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GOVERNANCE OF BLUE ECONOMY IN THE INDIAN OCEAN REGION: PROSPECTS AND CHALLENGES



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June 2021

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**GOVERNANCE OF BLUE ECONOMY IN
THE INDIAN OCEAN REGION:
PROSPECTS AND CHALLENGES**

**A Dissertation Submitted to the Department of Geopolitics and
International Relations in Partial Fulfilment for Master's Degree in
Geopolitics and International Relations**

Supervisor

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By

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June 2021



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DECLARATION

I declare that the dissertation entitled “**Governance of Blue Economy in the Indian Ocean Region: Prospects and Challenges**” submitted by me for the award of the degree of Master of Arts in Geopolitics and International Relations of Manipal Academy of Higher Education is my own work. The dissertation has not been submitted for any other degree of this University or any other University.

(Soham Rajendra Kango)

CERTIFICATE

I recommend that this dissertation be placed before the examiners for evaluation.

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ABBREVIATIONS

ABNJ	Area Beyond National Jurisdiction
ACCNNR	African Convention on the Conservation of Nature and Natural Resources
AMD	Atomic Mineral Division
ASEAN	Association of Southeast Asian Nations
BE	Blue Economy
BEAMS	Beach Environment and Aesthetics Management Services
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
CBD	Convention on Biological Diversity
CIOB	Central Indian Ocean Basin
CITES	Convention on International Trade in Endangered Species
CMLRE	Centre for Marine Living Resources and Ecology
CMS	Convention on Migratory Species
CRZ	Coastal Regulations Zone
CSIR	Council of Scientific and Industrial Research
DBT	Department of Biotechnology
DGH	Directorate General of Hydrocarbons
DNA	Deoxyribonucleic Acid
DWT	Dead Weight Tonnage
EAC	East African Community
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organisation
FEE	Foundation for Environmental Education
FFDA	Fish Farmers Development Agency
FSU	Fisheries Support Unit

FYP	Five Year Plan
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GSI	Geological Survey of India
GW	Giga Watt
IBRD	International Bank for Reconstruction and Development
ICCAT	International Commission for the Conservation of Atlantic Tuna
ICT	Information and Communication Technology
ICZM	Integrated Coastal Zone Management
IEA	International Energy Agency
IGO	Inter-Governmental Organisation
IIOE	International Indian Ocean Expedition
IMMT	Institute for Mineral and Material Technology
IMO	International Maritime Organisation
INCOIS	Indian National Centre for Ocean Information Services
IO	Indian Ocean
IOC	Indian Ocean Commission
IOR	Indian Ocean Region
IORA	Indian Ocean Rim Association
IORC	Indian Ocean Regional Countries
IOTC	Indian Ocean Tuna Commission
IPE	International Political Economy
IR	International Relations
ISA	International Seabed Authority

ISRO	Indian Space Research Organisation
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unreported and Unregulated
KG	Krishna Godavari
LDC	Least Developed Countries
LIDAR	Light Detection and Ranging
LME	Large Marine Ecosystem
LTTD	Low Temperature Thermal Desalination
MCS	Monitoring, Control and Surveillance
MNC	Multinational Corporation
MoEFCC	Ministry of Environment, Forest and Climate Change
MoES	Ministry of Earth Science
MoS&T	Ministry of Science and Technology
MPA	Marine Protected Areas
MSP	Marine Spatial Planning
MSRI	Maritime Silk Road Initiative
NATO	North Atlantic Treaty Organisation
NGHP	National Gas Hydrate Program
NGO	Non-Governmental Organisation
NGRI	National Geophysical Research Institute
NIFAP	National Inland Fisheries and Aquaculture Policy
NIO	National Institute of Oceanography
NIOT	National Institute of Ocean Technology
NITI	National Institution of Transforming India
NIWE	National Institute of Wind Energy
NML	National Metallurgical Laboratory

