

# LAW FOR THE WORLD OCEAN

*TAGORE LAW LECTURES*

*By*

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## Foreword

FOR ALMOST A quarter of a century I have been an occasional visitor to Calcutta, always stunned by the magnitude of its economic and social problems, always amazed by the talent and vitality of its people. To those not familiar with Bengal the physical strain upon the land, the struggle of industry and transport for teeming millions of inhabitants and refugees, can be numbing. But beneath this surface lies an extraordinary intellectual and spiritual ferment, nimble minds and sensitive souls that yield tremendous leadership in the arts, commerce, law, and religion.

The University of Calcutta, the oldest in India, is a tribute to the Bengal achievement in higher education. Among its many offerings to tens of thousands of students, none stands higher than its training for the law and its dedication to jurisprudence. I was especially pleased, therefore, to be appointed as Tagore Professor of Law in 1979 and invited to give a

series of lectures to the faculty and students of law at the University on a subject of my own choosing. To add my small contribution to the illustrious list of lectures by Tagore Law Professors since 1870 has been a strenuous challenge, and I can only hope that some insights to the developing law for the world ocean may be helpful to both the scholar and advocate of international law in maintaining peace with justice.

I am grateful to many people who made these lectures feasible and helped in their organization, presentation, and publication. Among them have been Dr. R. K. Podder, Vice-Chancellor of the University of Calcutta, Professor Dipti-bhusan Dutta, Pro-Vice-Chancellor of Academic Affairs, the Honorable Mr. Justice Sabyasachi Mukherjee, Dr. Debiprasad Pal, Senior Advocate of the High Court of Calcutta, Mr. Arunprakash Chatterjee, Standing Counsel, Government of West Bengal, High Court of Calcutta, Mr. Subrata Roy Chowdhury, Barrister-at-Law, High Court of Calcutta, and Dr. M. L. Upadhyay, Principal of the University College of Law at Calcutta University. Of inestimable help in making all the arrangements for my visit to Calcutta and the presentation of the lectures themselves has been Mr. Jagadiswar Pal, Estates and Trust Officer of the University of Calcutta.

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GERARD J. MANGONE

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# Contents

	<i>Page</i>
FOREWORD ..	[9]
CHAPTER	
1 LEGAL THEORY AND THE USES OF THE SEA ..	1
Physical Nature of the Oceans ..	1
The Seas in Ancient Times ..	5
Dominion Over the Seas ..	6
The Age of Mercantilism ..	11
Freedom of the Seas ..	17
The Territorial Sea and Contiguous Zones ..	21
The Hague Codification Conference (1930) ..	25
The Geneva Conventions of 1958 ..	30
2 INTERNATIONAL LAW AND NAVAL FORCES ..	42
Development of Navies ..	43
Laws of War ..	46
Neutral Rights ..	48
Prizes, Blockades, and Contraband ..	50

CHAPTER	<i>Page</i>
The Hague Peace Conferences and Declaration of London ..	55
Contraband ..	57
Two World Wars ..	59
Submarine Warfare ..	59
The United Nations Charter and War	65
Strategic Submarines and Ocean Space	69
International Straits ..	73
Archipelagic States ..	76
Neuclear Weapons and the Seabed ..	78
International Law At Sea Since 1950	79
 3 REGULATION OF THE WORLD	
MERCHANT MARINE ..	84
Development of Ocean Shipping ..	85
Early Maritime Law ..	89
Nationality of Vessels ..	93
Nineteenth Century Merchant Marine	99
Maritime Law Before World War II	103
Twentieth Century Merchant Marine	112
International Organization for World Shipping ..	121
IMCO and Maritime Law ..	124
Carriage of Goods by Sea Convention (1978) ..	129
UNCTAD and Maritime Law ..	133
U.N. Law of the Sea Conferences ..	139

CHAPTER	<i>Page</i>
4 CUSTOMARY AND TREATY LAW FOR FISHERIES ..	145
Early European Fisheries ..	148
Fisheries and Sovereignty of the Sea	154
From Bilateral to Multilateral Agreements ..	161
Conservation Measures before World War II ..	175
The First and Second U.N. Law of the Sea Conference ..	184
Modern Fisheries ..	189
Extended Jurisdiction Over Fisheries	193
The Third U.N. Law of the Sea Conference .. ..	198
5 EXPLOITATION OF THE SEABED UNDER INTERNATIONAL LAW ..	207
Legal Status of the Seabed in the Nine- teenth Century ..	207
The Petroleum Industry ..	211
Oil Statistics ..	215
The Continental Shelf ..	217
The Seabed beyond National Jurisdiction ..	224
The Third U.N. Law of the Sea Conference ..	232



