

**MARINE BIOPROSPECTING: INTERNATIONAL LAW,
INDONESIA AND SUSTAINABLE DEVELOPMENT**

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Statement of Originality

I certify that the thesis entitled *Marine Bioprospecting: International Law, Indonesia and Sustainable Development* submitted for the degree of Doctor of Philosophy of the Australian National University is an original work, which is the result of my own independent intellectual effort. Where reference is made to the work of others, due acknowledgment is given. I also certify that any material in the thesis that has been accepted for a degree or diploma by any other university of institution is identified in the text.

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Dedication

To the loving memory of my father.

To my mother, who has taught me how to be persistent
in the pursuit of knowledge.

To my wife and children, who have filled my days with love, joy and laughter.

Abstract

Bioprospecting is an element of the commercial exploitation of biodiversity which has sparked a number of legal issues, especially in terms of regulating access to and the sharing of benefits arising from the utilisation of genetic resources. Current studies in this field have largely focused on terrestrial genetic resources. Marine genetic resources need a special attention not only because of their significant economic potential but also because their sustainability is currently threatened by the degradation of the marine environment. By using Elinor Ostrom's theory of collective action in governing the global environment, this thesis provides an analysis of what legal frameworks should be adopted to regulate marine bioprospecting activities.

This thesis is centred on the development of a legal framework for marine bioprospecting in Indonesia, a megadiverse country and the largest archipelagic State in the world. With such distinctive features, Indonesia holds a significant position in the field of marine bioprospecting. However, the current legal regime in Indonesia is still inadequate to address the legal issues related to marine bioprospecting activities. In addition, Indonesia has been facing numerous environmental challenges, particularly the degrading state of its coral reefs. Moreover, social and economic problems have been pervasive, especially widespread poverty throughout the Indonesian coastal communities.

In this context, this thesis argues that the legal framework for marine bioprospecting should not only regulate access to and the sharing of benefits arising from the utilisation of marine genetic resources, but more importantly, also needs to be built upon the need to achieve sustainable development and to implement the concept of

Blue Economy. Thus, this thesis rejects the model of the regulation of access to genetic resources that focuses strongly and solely on reaffirming the sovereign right over natural resources and combating biopiracy. In addition, this thesis also rejects the model of regulating access to genetic resources that puts too much emphasis on the commercial use of biodiversity and neglects environmental objectives.

In this light, this thesis recommends that the Indonesian Government should amend the current regulatory framework for the utilisation of genetic resources. In particular, the Indonesian Government needs to enact specific rules and regulations with respect to three important fields, namely access to genetic resources, marine scientific research and patent law.

This thesis further argues that the regulation of marine bioprospecting with a view to implementing the principles of sustainable development and the Blue Economy is also required at the international and regional levels. As to the international level, this thesis supports a proposed implementing agreement under the framework of the *United Nations Convention on the Law of the Sea (LOSC)* to address the current legal loopholes in the utilisation of marine genetic resources. This thesis also calls for a closer coordination especially between the State Parties to the *LOSC*, the *United Nations Convention on Biological Diversity (CBD)* and the *Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS)*. As to the regional level, this thesis argues that countries in the same region need to take more concerted efforts in ensuring the implementation of sustainable development through marine bioprospecting activities. In this regard, Indonesia should play a leadership role in various regional fora, especially the Coral Triangle Initiative and the Association of South East Asian Nations.

