

Persian Gulf-Indian Ocean Geopolitical Intertwinement

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Received: 23/06/2013

Accepted: 18/11/2013

Abstract

The present paper is an attempt to discuss the symbiotic relationship between two geopolitical regions, i.e. the Persian Gulf and Indian Ocean. Since the Persian Gulf access to the high seas is through the Indian Ocean sea-lanes, geopolitics of oil routes also should be studied in the light of the geopolitics of Indian Ocean. The main contention of the present paper is that there is a symbiotic relationship between the Indian Ocean and Persian Gulf which goes much beyond mere morphological geographical connections. In fact, this symbiosis has a geopolitical-geographical nature as described by Stephen Jones' geopolitical theory of Unified Fields. In this perspective, the Persian Gulf is vitally dependent on the Indian Ocean while any development in the Persian Gulf would crucially affect the developments in Indian Ocean. The data required for this research were collected through documentary method which included books, journals and data available in statistical centers. The collected data have been analyzed to test the hypothesis within the framework of Stephen Jones' Unified Field Theory. The findings of the research sustain the hypothesis indicating that there is a geopolitical symbiosis between the two water bodies.

Keywords: Persian Gulf, Indian Ocean, Iran, Unified fields, Oil.

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1. Introduction

With the introduction of oil (instead of coal) as the basis and energizer of national industrial economies, and the fuel to link and sustain the world economy, life's dependence on this resource has become virtually total. Among the major consumers of oil as their main energy source, are the USA, Europe, Japan, Canada, China and India (Statistical Review of World Energy, 2013: 8-15).

The occurrence of the 'energy crisis' and its sweep in 1970s, marked the limitations – if not irrelevance to Indian Ocean condition – of politics powered and permeated by great powers' ideology. The two global ideologies (communism, capitalism-liberalism) failed to register or win recognition. Using a vital resource – oil – as an instrument of attaining political objective, apart from its dramatic impact universally, at once stressed the stark relevance of resource-base and resource-orientation of politics – in other words of geopolitics – to the Indian Ocean, its impulses and to its understanding. Recognition of this fact came grudgingly but surely, especially in the later decades when the United States created RDF, boosted its military facilities in the Island of Diego Garcia, revided the ANZUS Treaty (see below) and later invaded and occupied Iraq in search of new sources of energy.

The Persian Gulf, supplying about 26,872,000 barrels of oil per day which is 30.9 percent of the world total energy needs (86,944,000 barrels per day), plays a very important role in the world energy market. But the oil from Persian Gulf has to move through the sea-lanes of the Indian Ocean to reach the world markets. Hence, the Persian Gulf and Indian Ocean, not only morphologically, but also geopolitically are symbiotically connected to each other. Attempts have been made in this paper to study the symbiotic relationship between the two regions within the framework of Stephen Jones' Unified Field theory (Jones, 1967:142-156).

2. Theoretical Framework

Stephen Jones' Unified Field theory has been adopted for the purpose of analysis of the problem of this paper, According to this theory, policies and

patterns emerging in one geopolitical sub-region (in this case, the Persian Gulf) are dovetailed with and become inextricable from what is happening in the whole region (in this case, the Indian Ocean) and other sub-regions.

The main objective of the present paper is to study the intertwinement and geopolitical symbiosis between the Persian Gulf and Indian Ocean.

3. Research Methodology

The data required for this research were collected through documentary method which included books, journals and data available in statistical centers. The collected data have been analyzed to test the hypothesis within the framework of Stephen Jones' Unified Field Theory.

The main question of the present paper is: What kind of geopolitical relations exist between the Indian Ocean and Persian Gulf?

Accordingly the hypothesis formulated on the basis of the above objective is: Indian Ocean-Persian Gulf geopolitics, as a unified field of Stephen Jones' conception, represents a symbiosis.

4. Geopolitical Setting

Smallest of the three world oceans, the Indian Ocean lies in the Southern Hemisphere, and it has some unique features worthy of note. Roofed by the contours of southern Asia, it is flanked by the continents of Africa and Australia; further it stretches down to Antarctica. In contrast to the Atlantic and the Pacific, it is an enclosed ocean, like a huge bay. Two of its protrusions penetrate northwards into the southern belly of the Asian continent: the Persian Gulf is one, and the other is the Red Sea connected to the Mediterranean by the Suez Canal. The waters of the Arabian Sea and the Bay of Bengal flank the Indian subcontinent in the west and east respectively, which landmass juts southwards into the Ocean for more than a thousand miles (Panikkar, 1955: 19).