NMP	National Mariculture Policy
NPMF	National policy on Marine Fisheries
OES	Ocean Energy System
ONGC	Oil and Natural Gas Corporation
O-SMART	Ocean Services, Modelling, Applications, Resources and Technology
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
OTEC	Ocean Thermal Energy Control
R&D	Research and Development
RFMO	Regional Fisheries Management Organisation
REE	Rare Earth Element
RSCT	Regional Security Complex Theory
RTA	Regional Trade Agreement
SAARC	South Asian Association for Regional Cooperation
SADC	South African Development Community
SAGAR	Security and Growth for All in the Region
SCO	Shanghai Cooperation Association
SDG	Sustainable Development Goals
SeyCCAT	Seychelles Conservation and Climate Adaptation Trust
SICOM	Society of Integrated Coastal Management
SIDS	Small Island Developing States
SIOFC	Southern Indian Ocean Fisheries Commission
SITE	Small Island Tourism Economy
SLOC	Sea Lines of Communication
SSS	Seychelles Singapore Samoa
SST	Sea Surface Temperature

SWIOFP	Southwest Indian Ocean Fisheries Project
TERI	The Energy and Resources Institute
TNC	Transnational Corporation
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFCCC	United Nations Framework Convention on Climate Change
UNWTO	United Nations World Tourism organisation
US	United States
VLFS	Very Large Floating Structure
VMS	Vessel Monitoring System
WCPFC	Western and Central Pacific Fisheries Commission
WIOSEA	Western Indian Ocean Sustainable Ecosystem Alliance

TABLE OF CONTENTS

Contents	Page
Declaration.....	I
Acknowledgment.....	II
Abbreviations.....	III-VII
Table of Contents.....	VII-XI
List of Figures.....	XII
Abstract.....	XIII-XIV
CHAPTER – 1: INTRODUCTION.....	1-12
1.1. Background.....	2-5
1.2. Survey of Literature.....	5-10
1.3. Research Gap.....	10
1.4. Objectives of the Study.....	11
1.5. Significance of the Study.....	11
1.6. Methodology Used in the Study.....	11-12
1.7. Limitations of the Study.....	12
1.8. Delimitations of the Study.....	12
CHAPTER – 2: THEORETICAL ASSESSMENT OF VARIOUS APPROACHES TOWARDS BLUE ECONOMY IN THE IOR.....	13-28
2.1 Concepts and Applications of the International Relations Theories.....	14-28
2.1.1 Realism.....	14-15
2.1.2 Neorealism.....	15-16
2.1.3 Liberalism.....	16-18
2.1.4 Neoliberalism and the Sustainable Utilisation of the Blue Economy.....	18-20
2.1.5 International Political Economy (IPE).....	20-23
2.1.6 Green Theory and Exploitation of the Blue Economy.....	23-26
2.1.7 Regional Security Complex Theory (RSCT).....	26-28
CHAPTER – 3: DEFINITION, PRINCIPLES AND GUIDELINES TO GOVERN THE BLUE ECONOMY RESOURCES.....	29-54
3.1 Blue Economy: Concept and Definition.....	30-32
3.2 Taxonomy of the Blue Economy.....	33-48
3.2.1 Ocean-Dependent Leisure and Tourism.....	33-38
3.2.1.1 Small Island Tourism Economy (SITE) in the Indian Ocean.....	34
3.2.1.2 Tourism and Climate Change.....	34-35

3.2.1.3 Ecosystem Regulation.....	35-36
3.2.1.4 Trends in the Indian Ocean Tourism.....	36-38
3.2.1.4.1 Eco-Tourism.....	37
3.2.1.4.2 Sustainable Tourism.....	37
3.2.1.4.3 Growth Potential.....	37-38
3.2.2 Deep-Sea Resources.....	38-39
3.2.2.1 Oil and Gas.....	39
3.2.2.2 Minerals.....	39
3.2.3 Fishing and Aquaculture.....	40-42
3.2.3.1 Overfishing and Responses.....	40-41
3.2.3.2 Aquaculture.....	42
3.2.4 Environmental Conservation and Biodiversity.....	42-44
3.2.4.1 Overview of Threats to the Indian Ocean Biodiversity.....	43
3.2.4.2 Indian ocean Biodiversity Conservation Efforts.....	43-44
3.2.5 Shipping and Transportation.....	44-46
3.2.5.1 Ports Infrastructure.....	45-46
3.2.6 Marine Biotechnology.....	46-47
3.2.7 Marine Services.....	47-48
3.3 Guiding Norms and Principles on Sustainable Utilisation of Blue Economy.....	50-52
3.3.1 Creating Legal and Regulatory Institutions.....	50
3.3.2 Efficient Utilisation of Marine Resources.....	51
3.3.3 Emerging Marine Industries and Opportunities.....	51
3.3.4 Inclusive and Harmonious Growth with Sustainability Concerns.....	51-52
3.4 Blue Economy in the Indian Ocean: Opportunities and Potential.....	52-54

