance. In terms of the CHM principle, there is duty to ensure that the Area is managed for the benefit of humankind as a whole, as such, there is a need to ensure that the regime put in place is effective. Further efforts should be made in this regard, and will be discussed in Chapter 10.

Having surveyed the suite of frameworks underpinning DSM development in the Cook Islands, the question was posed whether they sufficed to meet the challenges expected in ocean governance. The response is that while great efforts have been made at all levels towards improving the ocean governance frameworks, there are however major weaknesses and challenges needing to be addressed.

[365] See Herman, above n 328.

PART TWO: TOWARDS IMPROVING THE OCEAN GOVERNANCE FRAMEWORKS UNDERPINNING DSM DEVELOPMENT

Part One provided an overview of the ocean governance frameworks underpinning DSM sustainable development, and identified the gaps, weaknesses and challenges of those frameworks. Part Two focuses on recommendations for the way forward, as well as issues requiring further attention. The recommendations presented aim to be pragmatic and feasible reforms of governance and management, with a reasonable prospect of resolving gaps and weaknesses identified, able to be effectively implemented, and cognisant of current political and legislative directions. Although, some of these issues are deeply rooted and complex, often the result of multiple factors, and can be characterised as 'wicked' problems.[366] These ocean-related issues are inherently 'wicked' as they are difficult to define and delineate from other and bigger problems, and tend to reappear.[367] Wicked problems cannot be tackled by the traditional approach in which problems are defined, analysed and solved in sequential steps. Ocean governance is seen as a way to truly engage these challenges, although it requires an interactive multi-faceted process involving all stakeholders addressed over the long-term.[368]

This thesis discussion is occurring at a timely point in the Cook Islands development with numerous legislative and policy reviews affecting ocean governance underway. There should be efforts to ensure reforms occur in a coherent manner, fix overlaps and inconsistencies, and result in harmonised and integrated regulatory frameworks. Several key sectors are in flux, which is an opportune time for the Cook Islands to shape its management of ocean affairs into one that is crosscutting, integrated and based on robust ocean governance principles, and to definitively set its vision for the future. It is hoped that the thesis can assist in achieving that vision.

The Seabed Minerals Act 2009 and Environment Act 2003 are currently under review, and the Marae Moana National Ocean Policy is under development, and the Public Sector is set to be reformed. Other relevant developments include the NSDP 2016+, the next iteration of the NSDP, which includes Goal 14 on oceans which can be traced to the equivalent goal in the SDGs.[369] The Seabed Minerals Act and Environment Act review has identified various issues, including some that have been discussed above.

[366] For example the capacity challenges for SIDS such as the Cook Islands.
[367] For further discussion see: Svein Jentoft and Ratana Chuenpagdee, 'Fisheries and coastal governance as a wicked problem' (2009) 33(4) *Marine Policy* 553; Kathryn K. Davies et al, 'Improving ecosystem service frameworks to address wicked problems' (2015) 20(2) *Ecology and Society* 37
[368] Charles W. Finkl and Christopher Makowski, *Environmental management and governance: advances in coastal and marine resources* (Springer, 2014)
[369] Goal 14: Encourage the sustainable use and conservation of ocean, lagoon and marine resources.

For brevity reasons, this thesis will focus on selected issues relating to the key ocean governance principles identified in Chapter 2 and how it affects DSM development.[370]

There is no one single model for operationalising ocean governance at the national level; this depends on the country's legal, cultural, political and economic context.[371] At the outset, this thesis proposes that the basis of DSM developments should be the adoption of the RLRF and the regional Model legislation. There are several reasons for this. As mentioned, the RLRF underwent extensive consultation to ensure that the best practices were advocated in terms of environmental, fiscal, revenue, social, OSH, MSR considerations. Furthermore, it is context specific to the Pacific, and so accounts for the challenges of SIDS. As a result, the RLRF has been widely used throughout the Pacific, and aside from the Cook Islands Seabed Minerals Act, which predates the DSM Project, all of the Pacific island countries laws are based on the RLRF and Model Law. This, in itself presents a successful case study for a coherent regional approach as espoused by the PIROP, and alignment of a marine sector towards the "development of consistent and harmonised national regulatory practices, policy and law."[372] This ensures that management approaches and standards are cohesive, and do not differ depending on what side of a national border DSM resources lie. Finally, the Cook Islands is currently adapting its Seabed Minerals Act to align with the Regional Model law. In addition to the RLRF, there are numerous regional and international guidelines and standards that will be useful for consideration. Produced by both governing and non-governing authorities, including industry and NGOs, these guidelines contribute to strengthening governance.[373]

5 Towards an Integrated Approach to Oceans Management

This Chapter discusses the efforts taken by the Cook Islands towards a national ocean policy, through its Marae Moana Policy, and how DSM fits within that context, as well as integration within the DSM sector itself.

As seen, one of the root causes for poor ocean governance is the prevalence of haphazard, overly fragmented ocean policy decision processes.[374] It is well-recognised that an integrated approach to

[370] For example, a current gap not discussed in this thesis the lack of Sovereign Wealth Fund policy and legislation, because of a need to limit the scope of this thesis. However, it is not a pressing issue, and it is currently under consideration by the MFEM. It is noted that the RFMF developed by the DSM Project and PFTAC will be a useful guide for the further consideration of this issue.
[371] Donald R. Rothwell and David L. VanderZwaag, *Towards Principled Oceans Governance: Australian and Canadian Approaches and Challenges* (Routledge, 2006) 400.
[372] RLRF, above n 85.
[373] Although given their voluntary nature, these instruments are viewed by some to be too general, lacking sufficient detail, and often reflecting the lowest agreeable standard (least common denominator) of a consensus-based process.
[374] Miles, above n 33.

coastal and marine policy and management is necessary for ocean governance. This will require a great deal of cooperation at the national level that starts with the enactment of a coherent national ocean policy, allowing all the relevant stakeholders to have a clear view of the direction the Cook Islands should take in dealing with its ocean affairs.[375] However, a difficult issue to answer is how resource-based sectors and environmental protection can be reconciled in practice. Success factors for achieving integrated oceans management include: implementing common principles; formal institutions; political support; promoting binding principles; enabling stakeholders; ensuring adequate funding.[376]

Since the turn of the century, many countries have come to accept the need for an integrated approach for ocean governance, and there have been increasing efforts to develop a national ocean policy to reflect this. Thus, the move to create comprehensive national ocean policies to harmonise existing uses and laws, to foster sustainable development of ocean areas, to protect marine diversity and vulnerable resources and ecosystems, and to coordinate the actions of government agencies that are typically involved in ocean affairs is a growing practice.[377] However, this has been notoriously difficult for many countries to develop and implement. For some, such as New Zealand who, after many years of development, have yet to pass a national ocean policy. Australia has had to revise its policy. It is one thing to agree that an integrated approach is needed; it is a completely different matter in achieving integration. The Cook Islands has begun to develop its national ocean policy, which is a step in the right direction, and it is advised that close consideration of other countries attempts should be taken into account in order to anticipate where the 'sticking points' will occur and how best to address them. It is important to note from the experience of other countries who have embarked upon the same exercise, that the adoption of a national oceans policy or legislation alone does not ensure a country will get its 'ocean act' together.[378] This approach to policy and management requires genuine integration rather than simply coordinating policy, planning and management across the coastal and marine interface.[379] There are a multitude of other factors to be taken into account ranging from the institutional, political, inter-governmental issues.

Before moving further, it is important to take stock of the various ocean-related sectors in the Cook Islands. These are living resources (including fisheries, pearls, and aquaculture); non-living resources

[375] For more see de Marffy, above n 93.
[376] Biliana Cicin-Sain, 'Enabling factors in achieving sustainable development in national ocean policies' (Paper presented at the Presentation to 2015-2015 UN-Nippon Foundation Fellows, New York, 2015).
[377] Miriam C Balgos, Biliana Cicin-Sain and David L VanderZwaag, 'A Comparative Analysis of Ocean Policies in Fifteen Nations and Four Regions' in Biliana Cicin-Sain, David L VanderZwaag and Miriam C Balgos (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge, 2015) 3, 5.
[378] Rothwell and VanderZwaag, above n 401.
[379] Geoffrey Westcott, 'Disintegration or disinterest? Coastal and marine policy in Australia' in K Crawley and K Walker (eds), *Environmental Policy Failure: The Australian Story* (Tilde University Press, 2012) 88.

(including DSM and energy); shipping (including maritime transport, registry and safety, maritime security, and port state control); the protection of the environment (including environmental management, conservation of biodiversity such as whales and sharks); marine tourism; and science and research (i.e. MSR).

5.1 Development of the Marae Moana Ocean Policy

The path towards a national ocean policy began in 2012 with the announcement of a multi-use marine park by the Cook Islands Prime Minister at the Pacific Island Leader's Forum. Originally envisaged to cover the southern half of the Cook Islands EEZ, it was at the time, the largest announced marine park making up approximately 1 million km^2.[380] A steering committee was set up to drive the development and establishment of the marine park, later known as the Marae Moana, with a number of workshops and consultations undertaken throughout the Cook Islands,[381] with the support of international donors.[382] The outcomes of the consultations has shown wide public support for the Marae Moana, as well as the desire for the marine park to be extended to the entire EEZ, as well as a broadening of the objectives of the marine park towards that of sustainable management as opposed to purely conservation. While the Prime Minister has been clear about the multi-use aspect of the Marae Moana, including other users such as fisheries and DSM,[383] it is questionable whether this has been fostered in practice. For example, there are tensions between fisheries and environmental conservation interest groups, a common issue in other jurisdictions, with the government's decision to award purse-seining licences as well developing the Marae Moana policy viewed as 'hypocritical'.[384] Reaching agreement between conservation and economic development interests is never going to be easy, however it is emphasised that ocean governance can only achieved if all the relevant actors are working together towards shared goals. An 'either/or' viewpoint impedes progress, and there needs to be further efforts from all stakeholders to work together towards integrated oceans management. Hence, one of the main challenges will be how to provide frameworks and processes that can accommodate, and resolve, conflicts between the vast range of interests and values involved in the Cook Islands marine area in order to achieve genuine integration across the sectors.[385] A difficulty to achieving integration is that traditional sectors can be territorial, and see an overarching policy as eroding their authority to

[380] Since then, other countries have announced marine parks larger than the Cook Islands such as Chile and New Caledonia.
[381] For more information on the consultation history of the Marae Moana, see 'Draft Marae Moana Policy' (Version 3, Office of the Prime Minister, 29 May 2015)
[382] Such as Oceans 5 and the IUCN.
[383] The Prime Minister has stated often "the Marae Moana will provide the necessary framework to promote sustainable development by balancing economic growth interests such as tourism, fishing, deep sea mining with conserving core biodiversity and natural assets in our ocean, reefs and islands." See Samisoni Pareti, "It's in our DNA to conserve the ocean' – Cook Islands Prime Minister', *Islands Business Magazine* (Apia, Samoa), 29 August 2014.
[384] Phillipa Webb, 'Marae Moana plan struggles to stay afloat', *Cook Islands News* (Rarotonga), 11 November 2015.
[385] There requires a trade-off between economic development and environmental protection in terms of governance of marine resources. For more see: Chang, above n 32; Zacharias, above n 73.

their detriment of their respective sectors. It has been noted that the traditional institutional framework governing ocean management has considerable strength, but the challenge is to build on this framework and establish new institutions and processes to deal with the demands of integrated management.[386] As it is clear that sectoral uncoordinated oceans management is not sufficient for modern challenges such as ocean acidification, climate change.

Promisingly, the development of the Marae Moana Policy continues to progress and a task force was set up in late 2014 with key ocean related agencies, including the OPM, MMR, NES and SMA. In December 2015, a further workshop was held to discuss version 4.0 of the draft national ocean policy.[387] The principles of the draft Marae Moana Policy align with the key ocean governance principles, and include: (1) Protection and Conservation; (2) Ecologically Sustainable Use; (3) the Precautionary Principle; (4) Community Participation; (5) Transparency and Accountability; (6) Integrated Management; (7) Investigation and Research; and (8) Ecosystem-based Management. There are also 13 policy objectives towards the achievement of the Marae Moana Policy.[388] These policy objectives support a more integrated approach to ocean governance, such as: recognising connections within and across ecosystems; utilising an ecosystem services perspective; protecting core elements of marine areas to preserve biodiversity and to sustain ecosystem services; addressing cumulative impacts; managing multiple objectives and values; addressing diverse scales of management consistently and adaptively; and embracing change, learning, and adapting. The policy objectives importantly indicate that oceans management will be science and ecosystem-based.[389]

The draft Policy aligns with the commitments expressed in the NSDP, PIROP as well as international conventions and commitments. This importantly gives attention to all the levels of ocean governance. As discussed earlier, applying integration as a key ocean governance principle, facilitates interaction across different regimes, sectors and levels.[390] It also identifies the key challenges to achieving the vision and long term outcomes of the policy, most of which reflect the key challenges identified in this

[386] Haward and Vince, above n 40, 21.

[387] For the purposes of this thesis, version 4.0 of the draft Policy dated 8 December 2015 will be considered. above n

[388] These are: (1) Conservation and Ecological Sustainability; (2) Integrated Planning & Adaptive Management; (3) Marine Resource Development; (4) Marine Tourism Development; (5) Maritime Transport & Safety; (6) Marine Spatial Planning; (7) Transparent Management Processes; (8) Socially Responsible Maritime Development; (9) Maritime Cultural Heritage; (10) Partnerships; (11) Education, Communication, Consultation and Commitment; (12) Research and Monitoring; (13) Sustainable Financing.

[389] It is noted that a proposal from traditional leaders for a 100 NM exclusion zone does not appreciate the complexities of managing migrating species or cumulative and transboundary impacts. While it may have an environmental conservation basis, the likelihood of acceptance from other stakeholders such as fisheries is not great. This likely 'alienates' other stakeholders, and does not ultimately lead to a truly sustainable solution with the requisite ownership by all stakeholders involved.

[390] K. Houghton, 'Identifying new pathways for ocean governance: The role of legal principles in areas beyond national jurisdiction' (2014) 49 *Marine Policy* 118.

thesis.[391] The draft Policy appears to reflect international best practices and standards of planning, decision-making, and governance to strengthen and improve ocean governance. It should therefore lead to governance processes, which generate the necessary connections and linkages required between laws, policies and institutions, to ensure effective ocean governance. Irrespective of form, attention must be paid to achieving the ends that the policy objectives pursue.[392] However, addressing underlying weaknesses and challenges, as discussed in Part One, are key to its successful implementation, which is discussed further in subsequent Chapters.