The total surface area of the Indian Ocean is approximately 28,707,195 sq. miles (74,610,000 sq.km). The Ocean thus covers nearly 20 percent of the total oceanic area of the world. It is deeper than Atlantic and is about 12,760

feet (3,200 meters) deep (Britannica Atlas, 1980, p. 6; Doumani, 1978: 5).

The waters of the Indian Ocean are spotted by numerous large and small islands, some of which are independent, while others belong to the territories of independent regional or non-regional states.

The northern sector of the Indian Ocean has been the scene of extensive oceanic as well as coastal shipping. It was partly due to "semi-enclosed" character of the Ocean and partly because of the currents and blow of regular monsoon winds, that regular sailing north of equator was carried out (Soraj, 1984: 2).

4.1. Facets of Gulf-Ocean Fusion

Since times immemorial, certainly in the recorded history, the waterbody located in the northernmost part of the Indian Ocean has been known as the Persian Gulf. The ancient Achaemenid Empire (5th century BC) of Iran called it so. The Roman historian Quintus Curtius Rufus (1st century AD) named it *Aquarum Persico* (literally meaning 'Persian Aquarium') in Latin. The Greek historian Flavius Arrianus (2nd century AD) described it as *Persikonkaitas*, which has been rendered as the 'Persian Gulf'. The celebrated second century Greek geographer, astronomer and mathematician Claudius Ptolemaeus, commonly known as Ptolemy, whose *Geography* was the standard geographical textbook until the discoveries of the 15th century, calls this water body *Persicus Sinus*. Latin works refer to it as *Mare Persicum*, meaning the Persian Sea. After the advent of Islam, the Persian Gulf finds reference in numerous Arabic works as *Bahr-e-Furs* [Persian Sea]; *al Bahr-el-Furs* [The Persian Sea]; *al Bahr-al-Farsi* [The Persian Sea]; *al Khalij-el-Farsi* [The Persian Gulf]; and *Khalij-e-Fars*, meaning Persian Gulf (Mashkur, 1962: 38-50; Bakhtiari, 1989: 135-157).

And down to the modern times, the middle of the present century and to-date the description 'Persian Gulf' has been rendered in the various languages of the world – including Arabic – as *Golfe Persique* [German], *Golfo Pesico* [Italian], *Persidskizaliv* [Russian], *Perusha Wan* [Japanese], *Al-Khalij-el-Farsi* [Arabic], and so on.

Washing the shores of Iran arcing somewhat northeastwards, and cupped southeastwards by the coastline of the Arabian Peninsula, the waters of the Persian Gulf form an extension of the Indian Ocean. The Persian Gulf waters continue into the Indian Ocean through the Strait of Hormuz across the Gulf of Oman. The Persian Gulf is geographically a semi-enclosed sea and, therefore, if disconnected from the Indian Ocean, it will be reduced into a shallow marshland. This is probably due to a high level of evaporation and absence of any other oceanic flow of water into it (Wilson, 1954:1-8; Keyhan, 1962: 10-17; Fisher, 1978: 486-499; Mirheidar, 1988: 73-80).

Stretching southeastwards from Arvand Rud to Musandam Peninsula (Oman), it covers an area of about 96,500 sq. miles (250,000 sq. km.). Its length is about 530 miles (850km.) and it varies in width from a maximum of 160 miles (250km.) to a minimum of 112 miles (180 km.) in the Strait of Hormuz which separate the Arabian side from the Iranian connecting the Persian Gulf to the Arabian Sea and the Indian Ocean. The Hormuz Straits are bisected by the Iranian Qeshm Island at its entrance; hence the plural, Strait of Hormuz (Wilson, 1954: 1-8; Keyhan, 1962: 10-17; Fisher, 1978: 486-499; Mirheidar, 1988: 73-80).

There are several small islands scattered throughout the waters of the Persian Gulf. These islands are, in fact, the extensions of the mountain ranges on both sides of the Persian Gulf. They have different physical characteristics; while the islands on the Iranian side are generally rocky and scraped, those on the Arabian side are coral islets and low plugs with salt origin.

The Persian Gulf was known since antiquity mainly for its pearls. It acquired importance later, because of its strategic location in the East-West trade routes. And later because of its oil (Simkin, 1968: 22-25).

Persia (Iran) controlled a considerable part of the Persian Gulf for about two-and-a-half millennia until new actors appeared in the Persian Gulf during the second half of the 19th century. Britain, Germany, and Russia, aware of the weakening of Persia, tried to extend their influence into the region. The region, at this stage, was serving as a link between the East-West trade routes(Hurewitz, 1956: 267-268).

The contemporary political map of the region comprises a cluster of eight countries including Iran, Iraq, Kuwait, Saudi Arabia, Bahrain, Qatar, UAE, and Oman.