CHAPTER – 4: EXISTING GOVERNANCE FRAMEWORK AND CHALLENGES IN THE INDIAN OCEAN..... 55-63

4.1 Existing Blue Economy Governance Frameworks on Utilisation of the Blue Economy.....	56-60
4.1.1 International Level.....	56-58
4.1.1.1 United Nations Convention on the Law of the Sea (UNCLOS).....	57
4.1.1.2 The United Nations.....	57-58
4.1.1.3 The Commonwealth.....	58
4.1.2 Regional Level.....	58-59
4.1.3 National Level.....	59-60
4.2 Blue Economy Initiatives in the IOR.....	60-63
4.2.1 Blue Bond.....	61
4.2.2 Blue Carbon Hub.....	61-62
4.2.3 Marine Protected Area (MPA).....	62-63
4.3 Challenges to the Development of the Blue Economy Governance Framework in the Indian Ocean.....	63-66

CHAPTER – 5: INDIA’S POLICIES AND FRAMEWORK ON THE SUSTAINABILITY OF THE BLUE ECONOMY..... 67-87

5.1 India and Blue Economy.....	68-69
5.2 India’s Marine Engagement.....	70-79
5.2.1 Blue Revolution.....	70-71
5.2.2 Coastal Regulation Zone (CRZ).....	71-72
5.2.3 Integrated Coastal Zone Management.....	72-73
5.2.4 Sagarmala	73-74
5.2.5 National Policy of Marine Fisheries.....	74
5.2.6 Ocean Services, Modelling, Applications, Resources, and Technology (O-SMART).....	74-75
5.2.7 Deep-Ocean Mission.....	75
5.2.8 Samudrayaan Project.....	75-76
5.2.9 India’s Draft Policy and Framework on the Blue Economy.....	76-79
5.2.9.1 Manufacturing, Emerging Industries, Trade, Technology, Services and Skill Development.....	76
5.2.9.2 Coastal Marine Spatial Planning and Tourism (CMSP&T).....	76-77
5.2.9.3 Security, Strategic Dimensions and International Engagement.....	77
5.2.9.4 Marine Fisheries, Aquaculture and Fish Processing.....	77-78
5.2.9.5 Logistics, Infrastructure and Shipping including Trans-Shipments.....	78
5.2.9.6 Coastal and Deep-Sea Mining and Offshore Energy.....	78-79
5.2.9.7 National Accounting Framework.....	79
5.3 Blue Economy: Opportunities and Efforts.....	79-87
5.3.1 Tourism.....	80-81
5.3.2 Fisheries, Aquaculture and Pharmaceuticals.....	81-82
5.3.3 Minerals.....	82
5.3.4 Hydrocarbons.....	82-83
5.3.5 Renewable Energy.....	83-84
5.3.6 Desalination.....	84-85
5.3.7 Climate Change.....	85-87

CHAPTER – 6: PROSPECTS TOWARDS SUSTAINABLE BLUE ECONOMY GOVERNANCE FRAMEWORKS AND ITS IMPLICATIONS ON THE INDIAN OCEAN REGION..... 88-97

6.1 Blue Economy and SDG - 14.....	90-92
6.1.1 SDG - 14 Debates.....	90-91
6.1.2 SDG - 14 Issues.....	91-92
6.2 Initiatives from IORA Countries.....	92-93
6.3 Prospects towards a Sustainable Blue Economy Governance Framework for the Indian Ocean	93-95
6.4 Blue Economy and COVID-19 in the IOR.....	96-97