The intention is for the OPM to be the lead coordinating agency. It is important, that there be a leading body, as lack of institutional leadership at the national level has impeded effective ocean governance.[393] The OPM should, inter alia, have a clear terms of reference; involve coordination at the highest political levels; receive input from an external council of advisors; be transparent and allow some form of public involvement; and have incentives for joint action, such as joint budgets.[394] However, it has been noted that the current taskforce lacks a clear terms of reference.[395]

The implementation of the Marae Moana Policy is to be carried out by the various sector strategies and strategic action plans. However, as identified, DSM does not have a strategic action plan,[396] and for that matter neither does shipping and maritime safety. Thus, while the draft Marae Moana Policy has identified some legislative gaps, an in-depth analysis of the gaps and challenges for the entire ocean governance framework will be useful to identify missing components which will affect ocean governance management overall.

This thesis will not discuss the Marae Moana Strategy or integrated management plan and its costing in further detail,[397] however it is a vital consideration in the development process,[398] and thus a few

[391] The key challenges identified in the draft Marae Moana Policy 3.0 are: 1. Inadequate integration of environmental externalities in development planning; 2. Small human resources base and close kinship ties; 3. Climate Change impacts; 4. Low prevalence of environmental education and awareness; 5. Limited understanding of the deep ocean environment and inadequate emphasis on scientific research of natural resources in general; 6. Under-appreciation of the importance of both western science, traditional ecological knowledge and the traditional leaders role in marine resources management; 7. Insufficient resources for coordination, research, ecosystem and species monitoring, stakeholder consultation as well as surveillance and enforcement; 8. Legislation that is lacking in some cases the requirement for accountability, transparency and in most cases collaboration across sectors.

[392] See Houghton, above n above 390.

[393] A lack of a leading body was an issue for the Philippines. For more see Jay L Batongbacal, 'The Phillipine National Marine Policy' in Biliana Cicin-Sain, David L VanderZwaag and Miriam C Balgos (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge, 2015) 416

[394] Balgos, Cicin-Sain and VanderZwaag, above n 377, 34.

[395] 'Situational Analysis to Support Implementation of the Cook Islands Marae Moana Policy' (Internal Government Document, Commonwealth Secretariat, 14 August 2015).

[396] Discussed further in Chapter 5.3.

[397] Although, access to financing is discussed further in Chapter 8.2.

[398] There are various examples of where this has been implemented successfully, such as the Sustainable Development Strategy for the Seas of East Asia. See Stella Regina Bernad and Chua Thia-Eng, 'The Sustainable Development Strategy for the Seas of East Asia: Policy Implications at Local, National and Regional Levels' in Biliana Cicin-Sain, David L VanderZwaag and Miriam C Balgos (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge, 2015) 522.

observations will be made. It is important to appreciate that the development of integrated management plans is not a quick process, and involves numerous steps including the need to: Identify existing and proposed ocean uses; Assess marine resource distributions and ecosystem relationships; Engage affected interests; Get endorsement of the plan by planning participants and decision-making authorities; and Ensure implementation of the plan through monitoring and evaluation.[399] It took other countries such as Canada, eight years after the passing its ocean legislation to finalise a plan for a Large Ocean Management Area (LOMA) and Australia six years after establishing its ocean policy to deliver its Southeast Regional Marine Plan.[400] New Zealand also spent years developing its policy and did not end up passing it.

5.2 Integrated Approach to DSM Management

In line with the development of the overarching National Ocean Policy, the various marine sectors will require adjustments to ensure integration, thus this section discusses the changes needed for the DSM sector.[401] Related to this is the reality that resources are limited, particularly for a SIDS, and thus the key is to use existing resources in a much more efficient and beneficial way, in order to 'do more with less'; ocean governance assists in this regard by removing overlaps, and creating synergies through cooperation, integration and coordination.

As highlighted in Chapter 4.1, the DSM legislative regime contained overlaps and conflict. There is a need for the clarification of the role and mandate of various governing agencies responsible for DSM management.[402] Governing agencies need to be strong and independent with clearly defined roles and missions.[403] There should be clarity on the lead functions of the agencies, and where they can complement or support other agencies functions. In the context of regulative DSM activities, this involves the management of licensing, environmental, occupational health and safety, marine scientific research considerations. Once the roles and mandates of particular agencies are clear, the next issue for consideration is interagency and cross-sectorial collaboration for DSM management. There will need to be coordinating mechanisms for issues such as information sharing between agencies. This is discussed further in Chapter 7.

[399] Rothwell and VanderZwaag, above n 371, 401.
[400] Elizabeth Foster, Marcus Haward and Scott Coffen-Smout, 'Implementing integrated oceans management: Australia's south east regional marine plan (SERMP) and Canada's eastern Scotian shelf integrated management (ESSIM) initiative' (2005) 29(5) (9//) *Marine Policy* 391.
[401] The Integrated Water Resources Management Policy is an example of integrated management between national agencies. The assessment of the effectiveness of this Policy is beyond the scope of this thesis.
[402] As well as in other ocean-related sectors, for example overlaps in fisheries.
[403] For example, in the aftermath of the Deepwater Horizon incident, a review oil and gas regulation was undertaken, which saw the reorganisation of MMS into BOEMRE: "MMS – with its conflicting missions of promoting resource development, enforcing safety regulations, and maximizing revenues from offshore operations and lack of resources – could not keep pace with the challenges of overseeing industry operating in U.S. waters"

The SMA takes the lead role in considerations of DSM issues, and manages the licensing and regulation of DSM activities. Given that, the SMA should take an active role in coordinating between agencies involved in DSM activities to ensure there is integration and that no areas fall 'through the cracks.'[404] Integrated management should also reduce inefficiencies and bureaucratic management. One suggested example for implementing this is in the application process; rather than making three applications, an applicant makes one application to the SMA, which includes licensing, environmental, financial and OSH considerations. SMA makes a decision on licensing, and where possible initial assessments on environmental and OSH, then refers to the relevant agencies. This process not only ensures integration, but also lessens the bureaucratic burden. In addition, legislative overlaps, such as in the Marine Resources Act 2005 will need to be removed.[405] In terms of monitoring and surveillance, the SMA have technical capacity and resourcing issues, and further collaboration with the MMR is suggested to undertake this.[406]

Environmental management in general and of DSM activities in particular, should rest with the NES as the lead agency.[407] Thus, overlaps in the Seabed Minerals Act which place environmental management functions with the SMA should be removed, with ongoing efforts on building up the NES capacity in DSM management. The SMA and the NES are currently working together develop guidelines and standards, and this should continue, as the collaboration between SMA and NES will build both agencies capacities. This highlights another issue beyond DSM, which is the environmental management of biodiversity in the Cook Islands EEZ. Currently the MMR has the mandate for this as well as the technical capacity. However, the NES also has a mandate for this through its Environment Act, but does not have the technical capacity or resources for its environmental management, and has traditionally focused on terrestrial and coastal environmental management, leaving environmental management of living resources in the EEZ largely to the MMR. An example of this is the Whale Sanctuary policy and legislation currently under development, which purports to place this responsibility with the MMR, due to NES capacity issues. The MMR, similar to the SMA focusses on resource development, whereas the NES are clearly mandated for environmental management. The Environment Act review has suggested that the NES should hold the environmental management role throughout the Cook Islands.[408] However, clarifying NES's mandate is one factor, and building up the requisite capacity to be able to effectively implement such management is another issue entirely. There

[404] As such, the SMA will need to take the lead on ensuring integrated DSM management and a further DSM Strategic Action Plan, as well as coordinating with relevant agencies for high-level updates on their respective responsibilities.
[405] To remove the overlapping of the MMR and SMA roles of managing DSM resources.
[406] Discussed in Chapter 7.1.
[407] Other options, as suggested by the RLRF, would see the SMA holding this role. However, this option is not encouraged as this may raise conflict of interest issues by the regulating authority who will be required to develop the DSM resources, as well as conserve biodiversity.
[408] Lily, above n 293.

will need to be further collaboration with the MMR on this, with the NES having a clear independent mandate for conservation and protection of the marine environment.

Maritime safety, including occupational health and safety should sit with the MoT as the lead, as it is more clearly within their existing mandate, with the SMA providing support in relation to DSM activities.[409] Further collaboration will be required between the SMA and the MoT on more technical issues, such as the engineering aspects of DSM vessels. However, similar to NES, there is a need to strengthen MoT's capacity for enforcing health and safety standards on vessels. In addition, some consideration may be given to whether the Maritime Transport Policy 2014 should be amended to reflect DSM management, particularly as part of the functions of the MoT.

Beyond the DSM sector, there needs to be further integration and reference of DSM into other national policies and plans. Areas where it is currently missing includes the Maritime Transport Policy and the Cook Islands Joint National Action Plan for Disaster Risk Management and Climate Change Adaptation (JNAP).

5.3 Development of a DSM Strategic Action Plan 2016+

The operationalising of an integrated approach to DSM management requires an operational or implementation plan to ensure that policy objectives of the DSM Policy are met. Currently, there is no DSM strategic action plan in place, to highlight the goals, strategies, key actions and responsible agencies, as the DSM Policy alone is not sufficient.[410]

In the context of the Cook Islands Government Policy and Planning Framework, the diagram below illustrates the role of various policy, legal and institutional arrangements:[411]

[409] Another option would be for it to be developed under the SBM Act; however, it is argued that this is not the most appropriate avenue. This comes back to the capacity for the SMA to undertake OSH monitoring and compliance. Further, this appears to be a role better suited for the MoT to undertake, as they are already responsible for maritime safety.

[410] An example of a successfully developed strategic action plan in the Cook Islands is the JNAP. For more see: 'A National Approach to Managing Climate Change in the Cook Islands' (Australia Government's Pacific Adaptation Strategy Assistance Program (PASAP), 2012); 'Joint National Action Plan for Disaster Risk Management and Climate Change Adaptation 2011-2015 ' (Cook Islands Government, 2012).

[411] 'The Cook Islands Government Public Policy & Strategic Planning Tool-kit: A Guide to Policy Development in the Cook Islands' (Office of the Prime Minister, December 2015).

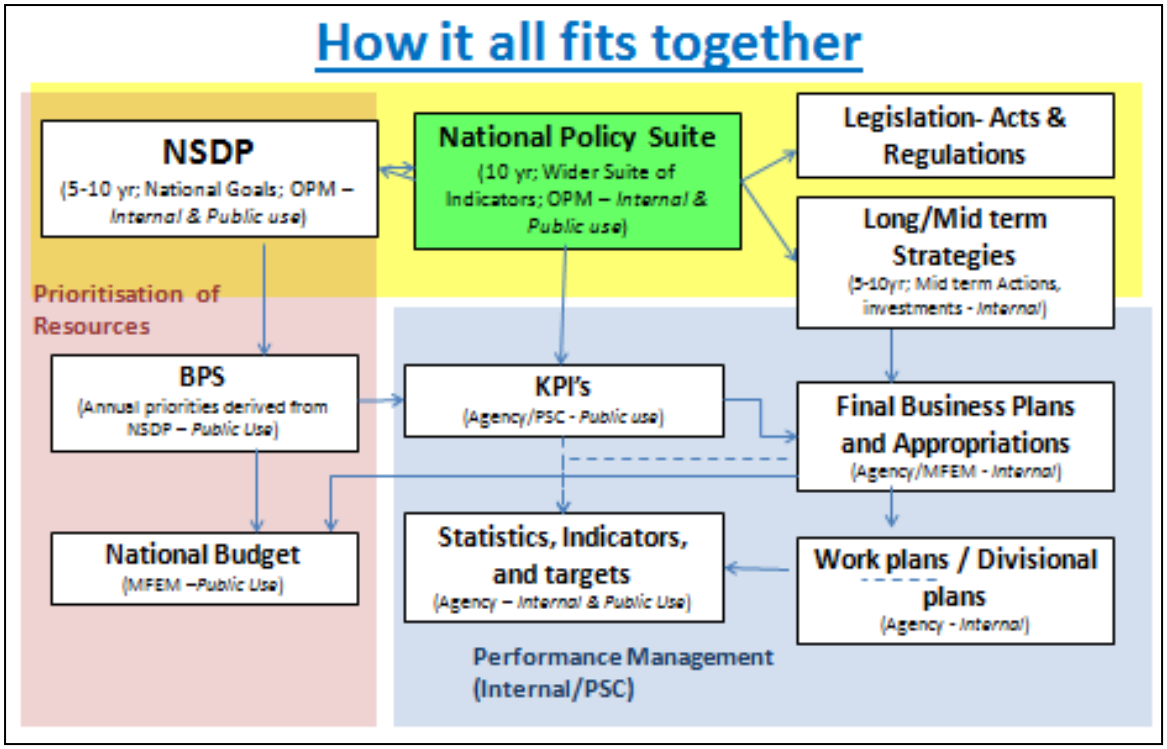

Figure 2: The Cook Islands Government Policy and Planning Framework

As discussed, the NSDP is the starting point for the policy direction of the Cook Islands, and the basis of national policies such as the DSM Policy. From the DSM Policy, flows laws such as the Seabed Minerals Act and Regulations to give legal effect, as well as long and mid-term strategies for its implementation, that is the DSM Strategic Action Plan. This is then filtered down to the annual Business Plans developed by individual Government agencies, which are the short to medium term plans for achieving the outputs for DSM management. The Business Plan is generally agency-focused, and does not provide a 'big picture' road map, whereas the DSM Strategic Action Plan ensures that purposeful steps and coordinated actions are taken by all the relevant stakeholders towards achieving the vision of the sustainable development of the DSM resources in the Cook Islands.[412]

The issues and recommendations discussed in this thesis can contribute to the development of the DSM Strategic Action Plan. The DSM Policy provides a blueprint for the vision, key strategic areas, strategies, actions and sub-actions for the Strategic Action Plan. Care needs to be taken to ensure that there are clear measurable targets, timelines, and indicators, as well as linkages to the key institutions identified.[413] A UNDP review highlighted this as one of the deficiencies towards the implementation of a Cook Islands national action plan.[414] Thus, indicators should contain clear qualitative and

[412] A similar need applies for a strategic action plan to accompany the development of the National Oceans Policy, which is currently under consideration.
[413] This is an issue for environmental management protection. See Passfield and Rongo, above n 283.
[414] D J Butler, 'Government of the Cook Islands Enabling Activity Biodiversity Project Evaluation Report (NBSAP) CKI/98/G31' (2003).

quantitative information on the progress toward outcomes.[415] Several key agencies need to be strengthened,[416] and a financing and communication strategy should be developed. The necessary coordinating mechanisms for various inter-agency arrangements and cooperation can be referred to in the Action Plan. Another key component of the Action Plan is a monitoring and evaluation (M&E) framework to provide a mechanism for relevant agencies to monitor progress and measure success of the DSM sector objectives, outcomes, and outputs, through key actions and key performance indicators.[417] Weak monitoring, evaluation and reporting mechanisms have been identified as a key constraint to managing environment related priorities and activities.[418] A robust review mechanism to ensure commitments are translated into time-bound results is necessary for all levels of ocean governance.[419] Furthermore, the Action Plan should incorporate a risk management framework such as a risk assessment and management plan for DSM development. [420] There are a range of different internal and external risks to the Cook Islands, such as political will, commodities demand, environmental risks including oil spills or disaster management.[421]

The proliferation of plans and policies for ocean governance and sustainable development will need to be managed well, particularly for a SIDS like the Cook Islands. A risk is that some issues may be prioritised over others, particularly within central, cross-cutting governing bodies. Hence the need to ensure that policies and plans complement each other, do not overlap, and are within the capacity of the agency implementing it, and if not, then measures are underway to strengthen those implementing agencies.

