

INTERNATIONAL STRAITS OF THE WORLD

GERARD J. MANGONE

GENERAL EDITOR

GUNNAR ALEXANDERSSON

# The Baltic Straits

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## FOREWORD

This is the sixth book of the series of studies organized and edited at the Center for the Study of Marine Policy at the University of Delaware on international straits of the world. From 1974 to 1982 the nations of the world have tried to reach agreement on a comprehensive convention for the law of the sea through the Third United Nations Law of the Sea Conference. Sessions have been held in Caracas, Geneva, and New York attended by the representatives of more than 150 states, and it is still uncertain when adoption of the draft convention of 320 articles and eight annexes will take place. It is even less certain when and whether an adequate number of states will ratify the convention, once adopted, without significant reservations, to give it legal force.

Passage through straits used for international navigation has been one of the key sections of the draft convention on the law of the sea, with an entirely new regime of "transit passage" incorporated in the articles. Whatever may ultimately be adopted and ratified by states on this subject, history indicates that several straits of the world ocean will continue to breed contention because of their strategic and economic importance to navies and trade, involving not only coastal and regional states, but also distant maritime powers. It may be helpful, then, to review the physical characteristics, the political and economic importance, and the legal status of certain narrows of the world ocean, so that policy decisions by all concerned may be wisely taken in the interests of peace, prosperity, and a sound marine environment.

For this study of the Baltic Straits, the Center was fortunate in enlisting the talents of Gunnar Alexandersson, Professor of International Economic Geography at the Stockholm School of Economics. Born in Bergkvara, Sweden, he has been an avid scholar of shipping and ports in the Baltic region, and a frequent traveller through Europe, America, and Asia. He has been a research associate at the University of Maryland and a visiting professor at both the University of Nebraska and the University of Wisconsin. Professor Alexandersson is the author of five books as well as co-author of *World Shipping: Economic Geography of Ports and Seaborne Trade*.

The Baltic Straits have a long and interesting history. They were called the Danish Straits, when Denmark was a great power that straddled those waterways and encompassed Norway, parts of Sweden, Germany, Poland, and Estonia to the east, and also colonized the Scottish isles, the Faeroes, Iceland, and Greenland to the west, while exercising control over much of England for centuries. For several hundred years Denmark collected "dues" from ships passing through the Sound and the Great Belt, the two important gateways to

the Baltic sea. In the early nineteenth century the British fleet had to force its way into the Baltic sea, denying Denmark's claim of a right to close the sea to non-littoral fleets.

Only in 1857, led by the United States, did the maritime states throw off the burden of the dues upon their commercial ships. Even then they indemnified Denmark generously, with the United States alone paying \$393 million. During World War I Denmark was neutral and the straits were the object of considerable strategic attention by both Germany and Great Britain. Although mined to protect Danish neutrality, the straits were considered by London as an avenue of attack upon Germany, while the German fleet passed through the straits to meet the British fleet at Jutland on 31 May 1916. Many thousands of merchant vessels, moreover, were piloted through the minefields of the Great Belt during World War I.

During the late 1930s Denmark, like other states of Europe, came under heavy political pressure from the demands of Adolf Hitler's Third Reich in Germany, and Copenhagen was forced to sign a non-aggression pact, allow overflight of the straits, and the passage of submerged German submarines. But immediately after the defeat of Hitler, the Baltic and the straits became a political arena of potential conflict between the NATO forces of the West and the WP forces of the East, led by the Soviet Union.

Professor Alexandersson has carefully drawn the physical-hydrographic elements of the Baltic Sea and its approaches; he has vividly described the historical interests, both politically and economically of the littoral states, analyzed the legal status and uses of the Baltic Straits over time, and calculated the role of the Baltic region, with its waterways, in the global struggle between the western alliance and the Soviet bloc. He has especially delineated the delicate role of Sweden and Finland, caught between the juggernauts. Of particular value is his description of the various legal views of the Baltic Straits, particularly in light of the emerging law of the sea, and, finally, his estimate of the opportunities for peace and prosperity in this region marked for trade, environmental cooperation, and political rivalries by different systems of political economy.