CHAPTER – 7: SUMMAR AND CONCLUSION.....	98-105
REFERENCES.....	i-xvii

LIST OF TABLES / FIGURES

Tables	Page
Table 1: Components of the Blue Economy.....	32
Table 2: Taxonomy of Blue Economy Sectors and Activities.....	49
Figures	
Figure 1: Timeline for SDG-14 Targets.....	92
Figure 2: Factors Governing Success of Blue Economy.....	96

ABSTRACT

Oceans cover about 71 per cent of the Earth's surface and provide food and livelihood to a significant percentage of the world's people. Marine waterways account for almost 80% of global trade, making them a critical source of economic development. To preserve the natural environment of these water bodies, the United Nations included marine preservation as one priority area of its sustainable development objectives i.e., SDG-14. The Blue Economy, as a concept, aims at socioeconomic development, as well as the preservation and improvement of a range of livelihoods, while also ensuring the environmental sustainability of the seas and coastal areas. The concept of the Blue Economy originated mostly from the foundation of the Green Economy. The idea of a blue economy first appeared in 2012 when nations across the globe have struggled with the dual challenges appearing from aspiration for rapid economic development based on the ocean economy and impacts of such development process on the underlying ecosystems. The term "blue economy" refers to policies that support the long-term development of the ocean economy, in which economic expansion does not deplete aggregate natural capital and ecological commons protection helps to alleviate poverty. The three aspects of ocean usage reflected in the sustainable development paradigm are social, environmental, and economic, and such strategies are often characterised as such.

The blue economy, which particularly supports the sustainable use of ocean resources for economic growth and demands to preserve the health of the ocean ecosystem. In the past decade, the concept of blue economy has emerged as a critical component of the larger ecosystem of inclusive and sustainable development. At both the national and global levels, there has been a strong desire to sustainably exploit the potential of marine resources. Technological advancements, investment, and international collaboration have all aided development in the blue-economy industries. Despite the fact that a number of national blue economic plans have been developed by the Indian Ocean littorals over the past five years, the focus and methods adopted by various nations' to address the challenges were varied. Currently, this new concept is gaining momentum as a new way of thinking about how to engage effectively and sustainably with the tremendous development opportunities that marine resources offer globally, particularly in the Indian Ocean where a large number of nations are heavily dependent on the ocean for their economic development.

By following the initiatives on Blue Economy, the Indian Ocean littorals are anticipated to harness substantial economic growth while maintaining a healthy balance between resource utilisation and renewability. The introduction of the Sustainable Development Goals (SDG) has raised worries about natural resource sustainability, particularly in the context of growth-centric development paradigms. In fact, in the post-recession era, the marine related activities are considered as the most important source of development. If the region's SDGs are to be fulfilled, as well as livelihoods, food security and economies based on marine resources, then building the blue economy via sustainable management and use of ocean resources must take precedence. However, competition for the available resources between the IOR littorals and other regions may intensify. Presently, there have been no great confrontations over the security of the natural resources or sea lines of communications (SLOCs) links, but many scholars anticipate that such situations might arrive soon. To overcome such situations, the region has to take efforts to install mutually accepted governance mechanism, norms and regulations to ensure the sustainability of the ocean ecosystem. Regional cooperation is very much required in this process and is possible only when the littorals converge their interests through comprehensive cooperation among the IOR littorals along with the cooperation of extra regional players.

The study evaluates the current governance structure and investigate how it is relevant to the sustainable use of the Blue Economy through the application of IOR-approved norms, rules, and agreements. It assesses the relevance of the legal and policy frameworks of blue economic governance at the national, regional, and international levels. The study also analyses the feasibility of current domestic rules and norms of coastal nations and estimates the efforts on sustainable utilisation of natural resources in littoral waters. The research also covers India's new initiatives to protect its interests and efforts on the blue economy resources and its impact on the country's foreign relations. Lastly, the research examines the Blue Economy as a potential area of growth for countries to enhance the ecology and environment, society and individual economic potentials.