CHAPTER	<i>Page</i>
The International Seabed Authority and the Enterprise ..	236
The Extended Continental Shelf ..	244
 6 LEGAL PROTECTION OF THE MARINE ENVIRONMENT ..	251
Pollution in the World Ocean ..	254
The Regulation of Marine Pollution	259
Prevention of Pollution of the Sea by Oil ..	263
 MARPOL 1973 ..	268
Tanker Safety and Pollution Prevention Conference (1978) ..	270
Liability for Oil Spills ..	272
Third U.N. Law of the Sea Conference ..	277
 CONCLUSION ..	286
 BIBLIOGRAPHY ..	292
 INDEX ..	301

## CHAPTER

# 1

## Legal Theory and the Uses of the Sea

IS THERE ANYONE who has not gazed upon the ocean with amazement—the immensity of its surface rolling beyond an endless horizon, the thunder of waves upon rocks, the spuming white surf surging upon a beach, and the wind blowing a wet, salt, invigorating air. Ever since man first sheltered himself upon a shore, he has wondered about the oceans, drawn to their content, their power, and their beauty, yet fearful of their rage in storms, their cold, dark depths.

### Physical Nature of the Oceans

The hydrosphere of the planet Earth encompasses the oceans, the seas, the rivers, and lakes that gouge the continents, the polar ice packs, and the subterranean aquifers. By far the most

distinguishing characteristic of this planet in the solar system is its hydrosphere. Any observer from outer space would quickly detect that the oceans alone cover about 71 percent of the Earth's surface. Indeed, in the southern hemisphere of this planet, there is roughly four times as much water surface as land surface. Except for the Antarctic region, only between the 40th and 70th parallel north of the Equator, where the mass of Asia, Europe, and North America lies, is there more land than sea.

The dynamics of the flow of rivers into the oceans, the diffusion and deposition of weathered soil and rock into the seas, the process of solar evaporation and rain, all of which have reached somehow a steady state of salts in the sea and carbon dioxide in the air, are subjects of inquiry for oceanographers. To give some idea of the magnitude of this system, 88 billion tons of water are estimated to pour from the rivers of the world into the oceans on the average every day. This awesome torrent carries with it eleven and one-half million tons of dissolved matter — the washings from soil and stones, the wastes of man and industry — into the oceans.

In the past it was possible to think of continents and seas as independent entities, for the civilizations of the past, limited by technology,

contended with local or at most regional problems. Waterways always played a role in military power, commerce, and culture, but not until the last century could science and politics come together in the analysis of the oceans as a world system. Thus, every physical aspect of the oceans, the seabed, and the shoreline, interacting with the atmosphere and the lithosphere, bears upon the organization of power and the development of law in modern society.

The topography of the world ocean is irregular, favoring certain continents and their political configurations, while the depths, shallow or deep, vary considerably, affecting navigation, plant and animal life, and mineral extraction. Large marginal seas and bays occur in the North Atlantic Ocean while the South Atlantic and the eastern rim of the Pacific Ocean tend to be regular. The Red Sea, the Persian Gulf, the Arabian Sea, and the Bay of Bengal mark the northern circle of the Indian Ocean, but the East African Coast has a relatively smooth line, while the Western Pacific Coasts are greatly indented with contiguous seas and the ocean is pockmarked by islands and archipelagos. Irregular coastlines, natural ports, and deep rivers cutting into the shorelines have all played important roles in the development of human communities and the transfer of cultures.

The volume of the world ocean is eleven times the volume of land that lies above sea level. In the Mariana Trench the bottom of the sea is almost 11,000 meters, a depth exceeding the height of Mt. Everest, but most of the world ocean has a depth of three to six thousand meters. About seven and one half percent of the surface of the ocean lies over waters no deeper than 200 meters. Here most of the plant and animal life of the ocean is found, and the seabed is formed of sedimentary rocks and mud that are geomorphically a part of the continental land mass. About 2.74 million square kilometers of the global surface are covered by these shallow waters; however the contours are most uneven, with large shallow areas over a wide continental shelf occurring, for example, off the northern coast of the Soviet Union in the Arctic Ocean and the North Atlantic Ocean; the eastern coast of Canada; the northern coast of Australia and Indonesia; or the southeast coast of Argentina. Narrow shelves, on the contrary, appear off the eastern coast of Africa and the western coast of South America.