The Center for the Study of Marine Policy launched this series of studies of international straits of the world with the encouragement and support of the Rockefeller Foundation, and I wish to express my deep appreciation to Elmore Jackson, Mason Willrich, and John Stremiau for their counsel and tangible assistance. At the same time I have had the benefit of observations and comments, with constructive suggestions, from a distinguished international Advisory Council including the late, esteemed Richard R. Baxter, Harvard Law School and Judge of the International Court of Justice, and the late Robert D. Hodgson, Office of the Geographer, Department of State, as well as Maxwell Cohen, formerly on the International Joint Commission (Canada-

United States), T.T.B. Koh, Permanent Representative of Singapore to the United Nations and President of the Third U.N. Law of the Sea Conference, Ali Moertopo, Center for Strategic and International Studies, Indonesia, John R. Stevenson, Sullivan and Cromwell, New York, and the late Admiral Edward Wegener, Federal Republic of Germany. To each of them I wish to express my gratitude.

All statements, judgements, or opinions within this study are the sole responsibility of the author and not to be attributed in any way to the Rockefeller Foundation, the Center for the Study of Marine Policy at the University of Delaware, or to any member of the International Advisory Council.

*Gerard J. Mangone*

Director

Center for the Study of Marine Policy  
University of Delaware  
15 March 1982

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## Chapter 1

### THE BALTIC REGION

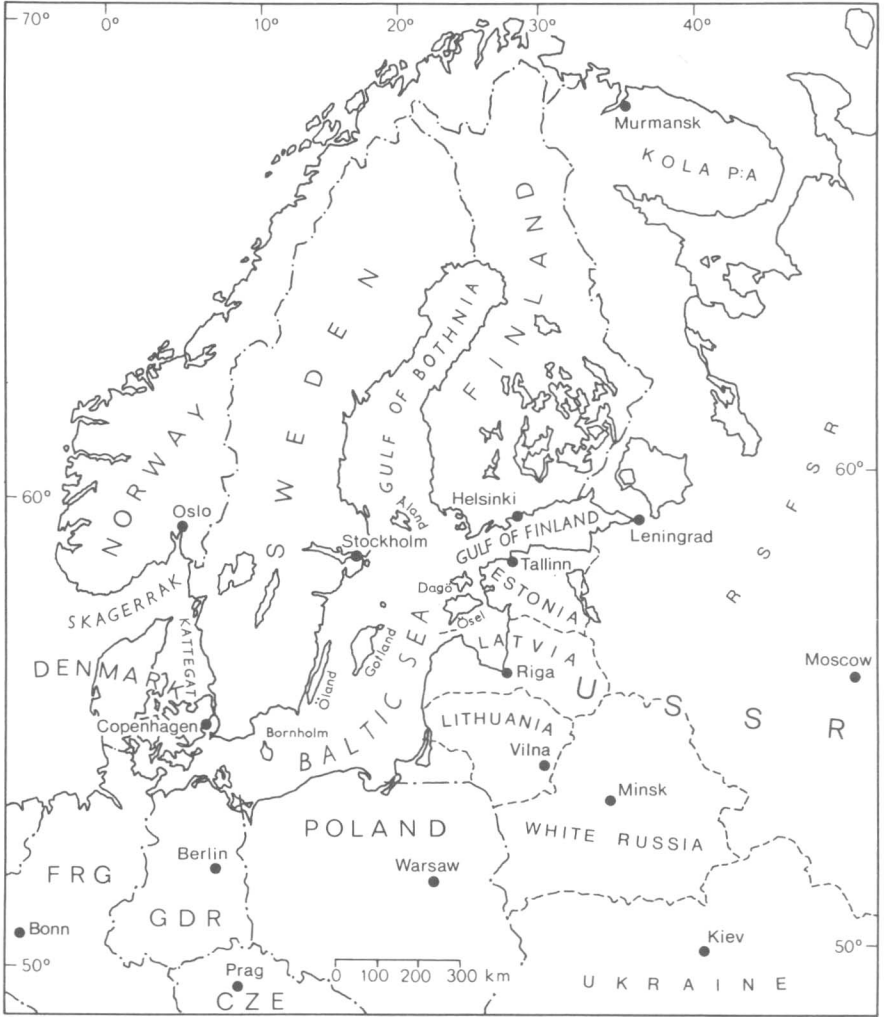
Measured by population density or industrial capacity, the Baltic region is the northern, sparsely populated, and modestly productive periphery of the European continent. Yet throughout history the Baltic region has played a greater role in European affairs than the size of its population or their industrial output might indicate, for the region has been - and still is - a major crossroads of international trade and an area of vital strategic importance.

