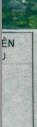


Chief author: Dr TRÂN CÔNG TRỤC

ON THIS BIEN DONG SEA





Chief author: Dr TRẦN CÔNG TRỤC

EVIDENCES OF VIETNAM'S SOVEREIGHTY ON THE BIEN DONG SEA

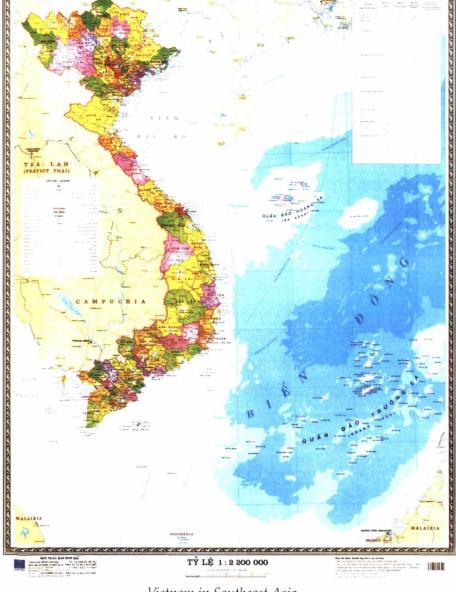
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SOCIALIST REPUBLIC OF VIETNAM



Vietnam in Southeast Asia

FOREWORDS

TO OUR READERS

The sea and islands are integral parts of the sacred sovereignty area of the Motherland, which, together with the land and the airspace create the environment for our nation's eternal survival and development.

The world is entering an "ocean era", and extending to the sea has become a major trend in coastal states. Even non-coastal states are seeking ways to reach out to the sea and take advantage of marine resources. To Vietnam, the sea plays an important role in its open door process and international integration. The sea, seabed and ocean surface contain a great diversity of resources, which provide our country with food, raw materials, fuels, and energy, and are becoming more and more essential to the development of the country in the present and future.

To firmly protect our Motherland - the Socialist Republic of Vietnam, to ensure respect for the sovereignty and territorial integrity of our land, sea, and air, and prevent any risk of invasion from outside, are the responsibility of every Vietnamese citizen and the State of Vietnam. These also concern other states, primarily neighboring states or other states in the region. For generations, our forefathers have sacrificed innumerable amounts of sweat, blood and lives to preserve and protect the sacred waters of the country. Today, we need to creatively apply the historical lessons, combining national strength with the power of the time to continue to assert the indisputable sovereignty of Vietnam over Hoang Sa and Truong Sa, exactly as taught by President Ho Chi Minh:

"Previously we only had the nights and the forests. Today, we have the days, the sun and the sea. Our coast is long and beautiful. We should know how to keep it".

For these reasons, the Information and Communications Publishing House hereby publishes the book "Evidences of Vietnam's sovereignty on the Bien Dong Sea" by Dr. Tran Cong Truc, the chief author. The book affirms Vietnam's evident imprints on the Bien Dong Sea, conveys accurate information to all people as well as serves as an assertion to the world of the solid stance and determination of the Vietnamese people to protect our national territory and integrity. The book comprises 4 chapters:

- Chapter 1: The location and role of the sea and islands of Vietnam in the Bien Dong Sea.
- Chapter 2: The establishment of Vietnam maritime areas and the continental shelf.
- Chapter 3: The process of establishing and enforcing the sovereignty of Vietnam in Hoang Sa and Truong Sa archipelagoes.
- Chapter 4: The Bien Dong Sea disputes Current situations and solutions.
 - Chapter 5: Some research papers on the Bien Dong Sea.

In addition, the book has an annex of official documents of the State of Vietnam on Vietnam's sea areas and continental shelf.

Hanoi, January 2012

Information and Communications Publishing House

⁽¹⁾ The Bien Dong Sea in Vietnamese literally means the sea in the east of the country, and is often referred to by Westerners as the South China Sea.

Chapter 1

THE LOCATION AND ROLE OF THE SEA AND ISLANDS OF VIETNAM IN THE BIEN DONG SEA

1. LOCATIONS OF VIETNAM'S SEAS AND ISLANDS

1.1. Physical features of The Bien Dong Sea

1.1.1. Position

The Bien Dong Sea is a semi-enclosed sea covering an area of about 3.5 million km², extending from latitude 3° North to latitude 26° North and from longitude 100° East to 121° East. Besides Vietnam, The Bien Dong Sea is surrounded by nine other countries and territories, including China, the Philippines, Indonesia, Brunei, Malaysia, Singapore, Thailand, Cambodia and Taiwan. According to preliminary estimates, The Bien Dong Sea exerts direct impact on the lives of some 300 million people in these countries. The Bien Dong Sea is not only an important strategic area for the countries in the region but also the Asia-Pacific and the Americas.