6 Enhancing Protection of Marine Environment

As mentioned, the Environment Act is currently undergoing a review to identify legislative gaps and make revisions with the assistance of the Commonwealth Secretariat, in order to improve its coverage

[415] Jody Zall Kusek and Ray C Rist, 'Ten Steps to a Results-Based Monitoring and Evaluation System: A Handbook for Development Practitioners' (The World Bank, 2004).
[416] This is discussed in greater detail in subsequent Chapters.
[417] For example, for scientific research management, there needs to be baseline data and systems in place to ensure progress is monitored and reported. For more on M&E frameworks, see: Kusek and Rist, above n 415; Jody Zall Kusek, 'Assessing Country Readiness for Results-Based Monitoring and Evaluation to Support Results Informed Budgeting' (The World Bank, January 2011)
[418] *Draft NESAF*, above n 264.
[419] As highlighted at the 70th Session of the General Assembly United Nations Summit on Sustainable Development 2015. In this regard, the central role of the HLPF on sustainable development at the global level was emphasised, as well as the ECOSOC's annual forum on financing for development to review the development financing outcome and the means of implementation was also welcomed. The need for increased capacity development and improved, credible and realistic statistical data for follow up and review was stressed. Robust data and global evidence, supported by harnessing the data revolution, were seen as critical. For more, see UN, above n 155.
[420] According to ISO 31000, a risk management framework is a set of components that support and sustain risk management throughout an organisation. There are two types of components: foundations and organisational arrangements. Foundations include your risk management policy, objectives, mandate, and commitment. And organisational arrangements include the plans, relationships, accountabilities, resources, processes, and activities you use to manage your organisation's risk
[421] As mentioned, DSM activities are not referred to in the current Cook Islands JNAP.

and provide a robust environmental law regime in the Cook Islands.[422] The discussion of the Environment Act review will be limited to issues that affecting DSM.[423]

The scope of the Environment Act should be extended to include DSM activities among other issues which is does not currently cover.[424] As the Environment Act is island focussed,[425] consideration of oceanic activities in the EEZ need to be built into the Act. This could be on a geographic or biological basis,[426] or the activity itself being a trigger because it is deemed too risky.[427] There are several options, and it is up to Cook Islands to decide which policy option is best. In order to ensure integrated ecosystem-based approach to management, the Act should include relevant tools such as the requirement for strategic environment assessment (SEA) and marine spatial planning (MSP). Contained in this is the need for a multidimensional risk assessment, to assess and respond to risks to ecosystems, human health, and economic wellbeing.[428]

Also, there needs to be further clarity around the requirements when undertaking DSM activities. This relates to the content of environmental management plans (EMPs) as well as triggers for EIAs. It is advocated that DSM activities should always require an EMP regardless of the level of impact it has. First, there is an inherent danger to DSM activities, particularly in the event of accidents. Further, monitoring and collection of baseline information should be required at the outset to build up the knowledge of the marine environment and potential DSM impacts. In order to achieve this, the current EMP template needs to be improved to take into account the specific requirements for DSM, as it does currently does not do so.[429] In terms of EIAs, the RLRF recommends an effects-based approach.[430] This could mean requiring varying levels of EIAs depending on the severity of the activities, therefore as DSM activities progress from prospecting, to exploration, and then to exploitation, the level of detail and effort required in an EIA will increase appropriately.[431] The REMF and the Regional Scientific Guidelines will be particularly useful to apply here. They contain guidelines on EMPs, EIAs, and guidelines on environmental data and method of collection. Further, the ISA Recommendations are

[422] Lily, above n 293. Initial consultations have been undertaken and various issues have been identified, the priority of which includes: The composition and operation of the Act's decision making bodies; NES enforcement capability and funding; EIA procedures; Limited coverage of the Act over outer islands and for nationwide projects; Unresolved jurisdictional overlap between NES and other agencies.

[423] Part Two does not make further consideration on the NESAF review. However, it reiterated that linkages should be made in the NESAF to other relevant marine sectors, including DSM, to ensure an integrated management approach. In addition, funding is another relevant issue, discussed further in Chapter 8.

[424] The environmental issues not covered are mostly those, which have in recent years attained international significance such as climate change and bio-prospecting, and being over a decade old, the Environment Act is out-dated.

[425] This is reflected in its attention to key island habitats such as coastal, foreshore, and wetlands issues.

[426] For example creating certain areas of the EEZ as protected and prohibited from activities.

[427] For example DSM exploitation activities.

[428] Miles, above n 33, 24.

[429] Furthermore, some requirements of the EMP template are subjective, and need to be quantitative to enable scientific monitoring.

[430] RLRF, above n 85.

[431] Thus, a lower level EIA would focus on major key issues and take a holistic approach, whereas higher level EIAs will need greater technical detail. Although, in some countries such as Australia, the level of technical detail is so extreme which make it difficult for regulators to hone in on substantive issues. The Cook Islands will need to be aware of this.

also a useful guide to base the requirements for an EIA on.[432] The current review is taking these guidelines into account. These changes are needed to ensure the effective management and protection of the marine environment. In the case of DSM, the role of science becomes critical, as it underpins the ability to measure and understand the effects of mining, and informs the development of effective mitigation and environmental management plans.[433]

In terms of the NEC composition, it is suggested that this be reconfigured to no longer depend on IEA membership, as the NEC is expected to manage environmental issues of national significance, such as DSM activities. It is clear that technical expertise, or at least access to technical expertise, should form the basis of the NEC composition, to ensure decisions are based on scientific evidence.[434] A concern with the current IEA composition is that it includes non-technical members such as members of parliament. This can lead to a risk of politically motivated outcomes, a lack of technical input and scientific evidence in decision-making, and conflicts of interest.[435] This issue requires further consideration by policy-makers.

Further, efforts should be made to mainstream environmental considerations into the relevant policy, legal and institutional arrangements. The development of the national ocean policy is an opportunity to undertake a stocktake of the relevant instruments, and incorporate environmental considerations to ensure an integrated approach.

OSH and the MoT's role is another relevant consideration to enhancing the protection of the marine environment. Given the nature of DSM activities, the MoT will need to have strong OSH laws in place to ensure the health and safety of people involved in DSM operations, and in this regard safeguarding against harm to the marine environment.[436] The RLRF recommends that DSM licences include provisions requiring the DSM operator to comply at all times with the prevailing national laws and procedures relating to occupational health and safety, employment security and labour laws.[437] Applicable to this are the recently passed Maritime Rules based on the Maritime Labour Convention

[432] ISA Recommendations (ISBA/19/LTC/8).
[433] *Regional Scientific Research Guidelines* above n 10.
[434] See: Lily, above n 422. Prior to the Environment Act 2003, the composition of a permitting authority was determined by a group of individual experts and found to work well; this was changed after concerns over individuals having too much influence over development projects.
[435] Ibid.
[436] This will include monitoring from an engineering perspective, including the integrity of DSM infrastructure systems such as the pipes transporting DSM resources from the seafloor to the ocean surface.
[437] RLRF, above n 85, [19.5]. Furthermore, the November 1999 International Maritime Organisation's Resolution A.891(21) on Recommendations on Training of Personnel on Mobile Offshore Units, provide an international standard for the training of such personnel to ensure that levels of safety and protection of the marine environment are complementary to what is required under the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers. The Resolution addresses all categories of personnel on Mobile Offshore Units, including the maritime crew, special personnel and visitors.

2006 (MLC).[438] The Cook Islands need to ensure that a minimum international standard is applied for DSM activities.[439] The risk of leaving it to DSM operators to apply their own safety rules is that there will be variability on the standards of protection, which may not be adequate.

7 Improving Cooperation and Coordination

Part One discussed the importance of cooperation and the current weaknesses and gaps amongst stakeholders involved in ocean governance. This Chapter discusses the way forward in terms of improving national, regional and global cooperation, coordination and communication amongst stakeholders, particularly governing bodies. One of the key issues in the Cook Islands is the lack of mechanisms in place to ensure cooperation and coordination amongst governing agencies and, as mentioned, this is reflected in the ad hoc or complete lack of cooperation. Cooperation is particularly pertinent to monitoring and compliance of activities in the ocean space. Therefore, in moving towards integrated management, mechanisms should be put in place that clearly set out the forms of coordination amongst agencies for the sharing of information, data, and resources. This already occurs in the coastal space, and needs to be extended to the EEZ.[440]

It is important to recognise that coordination needs to cut across all the relevant agencies, and be well understood and accepted by its ocean users to facilitate policy implementation and compliance. This requires both horizontal coordination across national agencies, and vertical coordination between the different levels of government.[441] This shift in focus from single-sector management to multi-sector management recognises that ocean users have common overarching national objectives and identifies common problems to be solved. Otherwise, attempts to impose centralised coordination on previously uncoordinated systems may trigger high degrees of bureaucratic conflict over issues of 'turf' and the right to manage, and an emphasis on harmonisation of policies through integrated mechanisms is required. [442]

[438] Further, in 2015 the Cook Islands became a member of the International Law Convention, which will enable it to ratify the MLC, as well as access training and funding opportunities to strengthen its labour laws.
[439] This also ensure certainty for the applicable requirements for the DSM industry.
[440] For example the MMR, NES, Ministry of Health, and the Ministry of Infrastructure Cook Islands work in conjunction on lagoon health monitoring programme, with MMR being the lead agency: *Integrated Water Resource Management Policy 2014* (Cook Islands).
[441] Miles, above n 33.
[442] Ibid.

7.1 National

As mentioned, the commencement of DSM activities will require further resources directed towards monitoring and compliance. While these resources may be directed to the SMA itself, it does not have the experience and foundation in monitoring and compliance that MMR already has, so it will be a steep learning curve. For example, the SMA does not have VMS capacity; to do this would require both expertise as well as technical infrastructure, both of which SMA does not currently have, and which the MMR has. Therefore rather than separately training officers in SMA, resources can be shared or pooled between the agencies for surveillance and monitoring. Given the current DSM allocation policy, it is anticipated that there will be a very small number of DSM exploration licences issued; therefore, the increased workload for MMR would not be overwhelming. The MMR has indicated a willingness to assist the SMA in tracking DSM vessels using its VMS capabilities.[443] Further, MMR also collaborates with the NZ Air Force, NZ Navy, French Navy and US Coast guard for surveillance and ship rider activities. Such arrangements could be extended to DSM vessels operating in the Cook Islands EEZ. Interdepartmental cooperation will rationalise government operational assets, thereby developing new mandates for certain well-endowed ministries, such as the MMR, to support the activities of less equipped ministries, like the SMA. This will likely require guidelines set forth in the form of an interagency memorandum of understanding (MOU) that stipulates operational procedures and structures. Another area requiring coordination mechanisms is the management of DSM marine pollution. While the SMA have recently passed regulations, the institutional and operational support for this has not been established.

7.2 Bilateral, Regional and International

At the regional level, there are efforts underway to strengthen DSM cooperation,[444] in line with the Framework for Pacific Regionalism as previously discussed.[445] The Pacific Regional DSM Treaty is a key instrument proposed by the DSM Project, which aims to, inter alia, foster regional cooperation

[443] This would allow regulators to crosscheck reports submitted by contractors, and allow effective monitoring of DSM vessels. This should then be formalised in a DSM strategic action plan.

[444] Suggested examples of potential areas of DSM regional cooperation between Pacific countries include: (1) Harmonisation of national DSM regulatory regimes; (2) Cooperation in the development of national DSM fiscal regimes; (3) Cooperation in regional DSM marine scientific research initiatives; Intergovernmental data-sharing (environmental, and/or commercial); (4) Fostering private / public partnership with the DSM industry, on a regional level; Regional DSM strategic environment assessment; (5) A regional network of marine protected areas; Regional cost-benefit analysis for DSM mining; (6) Multilateral strategic agreements about timing or phasing of DSM operations to avoid flooding the market for the commodities found in Pacific DSM; (7) Development of a regional protocol / operating standards for DSM operators; (8) Regional training initiatives for DSM-related skills and professions; (9) A regional DSM observer recruitment and training programme for on vessel operation; (10) Support to the PSIDS (Pacific Small Island Developing States) group in international fora related to DSM; Establishment of a regional DSM regulatory agency / monitoring service; (11) Collaboration on transboundary DSM projects, and/or joint management areas of extended Continental Shelf claims; (12) Coordination as a geographic bloc in order to exercise greater influence on matters of mutual interest with the ISA, concerning DSM activities beyond national jurisdiction: 'Draft DSM Regional Discussion Paper Final' (Deep Sea Minerals Project, SPC, 23 March 2015).