The Baltic region can be variously defined, depending on the purpose of the study. A treatise on water pollution would be centered on the hydrology of the region and the drainage basin of the Baltic Sea would be the natural object of study. An investigation of tourism and recreation would focus on the coast line, and a study of shipping would concentrate on Baltic ports and their hinterlands as well as their overseas relations. Here, however, political geography will be an important component of the study. After a brief description of the physical character of the region and its ecosystem, the decision-making units, the states, will be considered, leading into a detailed analysis of the Baltic Straits and their importance for international peace and economic development.

#### Physical Characteristics

The Baltic region located in the northwestern corner of the Eurasian continent, has a mild climate for its high latitude. Leningrad, Helsinki, Stockholm and Oslo are roughly on the same latitude as the southern tip of Greenland, central Hudson's Bay and the southern coast of Alaska ( $60^{\circ}\text{N}$ ) but their climate is not much different from that of Maine in the United States ( $45^{\circ}\text{N}$ ). This deviation in average annual temperature in comparison to the global mean for this range of latitudes is primarily explained by the heat transfer from lower latitudes caused by the North Atlantic Drift, a branch of the Gulf Stream, which follows the Norwegian coast to the Barents Sea. Thus, the influence of the relatively warm Atlantic Ocean is felt far inland in this region of prevailing westerly and southwesterly winds.

The anomalies of temperature are largest in the winter when isotherms in



Map 1. The Baltic Region

western Europe tend to have a north-southerly direction. The isotherm for freezing ( $0^{\circ}\text{C}$ ) in January runs along the coast of the Scandinavian peninsula from northernmost Norway through the Sound and then south through Germany to the Alps where it turns southeastward to the Black Sea. This means that ports on the west coast of the peninsula are not much hampered by ice. Even the Kola Peninsula of the Soviet Union benefits from ice-free harbors, so that Murmansk has been an ice-free port with direct access to the world ocean, as can be seen on Map 1.

Geologically the Baltic region is both extremely old and extremely young. Large areas are composed of pre-Cambrian rocks and Quaternary glacial deposits, which means the largest stratigraphic hiatus to be found anywhere. Deposits some 15 to 20 thousand years old are found directly on top of or adjacent to rocks formed a billion years or more ago. The Fennoscandian Shield of pre-Cambrian rocks, mostly granites or gneisses, covers all of Finland and adjacent parts of the Soviet Union that can be marked by a line across the Karelian Isthmus, the Ladoga and the Onega to the White Sea and including all the Kola Peninsula. The line limiting the shield in the southeast runs under the Gulf of Finland and across the Baltic Sea north of the two Swedish islands Gotland and Öland. Southwestern Skåne and all of Denmark, except part of Bornholm, from a geological point of view belong to the continent while southern Norway is part of the shield. The Scandinavian mountains, straddling the Swedish-Norwegian border, belong to the Cambro-Silurian or Caledonian folding system. These mountains, after being worn down to a peneplain, were rejuvenated when, during the Tertiary folding of the Alps and the Carpathians, the Scandinavian Peninsula was tilted, leaving the highest points near the Norwegian Sea. Large parts of the mountains are thus made up of plateaus, such as Hardangervidda.