Our country touches The Bien Dong Sea on three sides: East, South and Southwestern. The sea areas and the continental shelf of Vietnam are part of The Bien Dong Sea spreading along the 3,260km-long coast, from Quang Ninh to Kien Giang, with many beautiful beaches such as Tra Co, Do Son, Sam Son, Cua Lo, Cam Ranh, and Vung Tau. Thus, for every 100 km² there is 1 km of coastline; this ratio is 6 times higher than the rate of the coastal countries of the world (the world average is 1 km of coast for every 600 km²). No place in Vietnam's inland areas is more than 500 km away from the sea.

Vietnam has internal waters, territorial sea, contiguous zones, exclusive economic zones, and continental shelf; in the middle of The Bien Dong Sea there are 2 archipelagoes of Hoang Sa and Truong Sa and 2,577 small and large islands at various distances from the shore which form a defensive line to protect and control our waters and continental shelves.

1.1.2. The Bien Dong Sea's seabed topography

In most of the world's oceans and seas, eight major types of seabed topography are found: continental shelves, continental slopes, continental feet, ocean basins, island arcs, deep grooves, underground hills and underground mountain ranges, all of which find their similar appearance in *The Bien Dong* seabed.

- + The Bien Dong Sea's continental shelf account for over 50% of the area, distributing at a depth of less than 200m.
- + Continental slopes account for about 25%; the remaining area is distributed at a greater depth of 2,000m over the central basin, the deep grooves, shoals, island arcs and underground mountain ranges.

+ Between the north and the south deep sunken part, The Bien Dong Sea is deeply connected by a deep central trough with underground mountain ranges at its edge.

1.1.3. The Bien Dong Sea's salinity and temperature regime

Temperature and salt content (salinity) are the two most basic physical characteristics of sea water, dominating every marine hydro-thermodynamic process, while ensuring the existence and development of aquatic life in the sea. Unlike inland water, sea water is characterized by its salinity. The average salinity of the world ocean water is 35% (i.e. 35g of solid minerals dissolved in 01 kg of sea water). Salinity variations depend on water temperatures, marine meteorology, geographical locations and marine dynamic processes. The salinity of The Bien Dong Sea's surface water layer ranges from 32 to 34.5ppt (excluding estuaries). The salinity area of high values is in the Northeastern part of The Bien Dong Sea, where there is an exchange with the Pacific water bloc through Basi and Taiwan Straits, which is subject to less influence of continental water and strong sea surface evaporation. January to March is the time with the highest salinity. The low salinity areas are coastal areas due to the strong impact of the continental waters. The lowest salinity occurs in summer, June-August, due to heavy rains on the sea and large quantities of continental water discharge.

The thermo-saline distribution of the sea water reflects the hydromass structure and the ocean dynamic regimes. The water surface layer of The Bien Dong Sea contains different blocks: cold and light inshore water blocks, northeast offshore water block, south offshore block, and the summer upwelling block. Between the blocks are hydrographic fronts with very high thermo-saline

horizontal gradient characteristics. Fish schools often concentrate near the hydrographic fronts. The volatility of the fronts leads to migration of extractable fish schools and other types of sea creatures.

1.1.4. The Bien Dong Sea flow

The Bien Dong Sea surface water flow is the result of the sea-atmosphere interaction process. The flow observed on the surface is the mix of three components: wind flow, the local switch flow and tidal flow. The first two components are very difficult to determine; however, it is possible to use actual measurement data and mathematic models to quantify them. Combining both methods, we have developed The Bien Dong Sea flow regime map characterized for two seasons (winter and summer), reflecting the fundamental law of the under surface layer circulation under the action of the monsoon regime. In the Gulf of Tonkin, a cyclonic circulation has always existed as well as a strong current towards the south along the coast (in the winter, this flow penetrates deep into the waters of Binh Thuan and beyond). In the summer, under the influence of the Southeast monsoon, the strong southwest flow was formed along the Southern part of The Bien Dong and South Central to the North and sees the flow from the North at about 160 South, then they deflect to the East to the central sea area, creating large-scale vortices in the North and South of The Bien Dong Sea.

1.1.5. The Bien Dong Sea tide

The Bien Dong Sea tidal regime results from tidal waves from the Pacific and Indian Oceans passing through large straits dominated by the complicated topography of the sea. The Pacific