[445] See Chapter 3.2.

among Pacific countries.[446] It provides an opportunity to ensure that monitoring and review of compliance be carried out on a regional basis.[447] This enables Pacific countries to build on and learn from their shared experiences. The implementation of this Pacific Regional DSM Treaty will take time to draft, negotiate and reach agreement on, particularly given its aspiration to emulate what the Parties to the Nauru Agreement accomplished for some Pacific countries in the fisheries sector.[448] Although the DSM Project is working with the OPOC and PIFS and expect a draft text to be ready in early 2016, which is good progress.[449]

This leads to a related issue of the relationship amongst and between international and regional governmental organisations.[450] As mentioned, conflicts between users are numerous due to lack of communication and coordination.[451] In response to that, various instruments have been established;[452] such as the OPOC and the POA, in order to guide the implementation of the PIROP, as these institutional arrangements were a missing link in the regional ocean governance framework.[453] The first meeting of the POA in 2015 saw international, regional and national stakeholders converging from all of the various marine sectors, including DSM, to strengthen coordination and collaboration across and between the ocean stakeholders. Although in its infancy, there is a lot of potential value in the POA for good ocean governance, thus continued support from all stakeholders is required.[454] Another example is the recent cooperative arrangement between the SPC and the ISA.[455]

[446] It also aims to ensure the harmonisation of legal instruments pertaining to the management of DSM resources with national jurisdictions of PICTs and their interest in the Area; and ensure conformation to international law.

[447] Discussion paper above n 444. A key feature of the agreement is collaboration, learning, and information sharing among the countries. Such open communication avoids countries being pitched against each other competitively, which could lead to bad decisions and poor commercial deals in individual countries.

[448] Ibid

[449] The DSM Project further plans to organise a series of consultative workshops for Pacific representatives to discuss the DSM Treaty further.

[450] It has been argued that this relationship is addressed only in passing. See Steven Bernstein and Jutta Brunnée, 'Options for Broader Reform of the Institutional Framework for Sustainable Development (IFSD): Structural, Legal, and Financial Aspects' (Independent Report, UNCSD Secretariat, 1 November 2012).

[451] The example discussed in Chapter 4.2 was on the conflicting use between DSM exploration contracts in the Area and the submarine cables on the seafloor.

[452] Although, a current gap is an overarching global ocean governance body. This is a major issue, beyond the scope of this thesis.

[453] Pio E. Manoa and Joeli Veitayaki, 'Regional Ocean Governance in the Pacific Revisited' (2009) 23(1) *Ocean Yearbook Online* 503; Nuttall and Veitayaki, above n 299.

[454] Another example of successful international cooperation is the recent collaboration between the Pacific Community, KMI (Korean Maritime Institute) and DOALOS to provide a course for PSIDS on the conduct of MSR in accordance with the UNCLOS in December 2015, which the SMA participated in. These types of initiatives ensure capacity building of MSR competencies, and there are many opportunities such as this that PSIDS should be taking advantage of for ocean governance. This also shows the efforts made for cross-fertilisation of collaborative efforts between international, regional and national mechanisms. More discussion on MSR in Chapter 9.

[455] ISBA/21/C/11 above n 238. The Secretariat of the Pacific Community (SPC) has signed a memorandum of understanding with the International Seabed Authority (ISA) at its 21st annual session in Jamaica. On the MOU, the Chief Geoscientist at SPC, Dr Kifle Kahsai said "The highest level outcome of the partnership between SPC and the Authority will enable the Pacific Community to provide consistent and comprehensive assistance to all Pacific Island States who decide to engage with deep sea mineral activities."

The DSM community of practice is another potentially powerful tool for the Pacific region to utilise, at the regulatory management level, and enhances regional cooperation in a less formal way.[456] The experiences and challenges faced by Pacific countries are common given their similar capacity issues, so the sharing of knowledge and experiences will be useful in finding creative solutions to problems. It is further submitted that the Community of Practice should be expanded to include other technical fields such as science, environment, finance and geology. Developments in governance do not occur in an intellectual vacuum. Information, ideas and values that inform decision-making are drawn from various intellectual disciplines, and there has been a tendency for debate to stay within the disciplines, however ocean governance principles demand integration as each of the various fields plays an important role.[457] Synergies can be gained between different fields that would not normally interact. While cooperation may focus on particular competencies, for example, geological officers may share expertise on geosciences; this open forum allows other disciplines to contribute, as there may be relevant legal and policy considerations that should feed into the discussion. This avoids a silo mindset and encourages more collaboration, communication, and cooperation to problem-solving at the national regulatory level, and also ensures that other relevant considerations can be taken into account. This would be a true reflection of an integrated approach.

The Cook Islands could also explore other collaborative partnerships, such as with New Zealand (discussed further in Chapter 8.1). Another avenue would be greater collaboration with the DSM industry and research institutions. As mentioned, several international research and industry organisations have collaborated to form DSM specific projects.[458] The Cook Islands should try to capitalise on this for its national benefit. While most research efforts are focussed on the CCZ, research and development in the Cook Islands EEZ or in the Cook Islands reserved site in the Area should be encouraged.[459] Furthermore, the Cook Islands should keep abreast of innovations and information sharing in these projects so that knowledge gained can be used to build up the Cook Islands understanding.

[456] The regional DSM workshops are excellent opportunities to bring officials together to share ideas; however, this is often once or twice a year for a particular issue. In the actual implementation of their respective professions, it will be useful to be able to tap into a larger pool of legal and policy resource in the Pacific, for views. Particularly in the Information Age we currently live in, the vast ocean space no longer separates the world from each other.

[457] Barnes, above n 50, 269.

[458] These include projects such as MIDAS and Blue Mining.

[459] The SMA are currently investigating opportunities for further research to take place in the Cook Islands EEZ.

Overall, it is clear that there is a global push towards cooperation, collaboration and coordination, in the effort to achieve ocean governance and sustainable development.[460] And while the Cook Islands are joining on those efforts, there are further opportunities for cooperation that may be pursued as well.

8 Strengthening Ocean Governance Capacity

Part One made clear that the key challenge for the Cook Islands is its capacity to implement the ocean governance frameworks in place. This Chapter discusses the various opportunities available to build up the Cook Islands capacity, identifying a multitude of international, regional and national institutions both governmental and non-governmental offering training programmes and resources to assist with DSM management. It is critical for the Cook Islands to plan and manage how it accesses and utilises those opportunities, bearing in mind its existing capacity, in a manner that will provide for the long-term development and capacity building of the DSM industry.

From an overall national perspective, it is important to recognise that while the Cook Islands review identified a bloated public sector, there is still a technical skills shortage. That is because the Cook Islands public service is weighted towards administrative skills, and there needs to be more emphasis on building the technical capacity of the public service. The challenge in the context of ocean governance is for the Cook Islands to determine the range of ocean-related skills necessary, and to facilitate capacity building around that. From a DSM or ocean governance perspective, the types of skills required include on integrated management, marine policy, GIS, natural resource management, licensing, compliance and monitoring.[461] Capacity building should create a situation wherein outside or external assistance is no longer needed.[462] Considering the Cook Islands have received external assistance for decades, there needs to be continual analysis of the effectiveness of such assistance. While it is necessary for achieving development goals, there must be a firm understanding that building up national capacity is the one of the primary goals in receiving external technical assistance.[463] The

[460] See Addis Ababa Action Agenda [10]: "The enhanced and revitalised global partnership for sustainable development, led by Governments, will be a vehicle for strengthening international cooperation for implementation of the post-2015 development agenda. Multi-stakeholder partnerships and the resources, knowledge and ingenuity of the private sector, civil society, the scientific community, academia, philanthropy and foundations, parliaments, local authorities, volunteers and other stakeholders will be important to mobilize and share knowledge, expertise, technology and financial resources, complement the efforts of Governments and support the achievement of the sustainable development goals, in particular in developing countries. This global partnership should reflect the fact that the post-2015 development agenda, including the sustainable development goals, is global in nature and universally applicable to all countries while taking into account different national realities, capacities, needs and levels of development and respecting national policies and priorities. We will work with all partners to ensure a sustainable, equitable, inclusive, peaceful and prosperous future for all. We will all be held accountable by future generations for the success and delivery of commitments we make today."

[461] Tourism, agriculture, marine resources and commerce are key priority skills for the Ministry of Education.

[462] Cicin-Sain et al, above n 68.

[463] Recent external assistance programmes recognise this. For example, the previous Cook Islands Technical Assistance Fund (CITAF) required that evidence as to how proposed external assistance built up existing national capacity. However, the effectiveness of this needs to be assessed.

Cook Islands cannot continue to rely on external assistance, this is unsustainable and does not progress the country in the long-term.

8.1 Strengthening Technical Capacity

As discussed in Part One, key areas for strengthening capacity are in the Cook Islands technical capacity as regulator, in accessing funding and resources, and increasing engagement at international fora. The national regulatory agencies each require specific technical skills in order to carry out their roles successfully.[464] At the international level, as a party to the UNCLOS, the Cook Islands are able to access capacity building opportunities for developing States under the various instruments established under the UNCLOS.[465] This has led to the creation of numerous trust funds,[466] although the sufficiency of these trust funds is mixed.[467] The objectives of the voluntary trust funds reflect UNGA resolution 69/245, and assist developing States in a range of initiatives such as technical training, technical assistance or participation at relevant meetings. DOALOS administers various programmes.[468] Specific to DSM, the ISA provide training opportunities and has a trust fund to assist developing States in building their capacity in the Area. The Cook Islands has already benefitted from the trust fund.[469] The ISA also facilitates Contractor-provided training opportunities,[470] to ensure that personnel from developing States are provided with appropriate operational expertise to enable them to participate in DSM.[471] These programmes mostly involve at-sea training during contractor exploration surveys in the Area. At-sea training on board vessels is a key technical skill the Cook Islands need to develop. However, the Cook Islands, and other developing States faced difficulties in submitting suitable applicants for at-sea training as the threshold, mainly being holding PhD qualifications, was too high. The Cook Islands raised this at the 19th ISA session in 2013, and recently

[464] These include: SMA: licensing, monitoring and compliance, geological and industry expertise; NES: environmental assessment, management and monitoring of DSM; MoT: OSH, maritime safety; MMR: DSM monitoring and surveillance (although probably not to the same degree as above, given MMR already has systems in place)

[465] These instruments include United Nations Open-ended Informal Consultative Process; Submissions to the Commission on the Limits of the Continental Shelf; International Tribunal for the Law of the Sea dispute settlement; Regular Process for Global Reporting and Assessment of the State of the Marine Environment; UN Fish Stocks Agreement.

[466] Examples include: Voluntary trust fund for the purpose of facilitating the preparation of submissions to the Commission on the Limits of the Continental Shelf for developing States, in particular the least developed countries and small island developing States, and compliance with article 76 of the United Nations Convention on the Law of the Sea; Voluntary trust fund for the purpose of defraying the cost of participation of the members of the Commission on the Limits of the Continental Shelf from developing States in the meetings of the Commission; Voluntary trust fund to assist States in the settlement of disputes through the International Tribunal for the Law of the Sea.

[467] *Oceans and the law of the sea: Report of the Secretary-General* (A/70/74/Add.1) (1 September 2015), paragraph [138].

[468] Including: the Hamilton Shirley Amerasinghe Memorial Fellowship Programme; UN-Nippon Foundation Fellowship Programme and Alumni Network; Technical Assistance and Training Programmes.

[469] ISA Endowment Fund supported partial funding of Cook Islands representative at the Rhodes Academy for Oceans and Policy: See *Report of the Secretary-General of the International Seabed Authority under article 166, paragraph 4, of the United Nations Convention on the Law of the Sea* (ISBA/21/A/2) (3 June 2015), paragraph [89].

[470] Contractors have a legal obligation to provide and fund training opportunities for trainees from developing States and the personnel of the Authority. This requirement originates from the UNCLOS and is set out the standard terms of contracts with the ISA.

[471] Training programmes are generally formulated following negotiations between the Authority and the contractor, in accordance with the recommendations for guidance issued by the Legal and Technical Commission.

the ISA amended the required qualification for applications to bachelor and masters level.[472] Furthermore, recently the contractor training programmes have expanded and are now starting to include Masters and PhD scholarships in DSM related subjects, which will assist to bridge the gap of developing States qualifications, particularly the Cook Islands.

Regionally, the DSM Project has been prolific in providing capacity building for PSIDs.[473] As discussed, it has developed regional frameworks and guidelines to guide DSM development,[474] and hosted several regional workshops aimed at building national regulators capacity.[475] Further to this, the DSM Project has provided legal, environment and geological internships, which entail short-term attachments with the DSM Project.[476] It also provides financial assistance for Pacific representatives to participate in international training opportunities,[477] as well as attending various regional and international workshops and conferences.[478]

There are also other possible avenues to explore outside of those provided by the CROP agencies, particularly with New Zealand. Given the close relationship between the Cook Islands and New Zealand, as well as New Zealand's own experience in DSM developments, this carries huge potential for synergy between the two countries. The SMA recently began to explore this possibility in 2014, meeting with various NZ agencies such as New Zealand Petroleum and Minerals (NZPAM), the New Zealand Environmental Protection Agency (NZEPA), and the Ministry of Foreign Affairs. This engagement has led to internships and secondments from NZPAM and NZEPA.[479] It is suggested that a New Zealand-Cook Islands DSM partnership should be explored further at the political level to formalise an arrangement, which would see cooperation and capacity building between the NZ agencies and their Cook Islands counterparts.[480] New Zealand agencies have shown a willingness to cooperate and assist the Cook Islands in its DSM development. However, this is currently on an informal, ad hoc basis. To reach a formal arrangement, such as a Memorandum of Understanding, requires negotiation at the political level. This could for example, enable the SMA to draw upon the

[472] The Cook Islands interventions highlights the importance of Cook Islands participation at the international level.
[473] This is limited to the Pacific ACP States.
[474] Including the RLRF, REMF (environment), Scientific Research Guidelines, and Regional Finance Framework.
[475] These workshops cover environmental, geological, legal, technical and financial aspects. The Environment Workshop held in October 2015 was the eighth regional workshop in the series.
[476] The DSM project also provide GIS and data management training. The Cook Islands has participated in a legal and GIS internship.
[477] This includes: International Foundation for the Law of the Sea (IFLOS), Germany (one month); Rhodes Academy Centre for Oceans Law and Policy, Greece (3 weeks); Duke University Marine Conservation Summer Institute, USA. The DSM Project has assisted a Cook Islands representative to participate in the Rhodes Academy.
[478] This includes the ISA Annual Session and annual Underwater Mining Summit. The DSM Project has also been instrumental in establishing several regional groups such as the DSM Community of Practice, and the Pacific Regional Geoscience Steering Group.
[479] Furthermore, the National Institute of Water and Atmospheric Research (NIWA), a crown research institute is interested in developing the Cook Islands environmental management.
[480] This would be: NZPAM to SMA, NZEPA to NES, Maritime NZ and Worksafe NZ to MoT.