To keep some perspective about the world ocean and its integration with a global system bounded by politics and law, it should be remembered that only in the last century has science reached the point of providing an

organizational framework. Until the eighteenth century no map was able to present reasonably accurate contours of the inhabited continents. Antarctica was only discovered in the nineteenth century. Until the last quarter of the nineteenth century virtually nothing was known of the depths and deposits of the oceans. Only some sixty years ago was the sounding of the seabed by rope and wire replaced by bouncing sound waves electrically back to a research ship; only forty-five years ago the deepest dive that any submarine had made into the dense, opaque sea was about 117 meters.

### **The Seas in Ancient Times**

The most ancient civilizations of Egypt, Mesopotamia, India, and China, thousands of years before the birth of Christ, rose in river valleys where agriculture could flourish and trade could be carried on the smooth highways of water to the sea. The Hittites, who smelted iron, the Kassites, who trained the horse, and the Indians who wove textiles in the Indus Valley, were served by a river system flowing respectively to the Black Sea, the Persian Gulf, and the Arabian Sea. The Phoenicians, hugging the coast, steered their colonists around the rim of North Africa on the Mediterranean to the Pillars of Hercules beyond which, it was feared, there was

nothing more of earth. Maritime passage and trade by the bold Cretans traversed the Mediterranean in two-masted ocean-going vessels, preparing Greece for its great adventure in world civilization. Almost five hundred years before the mighty Augustus became the first citizen and virtual Emperor of Rome, Persia and Greece fought in fleets across the Aegean Sea. Maritime passage and trade in the Eastern Mediterranean between Sidon and Tyre on the Lebanon Coast, Cyprus, Crete, and the Greek isles of the Aegean thrived. Magistrates on the Island of Rhodes, in the center of this traffic, heard many litigations between masters and seamen, shipowners and cargo merchants, which led to the earliest known collection of maritime laws. Centuries later the code, the beginning of admiralty law, was largely adopted by Augustus into Roman practice.

### **Dominion Over the Seas**

From a legal point of view, dominion or sovereignty over the seas had to be different from dominion over the land. The surface of the ocean could not be inhabited; agriculture was impossible; and the harvest of food came from free floating creatures.

Moreover, the obvious resources of value — sand, stone, shell and finfish seemed to be ample

for all, replenishable without effort. For the ancient world denial of the sea to enemies in battle or in trade was desirable for any coastal kingdom, but to pre-empt the waters, even were it physically possible, not only demanded more ships and seamen for the tempestuous seas, but offered little advantage to the small Mediterranean settlements.

By sea Carthage tried to defeat Rome — and by sea Roman legions were transported to Africa to destroy Carthage forever. Yet the Romans regarded the sea with terror, never as an object of curiosity or exploitation. One permanent fleet was stationed by Augustus in the Adriatic to guard the Eastern Mediterranean; another in the Bay of Naples to guard the Western Mediterranean; and smaller Roman fleets were stationed on the coast of France and in the Black Sea, while Roman vessels plied between Gaul and Britain. To protect the peaceful commerce of Roman subjects, search, seizure, and punishment of pirates was the standing policy of Rome for its naval forces. But the legal status of the sea for Rome was clear, for the great Roman legal scholar, Domitius Ulpianus (Ulpian: died A.D. 228), upon whose writings about one-third of the Emperor Justinian's Digest (Pandects) published in A.D. 533, was based, wrote that "the sea by its nature is open



to everyone", and other Roman commentators compared the oceans to the air, "for the common use of all men".

Arab dhows probably sailed from the Red Sea through the Strait of Hormuz to Sri Lanka (Ceylon) and India in ancient times. The coastal trade of small ships hugging the coasts of Asia or threading the great archipelagos of the Philippines and Indonesia surely moved people and goods from shore to shore. But claims to dominion over large expanses of the sea, denying entry or proclaiming ocean rights against other maritime communities, do not seem part of Eastern history. Neither the Mughal Empire of India, the Chinese Empire, nor the Japanese Empire produced great navies ranging the world ocean.

The division of the Roman Empire between Byzantine and Western rulers, the redivision of the western Roman empire into barbarian kingdoms, and the rise of such maritime republics as Venice and Genoa in the Middle Ages determined a new approach to the seas economically, politically, and legally. From the ninth century onward people had taken refuge on the mud-flats of the Adriatic Sea at Venice to escape the powerful Lombards. They combined their energies and skills with their key geographical position of trade between Central