Table of Contents

Statement of Originality.....	i
Acknowledgments.....	iii
Dedication.....	v
Abstract.....	vii
Table of Contents.....	ix
List of Figures.....	xvii
List of Tables.....	xviii
INTRODUCTION.....	1
I INTRODUCTION.....	1
II MARINE BIOPROSPECTING VERSUS TERRESTRIAL BIOPROSPECTING.....	7
III BIOPIRACY.....	12
IV RESEARCH QUESTION.....	16
V THESIS ARGUMENT.....	17
A <i>International Law Perspective</i>	17
B <i>The ABS Principles</i>	20
C <i>Equality in Marine Bioprospecting Activities</i>	22
D <i>From Utilisation to Conservation</i>	24
E <i>Sustainable Development and the Blue Economy</i>	26
VI METHODOLOGY.....	34
VII OVERVIEW OF THE CHAPTERS.....	36
VIII CONCLUSION.....	40
CHAPTER 1 THE INTERNATIONAL LEGAL REGIME ON MARINE SCIENTIFIC RESEARCH: IS IT ADEQUATE TO REGULATE MARINE BIOPROSPECTING ACTIVITIES?.....	42
I INTRODUCTION.....	42
II THE CURRENT INTERNATIONAL LEGAL REGIME ON MSR.....	50
A <i>LOSC</i>	50
1 <i>General Principles of MSR</i>	53
2 <i>MSR within National Jurisdiction</i>	54
(a) <i>Territorial Sea</i>	54
(b) <i>Archipelagic Waters</i>	55
(c) <i>EEZ and Continental Shelf</i>	55

3	<i>MSR beyond the Limits of National Jurisdiction</i>	58
B	<i>The Implementation of MSR Regime</i>	58
C	<i>The Implementation of MSR Regime at the National Level</i>	59
III	THE RELATIONSHIP BETWEEN THE MSR REGIME OF THE <i>LOSC</i> AND OTHER INSTRUMENTS RELEVANT TO MARINE BIOPROSPECTING ACTIVITIES.....	61
A	<i>The CBD and the Nagoya Protocol on Access and Benefit-sharing</i>	62
B	<i>Intellectual Property Regime</i>	63
C	<i>The Antarctic Treaty System</i>	65
IV	THE REGULATORY GAPS.....	68
A	<i>The Applicability of MSR Regime under the LOSC</i>	68
B	<i>The Legal Status of Marine Genetic Resources beyond National Jurisdiction</i>	72
C	<i>Environmental Concerns</i>	79
V	WHAT LIES AHEAD FOR MARINE BIOPROSPECTING?.....	80
A	<i>A New Legal Regime</i>	80
B	<i>The Essential Elements: Sovereign Right, Scientific Advancement and Environmental Protection</i>	83
1	<i>Sovereign Right</i>	83
2	<i>Scientific Advancement</i>	84
3	<i>Environmental Protection</i>	86
VI	CONCLUSION.....	87
CHAPTER 2 THE REGULATION OF MARINE BIOPROSPECTING IN INDONESIA: FRAGILE ARCHIPELAGO INDEED?		89
I	INTRODUCTION.....	89
II	THE CURRENT LAWS AND REGULATIONS RELATED TO MARINE BIOPROSPECTING IN INDONESIA.....	98
A	<i>MSR</i>	99
1	<i>Law No 5 of 1983 on Indonesian Exclusive Economic Zone</i>	99
2	<i>Law No 6 of 1996 on Indonesian Waters</i>	100
B	<i>Research Permits</i>	101
C	<i>Marine Living Resources Utilisation</i>	103
1	<i>The Indonesian Fisheries Law</i>	103
2	<i>The Indonesian Coastal Zone Management Law</i>	105
3	<i>The Indonesian Environmental Protection Law</i>	106
III	THE IMPLEMENTATION OF THE LAWS AND REGULATIONS RELATED TO MARINE BIOPROSPECTING IN INDONESIA.....	107
A	<i>The Current Institutional Framework</i>	107