NZPAM expertise in monitoring and compliance until the SMA is able to build up its own expertise. It would also enable access to the technical infrastructure and resources needed for DSM development, as the NZPAM has developed its minerals and petroleum management systems, and through a formal arrangement, could share its expertise to the SMA. It is submitted that the shared experiences would benefit both countries.[481] Nationally, similar synergies can be built in terms of collaboration between agencies to share and pool resources, such as for monitoring and surveillance, which has been discussed above in Chapter 7. In terms of interactions with industry, an on-board training requirement for DSM contractors operating in the Cook Islands EEZ and under Cook Islands control in the Area would be sensible. Long-term solutions require educational and training facilities in place that will meet the needs for skilled ocean governance professionals, whether on a national or regional basis.[482] Existing training facilities such as the Cook Islands Maritime Training Centre[483] should be supported and strengthened. While the initiatives above will be valuable in building capacity, the Cook Islands must be careful to ensure there is continuity, thus planning needs to account for the short, medium and long term to ensure sustainable capacity building.

8.2 Sustainable Financing

A key aspect to building capacity is access to funding.[484] The Addis Abba Action Agenda recommends countries develop cohesive nationally owned sustainable development strategies, supported by integrated national financing frameworks.[485] Thus, the Cook Islands need to provide an enabling economic environment to support its national development efforts, including for ocean governance. It appears that its recent efforts are heading in that direction. For example, one of its main international development partners, New Zealand's aid programme, is being consolidated so that it is delivered through the Cook Islands budget as opposed to project-based aid, therefore aligning assistance to priority development objectives.[486] The Cook Islands have utilised various external sources, including international NGOs such as Oceans 5 and IUCN for the development of its marine park. However,

[481] Furthermore, there could also be cooperation with NZ with regard to the Cook Islands national ocean policy. Even though NZ ultimately did not pass an oceans policy, they underwent a tremendous amount of preparatory work and there is a lot of policy learning and transfer that can be gained from interactions between NZ and the Cook Islands.

[482] Cicin-Sain et al, above n 68.

[483] Its aim is to develop, promote, and increase the growth of a maritime safety.

[484] Funding sources generally derive from domestic public, domestic private, international public and international private sectors.

[485] *Addis Ababa Action Agenda (*endorsed by the General Assembly in its resolution 69/313 of 27 July 2015), [9]. See also: Report of the Intergovernmental Committee of Experts on Sustainable Development Financing (A/69/315). It discusses sustainable financing principles, which include to: (1) Ensure country ownership and leadership in implementing national sustainable development strategies, along with a supportive international environment; (2) Adopt effective government policies as the linchpin of a sustainable development financing strategy; (3) Make use of all financing flows in a holistic way; (4) Maximise the impact of international public finance; (5) Match financing flows with appropriate needs and uses; (6) Mainstream sustainable development criteria in national financing strategies; (7) Exploit synergies across the economic, environmental, and social dimensions of sustainable development; (8) Adopt a multi-stakeholder, people-centred and inclusive approach to achieve tangible results on the ground; (9) Ensure transparency and accountability of financing at the national, regional and international levels.

[486] Release, 'Aid relationship moves up a gear', *Cook Islands News* (Rarotonga), 7 November 2015

care needs to be taken so that expectations from such external donors do not impose on national development objectives. The challenge then, for Cook Islands policymakers is to channel and incentivise more of the diverse and decentralised sources of financing into national priority developments, such as ocean governance and DSM development.[487]

In directing its financial resources, this needs to be sufficient to enable regulators to carry out their roles adequately. As mentioned, the allocation for SMA will not be sufficient to regulate DSM activities actively. If DSM is a national priority, then this needs to change, although as noted, resourcing priority objectives is challenging for a SIDS. There are avenues to ensure that DSM development is self-sustaining, such as from industry. It is common practice for the cost of regulatory agencies to be built into annual licensing fees,[488] which the Cook Islands should incorporate.[489] Further, an Environment Fund can also be utilised to assist with environmental rehabilitation programmes. The Seabed Minerals Act and Environment Act both refer to an Environment Protection Fund and further consideration should be given to reactivating it, as part of an integrated approach, and administered by the NES [490] There is no need to create a separate DSM Environment Fund, as this will create an overlap. For DSM activities, a set percentage can be charged to DSM operators to go towards environmental rehabilitation and compensatory efforts under the Environment Fund.

8.3 Institutional Reform

A recent public sector review characterised the Cook Islands public sector as fragmented and costly with 52 entities, impeding the achievement of the Cook Islands national vision, and further called for a consolidated public service.[491] In 2015, the OPSC developed the Cook Islands Public Service Strategy 2016-2025,[492] after extensive consultation, with the aim of public sector transformation to "address the fragmented structural design of the current machinery of government which creates confusion in mandates, authority and accountability. Together with poor human resource planning and management, this has contributed to the increasing size and cost of the public sector, and poor monitoring and evaluation of performance."[493]

---

[487] Another issue of note is that the Cook Islands will soon be graduating to a high-income status, which affects its access to international finance. The MFEM and MFAI are continuing to highlight the need to consider the unique and significant development vulnerabilities the Cook Islands faces currently and in the future such as scale, isolation, and the impacts of climate change and disasters. See the *Cook Islands Development Partners Policy 2015*.

[488] For example, New Zealand's fees are set on a cost-recovery basis.

[489] The SMA is currently developing this. This should also be built into the NES permitting scheme.

[490] Sections 61 of the Environment Act. The Environment Act Fund is now defunct, but previously received contributions from the international departure tax. Even levying a small percentage would be sufficient considering that there are over 100,000 annual visitors to the Cook Islands.

[491] PSC, above n .

[492] PSC, above n 295.

[493]PSC, 'Consultation Panel Report on the Public Service Strategy Published ' (Media Release, Office of the Public Service Commissioner, 11 September 2015).

It is important to note that while the public sector review identified a bloated public service, as mentioned, there was still a lack of technically qualified Cook Islanders. This reflects an administration-heavy public service, with a need for stronger emphasis on technical capacity; hence the strategy to centralise finance and administrative services, and focus on strengthening core competencies, including technical skills.[494] Thus, the restructuring and merging of agencies will enable the pooling of resources, and sharing of technically skilled labour. Particularly, in the case of ocean-related agencies whose competencies are largely transferrable.

This institutional reform is a welcome opportunity for ocean governance in the Cook Islands, in terms of bringing ocean related agencies into one ministry, as done by some countries who have decided to undertake institutional restructuring in better managing their coasts and oceans. For example, in the Republic of Korea, the marine-related functions of several ministries merged into the Ministry of Maritime Affairs and Fisheries.[495] As it stands, the strategy does not propose to merge agencies along ocean governance, however it is expected that over the next 10 years, economic-related agencies such as fisheries, tourism, financial services and DSM will be merged into a 'super' ministry.[496] Perhaps as the development of the Public Service Strategy progresses, then further consideration to the merits of an ocean-governance ministry warrants attention.

Another related issue for further consideration is, on NES. While it is clear that NES should be strengthened, perhaps further consideration should be given to making NES a central agency. The Public Service Strategy discusses phase one of the implementation plan being to strengthen central agencies capability, as they play a key role in the development, coordination, implementation and evaluation of public policy. Perhaps, some consideration should be given to making NES a central agency. The Cook Islands is guided by its national vision of sustainable development, core to that is the balance of economic, environmental and social considerations. The central agencies play key roles towards economic and social development, however the environmental mandate rests with NES.

---

[494] The Strategy's key objectives are to strengthen institutions involved in the business of government ensuring they are responsive and relevant for the 21st century, and to strengthen people capability. The strategy embraces inclusiveness and community-led development, which requires collaborative partnerships between government, community representatives, non-government organisations, the private sector, and development partners. The institutional strengthening stream will focus on ensuring; public policies are community centred, better integration of national planning with the budget, and organisational excellence through structural reforms, e-governance and a performance improvement framework. The people-strengthening stream will focus on: developing leadership and talent, embedding a performance management culture and sustaining enabling polices to attract, train and retain a high skilled, engaged and empowered Public Service. It will require political leadership and a whole of society approach to be successful.

[495] Power and Solofa, above n 231, 538.

[496] New Zealand has also undergone a public sector review in recent years, leading to consolidation of ministries, such as the formation of the Ministry of Business, Innovation and Employment (MBIE) – a 'super' ministry, which contains the NZPAM.

Although the Public Service Strategy is long-term plan, and there are currently short to medium term management issues to consider. In this case, the major consideration is that of SMA, which while being tasked to manage DSM, has one of the smallest agencies and budget in government. This issue of resourcing has been raised several times by the SMA, and it is considered that there are two main options moving forward. The first is to increase the budget of the SMA, as well as its staff so that it will be sufficiently able to manage and monitor DSM activities. The other, along the lines of the Public Service Strategy, is to consolidate. That is, to merge SMA into MMR.

Merging the SMA into MMR, would be an appropriate choice for several reasons. Firstly, the MMR originally held the role of DSM management until the establishment of the SMA in 2012 as a standalone agency. Since then, the SMA has been building its capacity from the bottom up, whereas, the MMR has well-established experience in managing natural marine resources, and so the focus should be on strengthening MMR capacity for living and non-living resources, rather than creating separate agencies, which is why the Cook Islands public service is currently fragmented. As mentioned, there should be a minimisation of duplicating efforts as much as possible. The MMR and SMA competencies are closely related and transferrable, such as their licensing roles, except that they deal with different resources. There is further support for this, when considering the approach taken by other Pacific countries that have passed DSM legislation.[497] They have chosen to place the responsibility for the management of their DSM within an existing agency, and it is only the Cook Islands that have opted to create a standalone agency. While a standalone agency may be appropriate in other contexts where resourcing and technical capacity are not major issues, this is one of the major challenges for a SIDS like the Cook Islands. It is clear that the above recommendation is feasible and would be logical, however, it remains to be seen whether there is political appetite for this. Therefore, it is recommended that this issue be given further consideration, and political guidance as to the appropriate way forward.[498]

8.4 International Engagement

Capacity strengthening should also target Cook Islands engagement in international fora. The interdependence of international and national politics has long been recognised, particularly the link between domestic interests and international aspirations.[499] At the international level, "governments

[497] For example Tonga, Tuvalu, Fiji have used existing ministries to establish their seabed related regulatory authority.
[498] This can be addressed during the development of the Public Sector Strategy or, if there is support for it, earlier. Regardless of the timing, there needs to be an institutional review to assess the capacity of agencies, their weaknesses, and areas for consolidation.
[499] Haward and Vince, above n 40.

seek to maximise their own ability to satisfy domestic pressures, while minimising the adverse consequences of foreign developments."[500] Thus it is important for the Cook Islands to be 'at the table' at international fora such as the ISA, to be able to influence decision-making for its national benefit, particularly given that ISA decisions are taken as international best practices, so are highly influential on regional and national developments. To that effect, the DSM Project has supported the attendance of several PSIDs at ISA sessions, including the Cook Islands. On a related note, the DSM project is ending in March 2016.[501] Beyond that, there have been discussions about a second phase of the DSM Project as part of a broader extractive industries project that includes terrestrial mining, forestry and oil and gas.[502] The impact this will have on the DSM Project's ability to continue to deliver support will become clearer in coming months.[503] Membership to the ISA Council is an influential role, and with Tonga recently elected, has increased the Pacific membership on the Council to two for the first time.[504] The Cook Islands may consider the next Council elections given its engagement in DSM development; however, this is challenging for several reasons, the main being its lack of UN membership and permanent mission to the UN in New York.[505] There are other ways the Cook Islands can be represented, such as through Council member Tonga, who is also currently the chair of the PSIDS. On the issue of UN membership, leading up to its 50-year celebrations of self-governance, the Cook Islands Prime Minister broached this subject with New Zealand seeking its support. NZ's Prime Minister responded that it could not support the Cooks Islands bid without revisiting the current constitutional arrangement, including shared citizenship with NZ.[506] This is clearly a complex diplomatic issue requiring sophisticated consideration beyond the scope of this thesis. However, some observations will be made: It is clear that Cook Islanders in general do not support the change of the current constitutional arrangement with NZ.[507] It has been argued that the Cook Islands currently satisfy the criteria for membership in the UN.[508] Although, the Cook Islands need to consider its rationale for applying for UN membership. If it is to access further funding, this may not be a strong enough reason for changing the status quo. If it is to increase the Cook Islands political power and ability to influence policy decisions at the international level, as referred to above, then perhaps other

[500] D Putnam, 'Diplomacy and Domestic Politics:The Logic of Two-Level Games' (1988) 43(3) *International Organization* 427.
[501] Akuila K Tawake, 'SPC-EU EDF10 Deep Sea Minerals (DSM) Project 2015 Progress Report: 1st January – 30th June 2015' (Secretariat of the Pacific Community, November 2015).
[502] Steve Raaymakers, 'Mid Term Evaluation: Summary Findings - Cook Islands' (EC-SPC Deep Sea Minerals Project, 2015).
[503] The DSM Project has been instrumental in meeting the capacity challenges of SIDS like the Cook Islands. While this holistic approach is appreciated, there is a concern that the only countries in the region that have substantive terrestrial mining, forestry, and oil and gas are the Melanesian countries, and such a broader project would therefore immediately favour those countries to the disadvantage of the Polynesian and Micronesian countries: ibid.
[504] Previously, the only PSIDS represented on the Council has been Fiji.
[505] Not having UN membership, and thus a presence in New York is a logistical impediment to the Cook Islands, as most diplomatic interactions and decisions amongst States take place in New York before the annual ISA sessions. Further, the Cook Islands would also need to garner support from other States to support its bid for election, and being based in New York would greatly assist this.
[506] 'NZ PM rules out discussion on Cooks UN membership', *Radio New Zealand International* 19 June 2015.
[507] Particularly the health, educational and social benefits that come with being a NZ citizen.
[508] Stephen Eliot Smith, 'Uncharted Waters: Has the Cook Islands Become Eligible for Membership in the United Nations?' (2010) 8(2) *New Zealand Journal of Public and International Law* 169.

avenues can be explored. One option would be for the Cook Islands to consult with New Zealand further on the content of NZ representing the Cook Islands foreign interests. NZ has a permanent mission to the UN, and part of its arrangement with the Cook Islands and Niue is to represent its foreign interests. In this regard, there is space for the Cook Islands to negotiate with NZ on representation in New York. In 2015, the Cook Islands reflected on its past 50 years, and contemplated the next 50 years, including the possibility of independence. These national issues should be kept on the agenda as the Cook Islands navigate its future development.