The latest of the four ice caps that covered the Baltic region during the Quaternary made a lasting impact on the morphology of the landscape. Most lakes were formed by natural dams deposited by the ice. Finland has been called "The Land of the Thousand Lakes", an understatement since the number of lakes in Finland and Sweden runs into many tens of thousands, the count depending on the definition of "lake". The ice sculptured the Norwegian fiords, giving them their U-form and their typical threshold at the mouth; on the Swedish side similar lakes were created. The moraine deposited by glaciers over the landscape determine which land can be cultivated and which must be left in forest. On the shield most of the arable surfaces have been under water in the post-glacial period. Their mineral soils have been restructured and organic material added. Agriculture is limited to a few percent of the land area of the shield, primarily in the coastal districts, the river valleys, and reclaimed bog or lake lands. Most of the land, which is generally covered by a thin layer of acid soil with a low humus content and very low fertility (leached podsol), supports a coniferous forest.

The massive icecap, with its central thickness of two or three thousand meters, had pressed down the land. The Scandinavian Peninsula and Finland are still in the process of bouncing back while the lands around the southern parts of the North Sea are sinking, creating special problems. The land rise is maximum west of Härnösand, Sweden and is 44 cm a century at Stockholm, with the zero-line crossing in the straits. The gain of new land around the Gulf of Bothnia has been considerable.

East, south and west of the shield, from the Gulf of Finland to Denmark, where the pre-Cambrian rocks dip under younger sediments, conditions for agriculture have always been more favorable and population densities higher. But glacial deposits also play a great role in the morphology of the landscape and in the human environment in this part of the Baltic region. The many lakes, the large end-moraines, the sandy soils, and the drainage pattern with its east-west orientation of overlarge river valleys (Urstromtäler) marking the maximum extension of the icecap are among the most conspicuous contributions of the latest ice-age to the landscape south of the Baltic. As a consequence of this orientation of the drainage pattern, East Germany, which has a coast only on the Baltic, falls almost entirely within the drainage basin of the North Sea.

### **Regional Trade and Transportation**

Europe, with its large, enclosed seas<sup>1</sup> in the south and north, the Baltic, the Mediterranean, and the Black Sea, is more accessible from the ocean than other continents. No point west of the Soviet Union is more than just over 600 km from a coast. The land hemisphere - that half of the globe that holds the maximum of land (80%) and people (95%) - has northwestern Europe at its center. For centuries it has been the chief focus of world trade and world affairs. Great Britain until the First World War was the leading trading nation in the world and other nations of northwestern Europe have ranked prominently.<sup>2</sup>

Northwestern Europe still ranks far ahead of Anglo-America and Japan as a generator of international trade even when the intra-continental trade is disregarded.

In the early medieval period when the feudal system was at its peak in Europe and long-distance trade at its low, the Vikings had trade relations with points as far apart as Baghdad and Constantinople in the east and Greenland, Iceland, Ireland, Britain, and Spain in the west. That deeply penetrating sea in the southern periphery of Europe, the Mediterranean, which during earlier civilizations had been in the center of the known world, at this time was a battle line between Islam in North Africa and Christianity in Europe.

With the quickening of trade and the development of cities beginning in the twelfth century, the Baltic city of Lübeck played a leading economic role as the headquarters of the Hanseatic League, which included not only cities in the Baltic region but also in northern and central Germany and in the North Sea area from London to Bergen.