B	<i>Problems and Concerns</i>	109
IV	THE NEED FOR A SPECIFIC LEGAL FRAMEWORK FOR MARINE BIOPROSPECTING IN INDONESIA.....	113
A	<i>Legal Instruments</i>	113
B	<i>Institutional Mechanism</i>	114
V	CONCLUSION.....	115
CHAPTER 3 THE MANY GUISES OF PIRACY: FROM MARITIME PIRACY TO BIOPIRACY		129
I	INTRODUCTION.....	129
II	PIRACY AND THE LAW OF THE SEA.....	131
A	<i>The Early History of Maritime Piracy</i>	131
B	<i>International Law and Maritime Piracy</i>	134
C	<i>Maritime Piracy and Armed Robbery in the Contemporary World</i>	137
III	THE PIRACY OF INTELLECTUAL PROPERTY.....	141
A	<i>The History</i>	141
B	<i>Contemporary Piracy of Intellectual Property</i>	142
IV	BIOPIRACY AND MARINE BIOPROSPECTING.....	145
A	<i>The History</i>	145
B	<i>The Coining of 'Biopiracy'</i>	149
C	<i>Cases of Biopiracy</i>	155
D	<i>Possible Marine Biopiracy?</i>	160
V	ANALYSIS.....	162
VI	CONCLUSION.....	164
CHAPTER 4 PATENT LAW, MARINE BIOPROSPECTING AND SUSTAINABLE DEVELOPMENT		165
I	INTRODUCTION.....	165
II	PATENT LAW AND BIOTECHNOLOGY.....	169
A	<i>Patents and Biotechnology</i>	169
B	<i>Patent Landscape on Marine Genetic Resources</i>	173
C	<i>Patenting Life Forms Controversy</i>	175
D	<i>Twenty Years after Chakrabarty: The Controversy Continues</i>	178
1	<i>Bilski v Kappos</i>	178
2	<i>Mayo Collaborative Services v Prometheus Laboratories</i>	182
3	<i>Association for Molecular Pathology v United States Patent and Trademark Office</i>	185

4	<i>The Relevance of the Cases to Biodiversity-related Patents</i>	193
III	INTERNATIONAL LEGAL REGIME RELATED TO PATENT LAW AND MARINE BIOPROSPECTING.....	195
A	<i>TRIPS Agreement</i>	195
B	<i>Convention on Biological Diversity (CBD)</i>	196
C	<i>World Intellectual Property Organization (WIPO)</i>	199
IV	PROPOSED REFORMS TO THE <i>TRIPS AGREEMENT</i>	205
A	<i>Disclosure Requirement</i>	205
B	<i>Achievement of the Objectives of the TRIPS Agreement</i>	209
C	<i>Prevention of Fraudulent or Bad Patents</i>	210
D	<i>Patent Exceptions</i>	211
V	PATENT LAW AND MARINE BIOPROSPECTING: THE INDONESIAN CONTEXT.....	215
A	<i>Applying the Disclosure Requirement in the Patent System</i>	216
B	<i>Coordinating Relevant Institutions and Stakeholders</i>	219
C	<i>Developing a Sound Policy on Patent Law and Biotechnology</i>	222
VI	CONCLUSION.....	223
CHAPTER 5 WHAT COULD WE LEARN FROM OUR NEIGHBOUR?: MARINE BIOPROSPECTING IN AUSTRALIA		
I	INTRODUCTION.....	243
II	ABS POLICY AND REGULATORY FRAMEWORK IN AUSTRALIA.....	247
A	<i>National Level</i>	247
1	<i>The Policy Framework</i>	247
2	<i>The Regulatory Framework</i>	249
3	<i>The Review of the EPBC Act 1999 (Cth) in the Context of ABS</i>	253
B	<i>State and Territory Level</i>	255
1	<i>Queensland</i>	256
(a)	<i>Biodiscovery Act 2004 (Qld)</i>	256
(b)	<i>The Review of the Biodiscovery Act 2004 (Qld)</i>	262
2	<i>Northern Territory</i>	266
3	<i>Victoria</i>	271
III	THE AUSTRALIAN ABS SYSTEM IN PRACTICE.....	273
A	<i>Access Permits to Marine Genetic Resources in the Commonwealth Areas</i>	273
B	<i>The Sorcerer II Expedition</i>	275
C	<i>The Griffith University and AstraZeneca Partnership</i>	276
IV	AUSTRALIAN ABS SYSTEM: SOME ASSESSMENTS.....	279
A	<i>A Nationally Consistent Approach has not been Attained</i>	279