9 Strengthening Science & Research

The role of science is universally recognised, and to be able achieve sustainable ocean governance requires the effective use of science and involvement of scientists.[509] However, as discussed in Chapter 4.5, the current national policy, legal and institutional framework, and its implementation, is weak. Science and research within the Cook Islands needs to be encouraged and promoted, as "science holds the key to the future of SIDS" in relation to climate change, ocean acidification and related issues.[510] This is also the same for DSM, as the interpretation of scientific data on the impacts of DSM activities will be critical in the Cook Islands management of DSM.

The Draft Marae Moana Policy prioritises research and monitoring as one of its policy objectives.[511] While this places emphasis on the importance of strong science and research, it refers to the current NRC, which is arguably not a strong institutional framework. Although the Draft Marae Moana Policy recognises the importance of working together to develop a research agenda and create institutional arrangements, currently, it is weak in terms of implementation. The status quo of Cook Islands Science and Research capacity is unacceptable, and while the Draft Marae Moana Policy is heading in the right direction, this is an area that should be targeted.

It is suggested that a problem with science and research may be that it is not viewed or targeted as a standalone crosscutting issue, when it should be.[512] As a crosscutting issue, it encapsulates the various relevant sectors including MSR, health, social sciences and agriculture. While the research policies in the various sectors need to be individually robust, there must also be a centralised overarching

[509] Donald F. Boesch, 'The role of science in ocean governance' (1999) 31(2) *Ecological Economics* 189.
[510] 'Summary of the Third International Conference on SIDS: 1-4 September 2014', *Earth Negotiations Bulletin* 7 September 2014.
[511] *Draft Marae Moana Policy*, above n 381. It states that the "conservation and ecologically sustainable use of the [management area] will depend on the knowledge and understanding gained from basic and applied research and monitoring. Evidence-based decision-making requires investment in long-term monitoring of species and ecosystems in accordance with an agreed research agenda."
[512] This is reminiscent of the discussions on Oceans in the SDGs and whether it should be a standalone goal, or present in the other goals as it is crosscutting.

framework, rather than fragmented across the various sectors. It does not mean that various governing and non-governing bodies do not have a role to play in collecting and assessing scientific research. However, there needs to be linkages between the research capacity built, and its further use in strengthening Cook Islands development as a whole. This thesis has illustrated how a fragmented, uncoordinated approach to scientific research has impeded natural resource management. Thus, there needs to be a mechanism, which consolidates the wealth of existing research, and utilises it to make further advancements in the scientific understanding of issues relevant to the Cook Islands.[513] Currently the Cook Islands have the foundation for this through its National Research Policy; however, this needs to be strengthened.

Before going further, there are some contextual realities, in terms of building science and research. The first is that, as a SIDS, the Cook Islands are not going to be able to invest millions into it like other developed countries. Secondly, this requires long-term sustained efforts and goals. Finally, there must be direct attention towards strengthening science and capacity; it cannot be achieved through ancillary policy objectives.[514] However, it should also be noted that, given the recognition at international and regional levels of the challenges for SIDS in building science and research, this has led to a plethora of opportunities the Cook Islands can utilise.

There are several options to strengthen science and research in the Cook Islands, and will depend on Government policy. Suggestions for the way forward are to:

- Revise and strengthen overarching National Research Policy
- Develop sector-specific strategy for DSM MSR[515]
- Strengthen the NRC, or another applicable institutional body
- Assess current science and research status, including legislative and policy framework, and identify key research priority areas
- Provide adequate political and funding support
- Establish a steering committee (or empower the NRC) to develop a strategy for strengthening science and research
- Access international and regional opportunities for strengthening science and research

[513] Given the importance of the marine sector to the Cook Island future sustainable development, marine sciences should be a key element of that.
[514] Such as the current *Draft Marae Moana* policy objective.
[515] As well as other sector specific strategies.

In terms of the National Research Policy, some of the issues identified in Chapter 4.5 provide suggestions for improvement. Importantly, the Cook Islands need to make further consideration of how it wishes to achieve its vision of research for the national benefit of the Cook Islands. It is argued that this should be more assertive than the collection of research, and more clearly directed towards utilising that research for the long-term understanding and benefit of the Cook Islands. As such, the Policy needs to set out clear rules and procedures for the management of research. There needs to be a formal mechanism and clear linkages in place which centralise the information with an entity such as the NRC to ensure that data is readily accessible in one place; sets requirements for appropriate format of data submitted by researchers; and formalises arrangements for information sharing amongst agencies that is not of a proprietary or commercially sensitive nature to ensure that research may be utilised for the national benefit. As an overarching framework, the Policy should refer to the relevant international obligations relating to science and research that the Cook Islands are subject to,[516] and the various sectors responsible for them. In that regard, there should be sector-specific strategies, which take into account the relevant science and research obligations, aided by best practice guidelines, for that industry.[517] In the case of DSM, there are several MSR guidelines developed by the DOALOS and the DSM project, in accordance with the UNCLOS, which can assist in developing a DSM MSR Policy.[518] Further, the National Research Policy should then link the sector strategies, and provide the mechanism for managing science and research as a whole to ensure that the strategies are harmonised and integrated, similar to the current exercise on the National Ocean Policy.

Parallel to improving the National Research Policy, in terms of the institutional framework, the NRC should also be strengthened (or another applicable body). There should be a clear TOR for the NRC linked to achieving the vision of the Policy. This should strengthen the NRC so that it is not just a body that is convened for assessing ad hoc research permits, but rather has functions towards building science and research capacity. This includes the NRC developing a comprehensive centralised research database; tracking down previous research undertaken in the Cook Islands and requesting that information;[519] sharing knowledge and building upon research undertaken in the Cook Islands, in the form of publications for technical and public consumption. Access to scientific research is a challenge, and the Policy and legislation needs to be clear on the Cook Islands right to this information.

[516] This includes UNCLOS, the Nagoya Protocol, the CBD, to name a few.
[517] The 2008 Research Policy does refer to Guidelines for Pacific Health Research (HRC NZ 2005); however it has missed several other relevant guidelines.
[518] This includes the Regional DSM Scientific Research Guidelines, aimed to assist Pacific States to ensure that marine scientific research, prospecting, exploration and mining activities relating to deep sea minerals are well managed and performed in accordance with international standards and best environmental practice. Further discussion on how this applies to the protection of the marine environment is in Chapter 5.3.
[519] Several legal frameworks provide the right of a State to access to scientific research.

There are various avenues for funding and technical support from international or regional CROP agencies, which can be utilised for building science and research,[520] discussed in Chapter 8. The Capacity Development Strategy adopted by the IOC recommends, inter alia, enhancing access to scientific tools and methodologies, the communication between scientific and policymakers' communities and expanding ocean literacy. As such, there are a host of existing DSM science and research organisations, which the Cook Islands can utilise to build its science and research capacity. The Cook Islands could invite projects like MIDAS to undertake DSM cruises in its EEZ,[521] or any science and research institutions for that matter. Considering its unique situation in terms of DSM abundance, the Cook Islands could promote and encourage scientific research from around the world. International, regional and national civil society have also shown an interest in improving scientific research, which should be considered further.[522] Furthermore, the Cook Islands need to continue to enhance their maritime education and public awareness initiatives, especially toward youth, with the goal of improving understanding and awareness and encouraging active interest in coexistence with the ocean.[523] Youth-oriented initiatives should be undertaken in both the schools and community, and in concrete terms ocean related topics should be part of the education curriculum. The SMA has already made efforts towards this in terms of DSM holding a youth debate on DSM issues in 2013, and discussing options with the Ministry of Education for DSM to be included in the education curriculum. Other bodies such as NES host events such as Lagoon Day in to order to raise awareness on maintaining and improving the health of coastal ecosystems. These efforts also build up the future capacity of the Cook Islands, as discussed in Chapter 8.

In order to be able to effect these changes, there must be strong political drivers and funding support. For one, this requires a body, which will provide the necessary drive and planning required, such as a Science and Research Steering Committee or Working Group, made up of key science and policy stakeholders.[524] The Steering Committee can first undertake the initial scoping requirements identified above, and prepare a report on the options moving forward, and then develop a National Research Strategy and Action Plan, to direct the various measures required. The Strategy should identify the priority areas of research, in order to ensure that research undertaken is addressing the priority needs of the Cook Islands. In preparing the Strategy, there needs to be legislative analysis of the existing research policy and legislative instruments to identify overlaps and gaps. This thesis provided a brief

[520] For example, GEF funding.
[521] As discussed in Chapter 3.1.3, MIDAS has been on several research cruises in the CCZ.
[522] As an example, IUCN and Oceans 5 have financially supported the development of the Cook Islands Marine Park.
[523] See Hiroshi Terashima, 'Importance of Education and Capacity-Building Programs for Ocean Governance' (2004) 18 *Ocean Yearbook* 600.
[524] Another option is for the NRC to carry this out. The makeup of the steering committee is critical, as previous committees such as the Marae Moana steering committee became too large and ineffective. The steering committee needs to strike the right balance between having all the necessary actors for success, without becoming cumbersome.

analysis of the legislative regime applicable to marine activities, and it is likely that this will be an issue in other sectors as well. Aside from the legislative analysis, there needs to be assessment of the existing science and research, identifying key priority areas to focus on. There also needs to be a scoping exercise to determine best way forward in terms of the Policy.

The Cook Islands need to start building up its own capacity, to avoid reliance on outside partners for technical scientific issues, as discussed in Chapter 8.1.[525] Thus, it is important that the Cook Islands government prioritises and supports scientific research financially, otherwise it will be difficult to address nationally. In assessing the way forward, the Steering Committee may consider further efforts through the Ministry of Education,[526] the USP Cook Islands,[527] or the National Cook Islands Research Association. There are many ways in which this may be considered, which are outside the scope of this thesis.[528]

It is important to remember that this is a long-term issue that, similar to the sectors of ocean governance, needs to be addressed through the various policy, legal and institutional frameworks, at the national, regional and international levels, and include all the key stakeholders from governing and civil society.[529]

10 Towards a Cohesive Framework for the Area

As discussed in Chapter 4.6 the Cook Islands must put in place laws and regulations for the Area in order to satisfy its obligations under the UNCLOS.[530] Furthermore, in order to achieve good ocean governance, there is a need for further guidance on the regime of national laws developed for the Area. The UNCLOS entails an expectation of a minimum standard to the laws and measures put in place by States.[531] The concept of ocean governance takes this further by advocating an integrated, cooperative approach taking into account principles such as the CHM. In order to achieve this, it is argued that

[525] In other countries, national research institutes and academic institutions provide scientific contributions to national development. For example in Portugal, scientific contributions are provided by the Portugese Foundation for Science and Technology of the Ministry of Education and Science; in New Zealand, the National Institute of Water and Atmospheric Research provide scientific contributions for environmental management.
[526] The Ministry of Education strategy includes, inter alia, staff writing research papers, which could also be encouraged for ocean governance.
[527] Perhaps to promote and encourage advanced research and higher level learning in ocean related studies.
[528] It should be noted that the OPM is currently working on the development of the Research website, including web forms for easy online application, and an online database. However, again resources to implement this are severely limited.
[529] The Public Service Strategy Consultation Panel Report recommended building research capacity, but the final Public Service Strategy is focusing on 'basic' institutional strengthening for now. Building research capacity would need a multi-faceted approach from various governing and non-governing bodies.
[530] As mentioned, there are other relevant issues and gaps in the Area that are beyond the scope of this thesis, however efforts are underway at the international level to address them. This includes the development of Exploitation Regulations for the Area, and the development of an international legally-binding instrument under the UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (ABNJ). For further discussion, see: Houghton, above n 390, 124.
[531] This is confirmed by the Chamber in the Advisory Opinion.

there needs to be further guidance in the form of guidelines or model law. Model legislation would bring greater certainty to how sponsored contractor's activities in the Area will be regulated, as well as more certainty on the standard and required stringency of measures, versus States taking widely different approaches which may on some issues miss the mark. Model legislation could help to keep laws more or less similar, depending on the domestic context of which variances are accepted and to be expected, as long as the essential matters covered in the model law are addressed.

The Advisory Opinion referred to Germany's DSM law as an indication of model legislation that other sponsoring States could follow.[532] In 2011, the LTC proposed that the ISA should prepare model legislation to assist sponsoring States in fulfilling its obligations.[533] The Council decided to request that the Secretariat prepare an annual report on the laws, regulations and administrative measures adopted by sponsoring States and other members of the ISA with respect to the activities in the Area.[534] Currently, the Secretariat of the ISA is working on model legislation.[535] This could indicate that the ISA believes that further guidance should be given on sponsoring States laws, not just for the benefit of those States but also humankind as a whole in the development of the Area. Although given its significant workload of late, particularly in dealing with the issue of developing the exploitation framework for exploitation, it is not clear when the model law will be released.[536]

The Cook Islands will likely apply the Regional Model Law espoused by the DSM Project,[537] which is a suitable model to apply as it takes into account the obligations required under the UNCLOS, and makes provisions for measures to enable sponsoring States to ensure effective compliance. It is further proposed that the Regional Model Law should also form the basis of the ISA Model Law. It promotes regional harmonisation for oceans management, and could contribute to the establishment of common standards and practices in the Area.[538] Given that PSIDS have adopted a regional approach based on the RLRF, their laws are already similar to each other.[539]

---

[532] Ibid [237].
[533] ISBA, Summary report of the Chair of the Legal and Technical Commission on the work of the Commission at its seventeenth session (ISBA/17/C/13) (13 July 2011) paragraph 31 (b).
[534] ISBA, Decision of the Council of the International Seabed Authority (ISBA/17/C/20) (21 July 2011) paragraph 3. This led to the development of a national database of deep seabed mining laws, which is currently the most comprehensive database of laws relating to deep seabed mining. ISBA, *National legislation database*, <https://www.isa.org.jm/national-legislation-database>
[535] Based on recent conversations with the Secretariat legal counsel Yonghseng Cai and Gwenaelle Le Gurun.
[536] Alternatively, the Authority may consider issuing Recommendations for sponsoring States as it has done in the past for Contractors.
[537] Based on the RLRF.
[538] As mentioned in Chapter 7.2, the signing of the MOU between the ISA and the SPC, opens the way for future cooperation and coordination between the two bodies, such as on a model law for the Area.
[539] There was much discussion and concern on whether developing States could fulfil their obligations under the Convention, and yet the developing States from the Pacific region can be seen as leading the way in terms of adoption of laws and developing its capacity for regulating deep sea minerals activities. Note the DSM Project has advised all of the Pacific States who have passed seabed mining laws or are in the progress of developing such laws.