Nature has deprived the bulk of the region (the southern Persian Gulf) from almost all minerals except oil. The existence of this single phenomenon has not only shaped the history of the region but affected also the pattern of change world over. This geopolitical feature, viz., oil, has invested the region with exceptional politico-economic importance since its discovery in the region in 1908 (Shushtari, 1962: 37-41).

The mergence of the waters of the Persian Gulf and the Indian Ocean is a phenomenon the significance of which has been far greater than that of a mere morphological or geographical feature of the Indian Ocean region. That these vast waters linked the lands on the continents and components of Asia – as far as the Chinese coast – and Africa, including the big island of Madagascar, in ancient times as far back as three millennia before Christ, is by now fairly well established (Verlinden, 1987: 28-29).

Emergence of Iranian maritime activities, and correspondingly of the Persian Gulf, in this perspective dates to about the 5th century AD:

“The Romano-Hellenic decadence in the Indian Ocean was one of the reasons for the rise in maritime traffic between Persia and India. From the time of the reign of Bahram V (AD 420-39) Persia played a predominant role in the western part of the Indian Ocean, whereas India at the time of Guptas extended more to the East...

The Egyptian monk Cosmas...describes...navigation up to China [during the sixth century]. The Red Sea, the northwestern part of the Indian Ocean, and the Persian Gulf were the areas with which he was familiar. The Persians also used to come to Sri Lanka; but the Singhalese continued to prefer their own silver currency to Byzantine gold coins which, however, were soon to disappear from this area.

Preceded by the secondary maritime expansion and limited to the Kingdom of Aksum and its rival state, the Hymryarite state of meridional Arabia, the Iranian expansion, since the period of the Sassanids acquires a completely different importance.

During the great period of the Sassanids, in the fifth and sixth centuries AD, trade in the Erythrean Sea was in the hands of Iranians, whereas the activities at Adulis in the Red Sea had diminished considerably. The great touching points of this trade were Obollah on the Persian Gulf; Barigaza, on the western coast of India, in south Gujarat, and Sri Lanka where merchants coming from the East and the West got together...

Iran was conquered by a land route and Islam remained essentially a continental religion as long as the Umayyad [Arabs] had their capital in Syria at Damascus, i.e., from 661 to 749. But the Abassids [Arabs] who toppled the former and took the headquarters of the Khilafat to Baghdad on the Tigris River, naturally turned their attention to the Indian Ocean an area with which their capital was in constant contact, mainly through Shatt-el- Arab and the Persian Gulf.

Basra now replaced the port of Obollah, and remained the main port of the Persian Gulf for a period of ten centuries.

Neither the Mongol conquest during the thirteenth century, nor the political revival of Iran and Iraq were able to change the situation till the eighteenth century. However, Muscat in Oman, and Siraf in Iran rapidly acquired more importance from the time of the Abbasids." (Verlinden, 1987: 34-35).

4.2. Indian Ocean-Persian Gulf Dynamics in Historical Context

Indeed the role of the Persian Gulf, and contribution of the Persians, to the life and activity on the Indian Ocean and many of the lands framing it were wide-ranging and continuous. The morphological topographical features of the Persian Gulf provided aid and assistance to the mariners frequenting the Persian Gulf, of course. The Persians contributed significantly through technology and activity; the Persians have provided valuable knowledge and skill relating to navigation at a time when compass had not been invented. The Persian Gulf was in use at the time for slave-trade, and spread of religion, and language.

The sea has been a connecting factor, which manifests itself not only in trade, religion, the arts and techniques, but also in the field of languages. Maritime language, as per a recent survey, contains not less than 3,750 Arab words in Indonesia and 320 Persian words in the eastern African coast, of which 70 percent have already been adopted in Swahili. The basis of this language is inevitably medieval in period of time. We are dealing with linguistic contacts which encompass the ocean's space from east to west and from north to south (Verlinden, 1987: 52).

As a serious student of Indian Ocean affairs sums this up:

The peoples and countries of the Persian Gulf played an important role in history for millennia. They provided a link between the ancient civilizations, which had emerged in the basins of the Yangtze, Indus, Tigris, Euphrates and the Nile. They were incorporated in the dominions of the Sumerians and Babylonia, the Archimedean Empire, the state of Alexander the Great of Macedonia and the Khilafat of the Omayyad and Abbasids, the empire of the Suleiman the Magnificent and Abbas the First. In the Middle Ages, Hormuz became a major political and economic centre of the [Persian] Gulf. It was praised by Marco Polo, and subsequently by Camoens and Milton. In the early fourteenth century the Mongols futilely tried to establish their control over the straits, and in the beginning of the fifteenth century the Chinese made their appearance there... (Bondarevsky, 1987: 317).