B	<i>Economic Benefits have not Fully Accrued</i>	282
C	<i>Environmental Benefits</i>	283
D	<i>Marine Bioprospecting Still Needs More Attention</i>	284
E	<i>Areas of Particular Significance</i>	285
V	WHAT LESSONS COULD INDONESIA LEARN FROM AUSTRALIA?.....	292
A	<i>Philosophical Approach</i>	292
B	<i>The Design of the Regulation</i>	293
C	<i>The Institutional Framework</i>	294
VI	CONCLUSION.....	295
CHAPTER 6 THE NAGOYA PROTOCOL: UNFINISHED BUSINESS REMAINS		
UNFINISHED		
		311
I	INTRODUCTION.....	311
II	A LONG AND WINDING ROAD TO NAGOYA: THE HISTORICAL BACKGROUND OF THE <i>NAGOYA PROTOCOL</i>	317
A	<i>The Work of the WG-ABS</i>	318
B	<i>The International Setting Surrounding the Debates on the Nagoya Protocol</i>	324
1	<i>Entangled International Instruments and Institutions</i>	324
2	<i>The Competing Stakeholders</i>	328
(a)	<i>The Developing Countries</i>	328
(b)	<i>The Developed Countries</i>	332
(c)	<i>Biotechnology and Pharmaceutical Industry</i>	335
(d)	<i>Non-governmental Organisations</i>	337
(e)	<i>Indigenous and Local Communities</i>	338
(f)	<i>Researchers</i>	340
III	MAIN FEATURES OF THE <i>NAGOYA PROTOCOL</i>	341
A	<i>Preamble</i>	341
B	<i>Access Mechanism</i>	342
C	<i>Benefit-sharing Mechanism</i>	344
D	<i>Traditional Knowledge Associated with Genetic Resources</i>	346
E	<i>Compliance Measures</i>	348
F	<i>Relationship with Other International Instruments</i>	349
IV	THE WAY FORWARD FOR THE <i>NAGOYA PROTOCOL</i>	354
A	<i>The Development of Domestic Laws</i>	356
B	<i>The Effective Cooperation among Stakeholders</i>	358
V	CONCLUSION.....	361

CHAPTER 7 THE CORAL TRIANGLE INITIATIVE: A REGIONAL FRAMEWORK FOR MARINE BIOPROSPECTING	362
I INTRODUCTION.....	362
II REGIONAL ARRANGEMENTS AND MARINE GENETIC RESOURCES.....	367
A <i>Regional Framework for Oceans Management</i>	367
B <i>Regional Approach for Managing the Utilisation of Marine Genetic Resources</i> ...	371
III THE RELEVANT LEGAL INSTRUMENTS FOR REGIONAL MANAGEMENT OF MARINE GENETIC RESOURCES.....	378
A <i>LOSC</i>	378
B <i>CBD</i>	379
C <i>Nagoya Protocol</i>	380
D <i>Other Relevant Agreements</i>	382
1 <i>The ASEAN Draft</i>	382
2 <i>The Noumea Convention</i>	386
3 <i>The WCP Convention</i>	389
IV THE CORAL TRIANGLE INITIATIVE.....	390
A <i>Scope and Purpose</i>	392
B <i>Marine Bioprospecting within the Coral Triangle Initiative Area</i>	396
1 <i>The Philippines</i>	397
2 <i>Malaysia</i>	398
V ANALYSIS.....	399
A <i>The Regional Approach to Address the Utilisation of Marine Genetic Resources in the Coral Triangle Initiative Area</i>	400
B <i>The Role of Marine Bioprospecting in Supporting Conservation and Sustainable Use of Marine Biodiversity in the Coral Triangle Initiative Area</i>	406
C <i>The Improvement of the ABS Mechanism in the Coral Triangle Initiative Region</i>	407
D <i>External Factors that may Affect the Coral Triangle Initiative Region</i>	409
1 <i>The Australian Government Support Program</i>	410
2 <i>The Regional Comprehensive Economic Partnership</i>	410
3 <i>The Trans-Pacific Partnership</i>	411
VI CONCLUSION.....	417
CHAPTER 8 RIO+20: COLLECTIVE ACTION, SUSTAINABLE DEVELOPMENT AND THE BLUE ECONOMY	421
I INTRODUCTION.....	421