CONCLUSION

This thesis assessed deep sea minerals development in the Cook Islands through the ocean governance frameworks at the international, regional and national level. It used selected ocean governance principles as a measure of success with the ultimate aim being to achieve sustainable development of DSM. A key message of this thesis was that sustainable development is at the core of ocean governance. Strong ocean governance inevitably leads to sustainable development. Likewise, weak ocean governance means there is a breakdown in the economic, environmental and/or social development.

The Cook Islands and the international community have made significant in-roads towards laying down the framework for DSM exploration and exploitation. This thesis highlighted the strengths, weaknesses, gaps and challenges that exist within the legal, policy and institutional frameworks, and found that while sustainable development was well entrenched at national, regional and international levels; there were significant issues in the implementation of the selected ocean governance principles. Some issues being more deeply rooted than others were. While there are challenges facing the Cook Islands in its journey towards self-sustainability, there are also opportunities and options open for the Cook Islands to utilise at all levels of governance. Although it is accepted that tangible solutions are complex and will be difficult to implement. It is hoped that thesis has made the way forward a little clearer.

In 2015, the Cook Islands celebrated 50 years of self-governance, and political leaders took the opportunity to reflect on achievements and successes, as well as challenges and threats. The ocean has always played a major role in all facets of the Cook Islands, and looking ahead, we are entering an era of greater and more complex issues to oceans management. Facing these challenges will require strong commitment, active engagement, and mobilisation at all levels. For the Cook Islands, it needs to make important and necessary decisions that will not only achieve its national vision of ‘the highest quality of life consistent with the aspirations of our people, and in harmony with our culture and environment,’ and will carry it forward into the next 50 years.

Bibliography

1982 United Nations Convention on the Law of the Sea

2011 Seabed Disputes Chamber Advisory Opinion on the 'Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area' Case No. 17 of the International Tribunal of the Law of the Seas

*Addis Ababa Action Agenda (*endorsed by the General Assembly in its resolution 69/313 of 27 July 2015)

Application for approval of a plan of work for exploration for polymetallic nodules by the Cook Islands Investment Corporation (ISBA/20/LTC/3) (8 November 2013)

Canberra Agreement 1948

'Code for Environmental Management of Marine Mining' (Voluntary Code, International Marine Minerals Society, 2011)

Convention on Biological Diversity 1992

Cook Islands Development Partners Policy 2015

'The Cook Islands Government Public Policy & Strategic Planning Tool-kit: A Guide to Policy Development in the Cook Islands' (Office of the Prime Minister, December 2015)

Cook Islands National Maritime Transport Policy 2014

Cook Islands National Seabed Minerals Policy 2014

Decision of the Assembly regarding the first periodic review of the international regime of the Area pursuant to article 154 of the United Nations Convention on the Law of the Sea (ISBA/21/A/9/Rev.1) (29 September 2015)

Decision of the Council relating to an application for the approval of a plan of work for exploration for polymetallic nodules submitted by China Minmetals Corporation (ISBA/21/C/17)(20 July 2015)

'Draft DSM Regional Discussion Paper Final' (Deep Sea Minerals Project, SPC, 23 March 2015)

'Draft Marae Moana Policy' (Version 3, Office of the Prime Minister, 29 May 2015)

'Draft National Research Policy' (Draft Policy, Cook Islands Office of the Prime Minister, 2015)

'*Draft National Strategic Framework for the Environment 2013-2017*' (National Environment Service, 2014)

Employment Relations Act 2012

Environment Act 2003

Framework for Pacific Regionalism 2014 (Pacific Islands Forum Secretariat)

Income Tax Amendment Act 2013

Integrated Water Resource Management Policy 2014 (Cook Islands)

International Law Commission Draft Articles on Prevention of Transboundary Harm (2001)

Issues related to the sponsorship by States of contracts for exploration in the Area and related matters (ISBA/21/LTC/12) (9 June 2015)

'Joint National Action Plan for Disaster Risk Management and Climate Change Adaptation 2011-2015 ' (Cook Islands Government, 2012)

Laws, regulations and administrative measures adopted by sponsoring States and other members of the International Seabed Authority with respect to the activities in the Area (ISBA/21/C/7) (1 June 2015)

The Madang Guidelines : Principles for the Development of National Offshore Mineral Policies

'Manganese Nodules of the Cook Islands ' (South Pacific Applied Geoscience Commission September 1998)

Marine Resources Act 2005

Memorandum of understanding between the International Seabed Authority and the Pacific Community (ISBA/21/C/11) (4 June 2015)

'Migration Statistics: September 2015' (Cook Islands Statistical Bulletin, Ministry of Finance and Economic Management, 2015)

'A National Approach to Managing Climate Change in the Cook Islands' (Australia Government's Pacific Adaptation Strategy Assistance Program (PASAP), 2012)

National Sustainable Development Plan 2011-2015

'Nautilus Minerals shares surge on deep sea-mining lease', *Mineweb* 11 January 2011

'Nautilus Minerals signs offtake agreement with Tongling for Solwara 1 deposit', *Mining-technology.com* (Online), 14 December 2015

'NZ PM rules out discussion on Cooks UN membership', *Radio New Zealand International* 19 June 2015

Oceans and the law of the sea: Report of the Secretary-General (A/70/74/Add.1) (1 September 2015)

'Opening speech of the 43rd Pacific Island Forum by the Prime Minister of the Cook Islands, Hon. Henry Puna', *Cook Islands Herald* (Rarotonga), 21 March 2012

'Pacific Island Countries and Territories Regional Guidelines for Deep Sea Minerals Scientific Research' (Draft, Deep Sea Minerals Project, August 2015)

Pacific Islands Regional Ocean Policy

Pacific Oceanscape Framework 2010

The Pacific Plan for Strengthening Regional Cooperation and Integration 2005

'Polymetallic Nodules' *International Seabed Authority* <http://www.isa.org.jm/files/documents/EN/Brochures/ENG7.pdf>

Press Release: *Council agrees on criteria for approved contract extension, takes note of plans for exploitation regulations, adopts recommendation of finance committee* (SB/21/15) (23 July 2015)

Recommendations for the guidance of contractors for the reporting of actual and direct exploration expenditures as required by annex 4, section 10, of the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area (ISBA/15/LTC/7) (25 May 2009)

Recommendations for the guidance of contractors on the content, format and structure of annual reports (ISBA/21/LTC/15) (4 August 2015)

Recommendations for the guidance of the Contractors for the assessment of the possible environmental impacts arising from exploration for polymetallic nodules in the Area (ISBA/19/LTC/8) (1 March 2013)

Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area (International Seabed Authority)

Regulations on Prospecting and Exploration of Cobalt-Rich Crusts in the Area (International Seabed Authority)

Regulations on Prospecting and Exploration of Polymetallic Sulphides in the Area (International Seabed Authority)

Report and recommendations of the Legal and Technical Commission to the Council of the International Seabed Authority relating to an application for the approval of a plan of work for exploration for polymetallic nodules by the Cook Islands Investment Corporation (ISBA/20/C/18) (9 July 2014)

Report of the Intergovernmental Committee of Experts on Sustainable Development Financing (A/69/315)(15 August 2014)

Report of the Secretary-General of the International Seabed Authority under article 166, paragraph 4, of the United Nations Convention on the Law of the Sea (ISBA/21/A/2) (3 June 2015)

Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its sixteenth meeting (A/70/78) (16 April 2015)

Resolution adopted by the General Assembly on 14 November 2014: SIDS Accelerated Modalities of Action (SAMOA) Pathway (A/RES/69/15) (15 December 2014)

Resolution adopted by the General Assembly on 25 September 2015 - Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)(21 October 2015)

Resolution adopted by the General Assembly on 27 July 2012 - The future we want (A/RES/66/288)(11 September 2012)

Resolution adopted by the General Assembly on 29 December 2014: Oceans and the law of the sea (A/RES/69/245) (24 February 2015)

Seabed Minerals (Exploration Licensing) Regulations 2015

Seabed Minerals Act 2009

Seabed Minerals Royalties Regulations 2013

Seabed Minerals Tender 2015 <http://www.seabedmineralsauthority.gov.ck/>

'Seven Principles for Strengthening Research Capacity in Low- and Middle-income Countries: Simple Ideas in a Complex World' (Good practice document series, Essence on Health Research, 2014)

'Situational Analysis to Support Implementation of the Cook Islands Marae Moana Policy' (Internal Government Document, Commonwealth Secretariat, 14 August 2015)

'Summary of the Third International Conference on SIDS: 1-4 September 2014', *Earth Negotiations Bulletin* 7 September 2014

Summary report of the Chair of the Legal and Technical Commission on the work of the Commission during the twentieth session of the International Seabed Authority (ISBA/20/C/20) (16 July 2014)

Te Kaveinga Nui: Living the Cook Islands Vision - A 2020 Challenge

'Vital Statistics and Population Estimates: June Quarter 2015' (Cook Islands Statistical Bulletin, Ministry of Finance and Economic Management, 2015)

'Wealth in the Oceans: Deep Sea Mining on the Horizon? ' (Thematic Focus Report, United Nations Environment Programme, May 2014)

ADB, 'Cook Islands Country Operations Business Plan 2015-2017' (Strategic Analysis, Asian Development Bank, 2014)

ADB, 'The Cook Islands: Stronger Investment Climate for Sustainable Growth' (Asian Development Bank, 2015)

Arico, Salvatore and Charlotte Salpin, 'Bioprospecting of Genetic Resources in the Deep Seabed: Scientific, Legal and Policy Aspects' (Institute of Advanced Studies, United Nations University 2005)

Asian Development Bank, Australian Government, 'Cook Islands 2008 Social and Economic Report' (2008)

Authority, International Seabed, 'G-Tec Sea Mineral Resources Nv (GSR) Of Belgium Signs Exploration Contract' (2012) <https://www.isa.org.jm/news/g-tec-sea-mineral-resources-nv-gsr-belgium-signs-exploration-contract>

Bailet, Francois, 'Ocean Governance ' (UN-Nippon Foundation Presentation, Division of Ocean Affairs and the Law of the Sea, April 2015)

Balgos, Miriam C, Biliana Cicin-Sain and David L VanderZwaag, 'A Comparative Analysis of Ocean Policies in Fifteen Nations and Four Regions' in Biliana Cicin-Sain, David L VanderZwaag and Miriam C Balgos (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge, 2015) 3

Barnes, Richard A., 'Consolidating Governance Principles for Areas beyond National Jurisdiction' (2012) 27(2) *The International Journal of Marine and Coastal Law* 261

Batker, David and Rowan Schmidt, 'Environmental and Social Benchmarking Analysis of Nautilus Minerals Inc. Solwara 1 Project' (Earth Economics, May 2015)

Batongbacal, Jay L, 'The Phillipine National Marine Policy' in Biliana Cicin-Sain, David L VanderZwaag and Miriam C Balgos (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge, 2015) 416

Bernad, Stella Regina and Chua Thia-Eng, 'The Sustainable Development Strategy for the Seas of East Asia: Policy Implications at Local, National and Regional Levels' in Biliana Cicin-Sain, David L VanderZwaag and Miriam C Balgos (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge, 2015) 522

Bernstein, Steven and Jutta Brunnée, 'Options for Broader Reform of the Institutional Framework for Sustainable Development (IFSD): Structural, Legal, and Financial Aspects' (Independent Report, UNCSD Secretariat, 1 November 2012)

Boesch, Donald F., 'The role of science in ocean governance' (1999) 31(2) *Ecological Economics* 189

Brown, E. D., *Sea-bed energy and minerals: the international legal regime* (Martinus Nijhoff, 1992)

Butler, D J, 'Government of the Cook Islands Enabling Activity Biodiversity Project Evaluation Report (NBSAP) CKI/98/G31' (2003)

Chang, Yen-Chiang, 'Good Ocean Governance' (2009) 23(1) *Ocean Yearbook Online* 89

Chang, Yen-Chiang, *Ocean Governance: A Way Forward* (Springer Netherlands, 2012)

Cicin-Sain, Biliana, 'Conserve and sustainably use the oceans, seas and marine resources for sustainable development' (2014) 51(4) *UN Chronicle* 32

Cicin-Sain, Biliana, 'Enabling factors in achieving sustainable development in national ocean policies' (Paper presented at the Presentation to 2015-2015 UN-Nippon Foundation Fellows, New York, 2015)

Cicin-Sain, Biliana, *Ocean governance : a new vision : the work program of the Ocean Governance Study Group* (1992)

Cicin-Sain, Biliana et al, 'Education and training in integrated coastal management: lessons from the international arena' (2000) 43(4) *Ocean and Coastal Management* 291

Davies, Harriet Harden, 'The Regulation of Marine Scientific Research: Addressing Challenges, Advancing Knowledge' in Robin Warner and Stuart Kaye (eds), *Routledge Handbook of Maritime Regulation and Enforcement* (Routledge, 2015) 212

Davies, Kathryn K. et al, 'Improving ecosystem service frameworks to address wicked problems' (2015) 20(2) *Ecology and Society* 37

de Marffy, Annick, 'Ocean Governance: A Process in the Right Direction for the Effective Management of the Oceans Ocean Governance' (2004) 18 *Ocean Year Book* 162