In the sixteenth century, as the Hansa declined, Dutch trade excelled, to be followed by British domination of trade in the eighteenth and nineteenth cen-

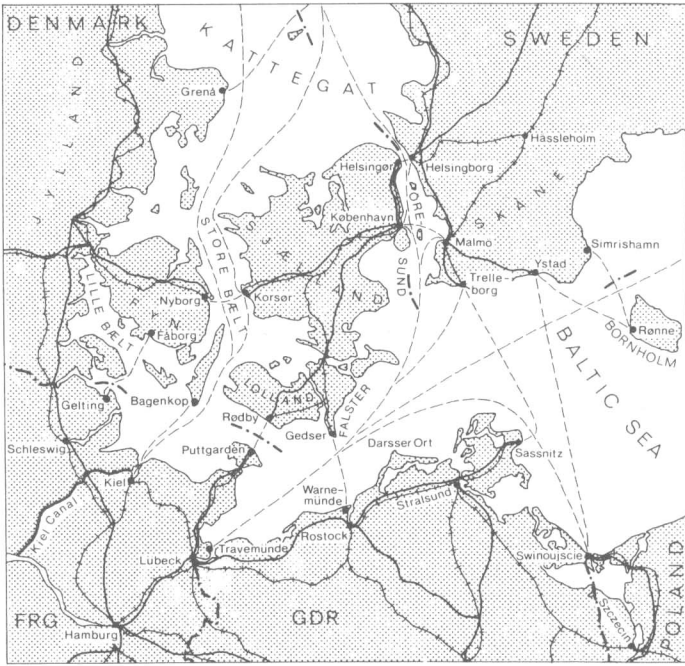
turies. To the Netherlands and Britain, the Baltic region for a long period played the same role as a supplier of raw materials as their overseas colonies did later within a much larger trade volume. To both countries, the Danish-control of the straits to the Baltic Sea and the Danish-Swedish struggle for military hegemony in the Baltic region for centuries were geopolitical facts of great importance. Nevertheless, it was the initiative of the United States that brought to an end the Sound Dues in 1857, which the Danes had collected for more than four hundred years, and American action was based more on legal principle than national economic urgency.

With the Industrial Revolution the Baltic Sea and its straits lost in relative importance as a shipping region. Railroads gradually took over much of the east-west trade as Berlin, well to the south of the Baltic coast, became one of the most important railroad junctions in the world. With the construction of the Kiel Canal, moreover, an alternative was created to the Baltic Straits. Hamburg, on the North Sea, became a formidable competitor of Copenhagen for the transit trade, and in recent times Rotterdam has become a strong competitor of Gothenburg for the overseas container traffic of the Nordic countries. To both Hamburg and Rotterdam containers are hauled mainly by road and rail as well as by feeder vessels through the canal.

After the Second World War, coastal liner shipping all but disappeared in northwestern Europe, and the railroads have also been losing their relative importance to the roads. General cargo, shipped in unit loads and hauled by trucks or trains, tend to follow the shortest route from origin to destination. Roll-on, roll-off ferries act as bridges across the Baltic Straits or between points in the Nordic countries and points on the Continent for these type of transports and for passenger cars. Much of the international passenger traffic and some cargo have been taken over by airplanes. For passengers and general cargo, transportation by ship no longer is an attractive alternative.<sup>3</sup>

The Baltic and the straits act as barriers to the new modes of transportation, making them slower and more expensive. Cross traffic has become as important as through traffic in the straits. Skåne, the southern tip of Sweden, acts as a bridgehead for most of the ferry traffic that connects the road and railway nets of Finland, Sweden, and Norway with those of the continent. The large flows passing over Denmark require two ferry passages between the continent and the Scandinavian Peninsula, and those with origin or destination in Finland require three, if they do not move directly by roll-on, roll-off ferry between Helsinki and Travemünde, as shown in Map 2. For the international ferry traffic in the terminals on the map, see Table 1.