II	SUSTAINABLE DEVELOPMENT AND THE MARINE ENVIRONMENT.....	425
	A <i>The Evolution of the Sustainable Development Concept</i>	425
	B <i>Sustainable Development in the Marine Environment</i>	430
III	THE RIO+20 CONFERENCE.....	437
	A <i>Rio+20: The Zero Draft</i>	437
	B <i>The Blue Economy</i>	440
	C <i>The Member States and Major Group Submissions</i>	446
	1 <i>Member States</i>	446
	(a) <i>Australia</i>	446
	(b) <i>United States of America</i>	449
	2 <i>Political Groups</i>	450
	(a) <i>Group of 77 and China</i>	451
	(b) <i>European Union</i>	453
	(c) <i>Pacific Islands Forum</i>	454
	(d) <i>Pacific Small Island Developing States</i>	455
	3 <i>Major Groups</i>	456
	(a) <i>Non-governmental Organisations</i>	456
	(b) <i>Business and Industry</i>	458
IV	THE FUTURE WE WANT.....	460
	A <i>Our Common Vision</i>	460
	B <i>Renewing Political Commitment</i>	461
	C <i>Green Economy in the Context of Sustainable Development and Poverty Eradication</i>	462
	D <i>Institutional Framework for Sustainable Development</i>	464
	E <i>Framework for Action and Follow-up</i>	465
	F <i>Means of Implementation</i>	468
V	SUSTAINABLE DEVELOPMENT AFTER RIO+20: THE FUTURE OF THE BLUE ECONOMY.....	470
	A <i>The Rio+20 Outcome and the Blue Economy</i>	470
	B <i>Collective Action: The Silver Lining of Rio+20</i>	472
	C <i>Sustainable Development through Marine Bioprospecting: The Indonesian Context</i>	476
	D <i>Indonesia's Role at the Regional Level</i>	484
VI	CONCLUSION.....	485
	CONCLUSION	487

I	INTRODUCTION.....	487
II	POSITIONS.....	490
III	SUMMARY OF KEY ARGUMENTS.....	497
IV	RECOMMENDATIONS.....	502
	A <i>International Law on Access to Marine Genetic Resources</i>	503
	B <i>Regional Models</i>	507
	1 <i>The Coral Triangle Initiative Framework</i>	508
	2 <i>The ASEAN Framework</i>	511
	C <i>Indonesia</i>	514
V	FUTURE DIRECTIONS.....	517
	A <i>Traditional Knowledge</i>	518
	B <i>Climate Change</i>	521
	C <i>Food Security</i>	523
	D <i>Access to Medicines</i>	525
	E <i>Emerging Technologies in Biotechnology</i>	528
VI	FINAL REMARKS.....	529
	Bibliography.....	533

List of Figures

Figure No.	Description	Page
I.1	The Current Problems in Marine Bioprospecting	21
I.2	Proposed Framework for Regulation of Marine Bioprospecting	33
1.1	The Maritime Zones	53
1.2	Legal Regime Applicable to Marine Scientific Research	72
2.1	Map of Indonesia	90
5.1	Access Permits Issued in the Commonwealth Jurisdiction 2009–2012	274
5.2	Access Permit Applicants for Biological Resources in the Commonwealth Waters 2009–2012	274
5.3	Marine Bioregional Planning Regions in Australia	286
5.4	Australia’s Marine Reserve Networks	289
6.1	Greenpeace projects a message urging biodiversity protection at the Nagoya Castle in the host city to the Tenth Conference of the Parties to the CBD, taking place from 18–29 October 2010	311
7.1	The Coral Triangle Initiative Implementation Area	363
7.2	The Area of the Project for the Conservation and Sustainable Use of the Mesoamerican Barrier Reef System	377
8.1	A model of giant fish made with plastic bottles was exhibited during the Rio+20 Conference in Brazil, displaying the message on the current degrading state of the marine environment	421
C.1	Proposed Framework for Regulation of Marine Bioprospecting in Indonesia	492
C.2	The Coral Triangle Initiative Area	509
C.3	The ASEAN Member States	512

List of Tables

Table No.	Description	Page
2.1	Marine Scientific Research Permits for Foreigners in Indonesia 2010	117
4.1	Patents Based on Marine Living Resources (PCT/ PatentScope Database) 2007–2012	227
5.1	Access Permits to Marine Biological Resources in Commonwealth Areas 2009–2012	297
7.1	The Coral Triangle Initiative Member States Participation of International Instruments Relevant to Marine Bioprospecting	419