Dodds, Felix, Kirsty Schneeberger and Farooq Ullah, 'Sustainable Development in the 21st century (SD21): Review of implementation of Agenda 21 and the Rio Principles' (United Nations Department of Economic and Social Affairs Division for Sustainable Development, January 2012)

Drew, Lisa W, 'The Promise and Perils of Seafloor Mining: Vol 47, No 3', *OceanUs Magazine* 20 November 2009

Dyke, Jon Van and Sherry P Broder, 'International Agreements and Customary International Principles providing Guidance for National and Regional Ocean Policies' in Biliana Cicin-Sain, David L VanderZwaag and Miriam C Balgos (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge, 2015) 49

Editor, 'Pacific 'Large Ocean Island States' Conserve Huge Marine Areas', *International Environment News Service* 3 September 2012 <http://ens-newswire.com/2012/09/03/pacific-large-ocean-island-states-conserve-huge-marine-areas/>

Egede, Edwin, *Africa and the deep seabed regime: politics and international law of the common heritage of mankind* (Springer, 2011)

Ehler, Charles N. et al, 'Guidelines to assist policy makers and managers of coastal areas in the integration of coastal management programs and national climate-change action plans' (1997) 37(1) *Ocean and Coastal Management* 7

Ekstrom, Julia A. et al, 'A tool to navigate overlaps in fragmented ocean governance' (2009) 33(3) (5//) *Marine Policy* 532

Finkl, Charles W. and Christopher Makowski, *Environmental management and governance: advances in coastal and marine resources* (Springer, 2014)

Foster, Elizabeth, Marcus Haward and Scott Coffen-Smout, 'Implementing integrated oceans management: Australia's south east regional marine plan (SERMP) and Canada's eastern Scotian shelf integrated management (ESSIM) initiative' (2005) 29(5) (9//) *Marine Policy* 391

Freestone, David, 'Principles Applicable to Modern Oceans Governance' (2008) 23(3) *The International Journal of Marine and Coastal Law* 385

Greig, Helen, 'Minerals taskforce set up', *Cook Islands News* (Rarotonga), 31 August 2010

Guntrip, Edward, 'The Common Heritage of Mankind: An Adequate Regime for Managing the Deep Seabed?' (2003) 4(2) *Melbourne Journal of International Law* 376

Haward, M. G. and Joanna Vince, *Oceans governance in the twenty-first century: managing the blue planet* (Edward Elgar, 2008)

Haward, Marcus and Joanna Vince, 'Australian Ocean Governance - Intiatives, Challenges and Opportunities' (Paper presented at the Australian Political Studies Association Conference, University of Newcastle, 2006)

Henley, Peter Holcombe, 'Minerals and mechanisms: the legal significance of the notion of the 'common heritage of mankind' in the advisory opinion of the Seabed Disputes Chamber' (2011) 12(2) *Melbourne Journal of International Law* 373

Herman, Alexandrya, 'Assessing the Adequacy of Sponsoring States Measures in Order to Meet their Obligations and Responsibilities with Respect to Activities in the Area' (LLM Research Paper, University of Queensland, 2015)

Herman, Alexandrya, *Towards a Better Future? An Analysis of the Cook Islands Seabed Minerals Regime* (Honours dissertation Thesis, University of Auckland, 2011)

Hosoi, Yoshitaka, 'A Record on the Establishment of Phase III of the JAPAN/SOPAC Deepsea Mineral Resources Survey Program and Associated Activities' (Miscellaneous Report 191, South Pacific Applied Geoscience Commission, March 1995)

Houghton, K., 'Identifying new pathways for ocean governance: The role of legal principles in areas beyond national jurisdiction' (2014) 49 *Marine Policy* 118

ISA, 'Workshop on Polymetallic Nodule Mining Technology - Current Status and Challenges Ahead' (Background Document, International Seabed Authority, 2008)

Jacques, Peter and Zachary A. Smith, *Ocean politics and policy: a reference handbook* (ABC-CLIO, 2003)

Jamasmie, Cecilia, 'Nautilus dispute with Papua New Guinea authorities threatening underwater mining future', *Mining.com* (Online), 18 June 2012

Jamasmie, Cecilia, 'NGOs question Nautilus Minerals report on seafloor mining ‘minimum’ impacts', *Mining.com* (Online), 16 June 2015

Jentoft, Svein and Ratana Chuenpagdee, 'Fisheries and coastal governance as a wicked problem' (2009) 33(4) *Marine Policy* 553

Koers, Albert W., Bernard H. Oxman and Norway Law of the Sea Institute. Conference Oslo, *The 1982 Convention on the Law of the sea: proceedings, Law of the Sea Institute seventeenth annual conference, Co-sponsored by Friedtjof Nansen Institute, July 13-16, 1983, Oslo, Norway* (Law of the Sea Institute, University of Hawaii, 1984)

Kusek, Jody Zall, 'Assessing Country Readiness for Results-Based Monitoring and Evaluation to Support Results Informed Budgeting' (The World Bank, January 2011)

Kusek, Jody Zall and Ray C Rist, 'Ten Steps to a Results-Based Monitoring and Evaluation System: A Handbook for Development Practitioners' (The World Bank, 2004)

Lily, Hannah, 'Review of the Cook Islands Environment Act: Summary of Initial Issues and Recommendations' (Commonwealth Secretariat, 2015)

Lynch, Paul, *Towards the Development of a National Regulatory Framework for Deep Sea Mining in the Cook Islands* (Masters Research Paper Thesis, University of the South Pacific, 2011)

Makgill, Robert and Ana Linhares, 'Deep Seabed Mining: Key Obligations in the Emerging Regulation of Exploration and Development in the Pacific' in Robin Warner and Stuart Kaye (eds), *Routledge Handbook of Maritime Regulation and Enforcement* (Routledge, 2015)

Manoa, Pio E. and Joeli Veitayaki, 'Regional Ocean Governance in the Pacific Revisited' (2009) 23(1) *Ocean Yearbook Online* 503

Marian, Ilie, 'Developing Effective Ocean Governance' (2012) 4(1) *Geopolitics, History and International Relations* 101

McLeod, Karen and Heather Leslie, *Ecosystem-based management for the oceans* (Island Press, 2009)

MFEM, 'Cook Islands Government Budget Estimates 2014/2015' (Book 2: Ministry Budget Statements, Ministry of Finance and Economic Management, 2014)

MFEM, 'Cook Islands Government Budget Estimates 2015/2016' (Book 1: Appropriation Bill, Appropriations and Commentary, Ministry of Finance and Economic Management, 2015)

Miles, Edward L., 'The Concept of Ocean Governance: Evolution Toward the 21st Century and the Principle of Sustainable Ocean Use' (1999) 27(1) *Coastal Management* 1

Minerals, Nautilus, 'Nautilus granted exploration tenements in Fijian waters', *News Release* (Vancouver, British Columbia), 11 August 2011

Nations, United, 'Report of the International Meeting to Review the Implementation of the Programme of Action for Sustainable Development of Small Island Developing States Port Louis, Mauritius 10-14 January 2005' (United Nations, 2005)

Noyes, John E., 'The common heritage of mankind: past, present, and future' (2011) 40(1-3) *Denver Journal of International Law and Policy* 447

Nuttall, Peter and Joeli Veitayaki, 'South Pacific and Small Island Developing States: Oceania is Vast, Canoe is Centre, Village is Anchor, Continent is Margin' in Hance D Smith, Juan de Vivero and Tundi S Agardy (eds), *Routledge Handbook of Ocean Resources and Management* (Routledge, 2015) 560

NZME, 'Kermadec marine sanctuary announced', *Otago Daily Times* (Otago), 29 September 2015

Oude Elferink, Alex G., 'Environmental Impact Assessment in Areas beyond National Jurisdiction' (2012) 27(2) *The International Journal of Marine and Coastal Law* 449

Pareti, Samisoni, "It's in our DNA to conserve the ocean' – Cook Islands Prime Minister', *Islands Business Magazine* (Apia, Samoa), 29 August 2014

Parmentier, Rémi, 'Role and Impact of International NGOs in Global Ocean Governance' (2012) 26(1) *Ocean Yearbook Online*

Passfield, Kelvin and Teariki Rongo, 'Cook Islands 4th National Report to the Convention on Biological Diversity' (National Environment Service, 2011)

Power, Mary and Anama Solofa, 'The Pacific Islands Regional Ocean Policy and the Framework for a Pacific Oceanscape: 'Many Islands - One Ocean'' in Biliana Cicin-Sain, David L VanderZwaag and Miriam C Balgos (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge, 2015) 504

PSC, 'Consultation Panel Report on the Draft Cook Islands Government Public Service Strategy 2015-2025' (Office of the Public Service Commissioner, 2015)

PSC, 'Consultation Panel Report on the Public Service Strategy Published ' (Media Release, Office of the Public Service Commissioner, 11 September 2015)

PSC, 'Cook Islands Government Public Service Strategy 2016-2025' (Strategy Paper, Office of the Public Service Commissioner, 2015)

Putnam, D, 'Diplomacy and Domestic Politics:The Logic of Two-Level Games' (1988) 43(3) *International Organization* 427

Raaymakers, Steve, 'Mid Term Evaluation: Summary Findings - Cook Islands' (EC-SPC Deep Sea Minerals Project, 2015)

Release, 'Aid relationship moves up a gear', *Cook Islands News* (Rarotonga), 7 November 2015

RLRF, 'Pacific-ACP States Regional Legislative and Regulatory Framework for Deep Sea Minerals Exploration and Exploitation' (Regional Framework, SPC-EU EDF10 Deep Sea Minerals Project, 2012)

Rochette, J. et al, 'Regional oceans governance mechanisms: A review' (2015) 60 *Marine Policy* 9

Rongo, Teina, 'Climate Change Research in the Cook Islands' (Climate Change Cook Islands Division, Office of the Prime Minister, 2013)

Rothwell, Donald R. et al, *The Oxford handbook of the law of the sea* (Oxford University Press, 2015)

Rothwell, Donald R. and Tim Stephens, *The International Law of the Sea* (Hart, 2010)

Rothwell, Donald R. and David L. VanderZwaag, *Towards Principled Oceans Governance: Australian and Canadian Approaches and Challenges* (Routledge, 2006)

Ruckelshaus, Mary et al, 'Marine Ecosystem-based Management in Practice: Scientific and Governance Challenges' (2008) 58(1) *BioScience* 53

Ryngaert, Cedric, Erik J Molenaar and Sarah Nouwen, *Whats Wrong with International Law?* (Brill, 2015)

Silver, J. J. et al, 'Blue Economy and Competing Discourses in International Oceans Governance' (2015) 24(2) *Journal of Environment & Development* 135

Smith, Craig R, 'Biodiversity, species ranges, and gene flow in the abyssal Pacific nodule province: predicting and managing the impacts of deep seabed mining ' (Technical Study No 3, International Seabed Authority, 2008)

Smith, Stephen Eliot, 'Uncharted Waters: Has the Cook Islands Become Eligible for Membership in the United Nations?' (2010) 8(2) *New Zealand Journal of Public and International Law* 169

SOPAC, 'The Madang Guidelines' (1999) *SOPAC Miscellaneous Report 362*

SPC, 'Deep Sea Minerals (DSM) Project Overview' (Information Brochure 1, SPC-EU EDF10 Deep Sea Minerals (DSM) Project, 2012)

SPC, 'Deep sea minerals community of practice for the Pacific' (Media Release, Deep Sea Minerals Project, 27 May 2015)

SPC, 'Deep Sea Minerals: Deep Sea Minerals and the Green Economy' (Vol. 2, Secretariat of the Pacific Community, 2013)

SPC, 'Deep Sea Minerals: Manganese Nodules, a physical, biological, environmental, and technical review' (Vol. 1B, Scretariat of the Pacific Community, 2013)

SPC, 'Geoscience skills a critical need in Pacific countries' (Deep Sea Minerals Project, 16 April 2015)

SPC, 'Pacific countries discuss environmental management options for deep sea minerals development' (Media Release, Deep Sea Minerals Project, 5 October 2015)

SPC, 'Pacific countries discuss financial management options for deep sea minerals development' (Media Release, DSM Project, 26 August 2015 2015)

Steiner, Richard, 'Independent Review of the Environmental Impact Statement for the proposed Nautilus Minerals Solwara 1 Seabed Mining Project, Papua New Guinea' (Bismarck-Solomon Seas Indigenous Peoples Council 10 January 2009)

Tawake, Akuila K, 'SPC-EU EDF10 Deep Sea Minerals (DSM) Project 2015 Progress Report: 1st January – 30th June 2015' (Secretariat of the Pacific Community, November 2015)

Terashima, Hiroshi, 'Importance of Education and Capacity-Building Programs for Ocean Governance' (2004) 18 *Ocean Yearbook* 600

Tsamenyi, Martin and Joytishna Jit, 'Evaluation of the Pacific Oceanscape to Manage the Pacific Islands and Ocean Environment' (Paper presented at the Proceedings of 2nd International Seminar on Islands and Oceans, November 2010 2010)

UN, 'United Nations Summit on Sustainable Development 2015: Informal Summary' (70th Session of the General Assesmbly, United Nations, 2015)

Upoko, T T, 'National Stocktake Report - National Capacity Self Assessment for Global Environment Project' (National Environment Service, 2005)

Vallega, Adalberto, *Fundamentals of integrated coastal management* (Kluwer Academic Publishers, 1999)

Veitayaki, Joeli, Nathan Evans and G. Robin South, 'The Pacific Islands Regional Ocean Policy: The Quest for Good Ocean Governance' (2004) 18(1) *Ocean Yearbook Online* 558

Webb, Phillipa, 'Marae Moana plan struggles to stay afloat', *Cook Islands News* (Rarotonga), 11 November 2015

Westcott, Geoffrey, 'Disintegration or disinterest? Coastal and marine policy in Australia' in K Crawley and K Walker (eds), *Environmental Policy Failure: The Australian Story* (Tilde University Press, 2012) 88

Wolfrum, Rudiger, 'Common Heritage of Mankind' (2009) *Max Planck Encyclopedia of Public International Law*

Zacharias, Mark, *Marine policy: an introduction to governance and international law of the oceans* (Earthscan from Routledge, 2014)