For bulk cargo, sea transport is still the cheapest means so that ports are the most competitive location for heavy industry and bulk storage. Since bulk cargo completely dominates international trade by weight, the flow of cargo in the Baltic Sea and through the straits and the Kiel Canal have been larger than



Map 2. Ferry lines in the Baltic Straits Region. Inland are shown major railways and Europe-roads. The Malmö - Karlskrona - Norrköping road (E66) was reclassified after the map was completed.

ever in spite of the almost complete loss of general cargo and passenger traffic to other modes of transportation. Even though the cargo and passenger flows no longer follow their old patterns through the straits or the canal, but rather use ferries or airplanes, the small Helsingborg-Malmö-Lübeck-Kiel-Nyborg-Helsingborg area remains the crossroads for traffic to and from the Baltic region. Copenhagen is the undisputed air gateway to the Nordic countries and one of the largest airports in Europe. It is also the rail gateway, now operating chiefly through the rail-ferry at Helsingør-Helsingborg. Ferries serving road traffic have tried to avoid metropolitan cities and tend to be scattered in both their Scandinavian and their continental terminals. For example, several ferry lines from Norway and the west coast of Sweden have their continental terminals on the Jutland Peninsula, which lies outside the Baltic region.

Table 1

**Ferry Traffic at Baltic Terminals Covered by Map 2**  
(weekly connections)

Terminal	Frequency	Terminal	Frequency	Terminal	Frequency
Gelting	14-21	Rønne	7-40	Göteborg	11
Kiel	21-34	Ystad	21-49	Oslo	4-6
Puttgarden	Frequent*	Trelleborg	56	Helsingør	Frequent
Travemünde (Incl Lübeck)	75-79	Malmö (Incl Limhamn and Landskrona)	14 Frequent	Copenhagen (Incl Dragør)	15-17 Frequent
Warnemünde	21-28			Gedser	21-28
Sassnitz	35	Helsingborg	14 Frequent	Rødby	Frequent
Swinoujscie	20	Varberg	14-28	Korsør	4-7
Helsinki	17-24			Bagenkop	10-21
Simrishamn	0-5			Fåborg	14-21
				Grenå	14-28

\* Sailings every hour or so over short distances.



## Chapter 2

### THE BALTIC SEA AS AN ECOSYSTEM

The world ocean has been conveniently divided by oceanographers along arbitrarily chosen lines.<sup>1</sup> Several “adjacent seas” of the North Atlantic Ocean have been distinguished: namely, the Caribbean Sea, the Gulf of Mexico, the Mediterranean Sea, the Black Sea, the Polar Seas, Baffin Bay, the Labrador Sea, the Norwegian Sea and the Baltic Sea. The limit of the Baltic area is normally drawn either just north of the straits or on the latitude of the Skagen (Skaw), which means that the Kattegat sometimes is included. However, the Skagerack has never been regarded as part of the Baltic area, and Norway is not considered a littoral state of the Baltic.<sup>2</sup>

In the Gdańsk Fishing Convention (Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and the Belts, signed in Gdańsk on 13 September 1973 and ratified on 28 July 1974), which established a commission for cooperation in fishing matters between the seven littoral states of the Baltic, headquartered in Warsaw, the line was drawn just north of the Belts from Hasenøre Head south of Aebeltoft on Jutland to Gniben Point, Korshage, Spodsbjerg and Gilbjerg Head, all on Sjælland, and to Kullen in Sweden. Kattegat was not included. The London Fishing Conventions of 1946 and 1973, regulating the meshes of fishing nets and the size limits of fish, the Paris Convention of 1974, regulating marine pollution from landbased sources and the Copenhagen Agreement of 1974 between Denmark and Sweden, regulating pollution in the Sound, use the same limit.

Part IX of the Draft Convention (Informal Text) on the Law of the Sea, which was elaborated by the Third UN Conference on the Law of the Sea from 1974 to 1980, defined an “enclosed or semi-enclosed sea” as “a gulf, basin or sea surrounded by two or more states”. One or both of the following two qualifications must also be filled: the sea must be “connected to the open seas by a narrow outlet” or consist “entirely or primarily of the territorial sea and exclusive economic zones of two or more coastal states”.<sup>3</sup> The Baltic Sea, like the Black Sea and the Mediterranean Sea, fits both qualifications, but the North Sea meets only the second. The North Sea has two outlets to the high sea and the northern outlet is far from narrow. Moreover, as a descriptive term, “enclosed sea” for the three European seas may be acceptable, but as a legal concept it seems highly controversial.