The colonial era dating to the advent of the Europeans from the sixteenth century onwards only strengthened the linkage between the Persian Gulf and the Indian Ocean. To start with, the Portuguese adapted and fitted themselves in the already entrenched and flourishing trade and cultural networks in the Ocean, to which the Persian Gulf had always been integral from the very beginning. The squadron of Albuquerque appeared in the Persian Gulf in 1506. The formation of the first colonial empire in the modern time began with the consolidation of the Portuguese positions, especially in the Persian Gulf. The Portuguese colonial empire relied on the domination of its fleet in the ports, among others, of the Persian Gulf.

Eventually they took over that trade network to emerge as masters of the Indian Ocean; in the exercise of their mastery the role of the Persian Gulf was absolutely crucial. The subsequent competition and rivalry the other European maritime powers – the Dutch, the French and finally the British – offered the Portuguese, could possibly not miss the value of the Persian Gulf for their operation in the rest of the Indian Ocean. The uses to which these other powers put the Persian Gulf to, expanded and multiplied over time and reached their apogee, so to speak, with the British replacing the Portuguese as the masters of the Ocean from about 1763 [the end of the 7 years war between the French and the British] onwards. Under the British, the Persian Gulf was assigned the position of an exclusive 'British Lake'. Without doubt, the one region of the Indian Ocean "that has not only preserved but also increased its importance over the last 500 years" is the Persian Gulf (Bondarevsky, 1987: 153).

The European presence in the Indian Ocean eventually destroyed the trade and other networks that had existed in these waters for centuries, and replaced them by patterns of dominance, militarization on the sea, and colonization in the littoral and hinterland of the region. The Portuguese and the British were the only two European powers that established their unchallenged supremacy in the Indian Ocean after one another. In contrast to the former, the British brought under their occupation huge territories in Asia and Africa. For the defense and maintenance of these vast imperial possessions, the great British

Empire, the Persian Gulf was assigned the key position.

The general scenario then has been pithily described as follows:

The arrival of Germany in [Persian] Gulf affairs at the turn of the century only merged, in the British eyes, into the general problem of the protection of what could well be regarded in the nineteenth century as a "British Lake" against a variety of challenges. France, Russia, the Ottoman Empire, Germany – each found the [Persian] Gulf worthy of attention. Even powers with fewer pretensions to greatness in all areas of the world – Italy, the United States, Portugal – had minor roles to play in this story. The essential problem was simple: the "Lake" was no lake at all, but an international waterway of steadily increasing importance in an age of imperial rivalries, diplomatic flux, and sizable dangers to international peace of mind in the cycles of decay and revolutionary activity in the Ottoman and Persian States (Busch, 1967: 1-2).

Britain was convinced that for the protection of the Indian Empire specifically, it was absolutely vital for her to hold the Persian Gulf. Discovery of oil in the early years of the present century further added enormously to the value and crucial importance of the Persian Gulf, making it a geopolitical area of vital significance on the map of the world.

It is clear, therefore, that in the colonial era, the superintendence and mastery of the Indian Ocean was dependent crucially, critically on the Persian Gulf as a base. The geographic value of the Persian Gulf, before oil, lay in providing a vast harbor for their navies, a possible base for their supplies and, therefore, of course, for carrying overland trade to Europe. Had the Persian Gulf not been there, this trade route would have had to round the Cape of the African continent, which was commercially and economically not viable.

In other words, in the management of affairs on and of the Indian Ocean throughout the colonial era, the role of the Persian Gulf was vital and crucial. Conversely, the happenings on and around Indian Ocean waters were promptly reflected and greatly affected those in the same Persian Gulf. Indeed, one fomented and fed the other as the nature of a symbiotic relationship warrants.

5. Result and Discussion

Indian Ocean, at the end of the Second World War stood connected to the outside world through five gateways or chokepoints: the Strait of Hormuz at the southern end of the Persian Gulf, overlooking the flow of traffic and transportation; Babel Mandeb Strait at the southern end of the Red Sea, providing the shortest sea route from northern quarter of the Indian Ocean to Western Europe and the USA; the Cape of Good Hope, which is the only alternative route to the Red sea; the Straits of Malacca and Singapore, the eastern gateway of the Indian Ocean; and the Sunda Strait between Java and Sumatra, capable of providing passage to supertankers between the Pacific and the Indian Oceans.

The post-colonial Indian Ocean since about the late 1950s has been characterized by two over-lapping developments: (a) proliferation of very active, assertive, indigenous actors in the region, and (b) steady escalation in the demand for oil both by the industrial Europe restored to health after post-war economic reconstruction, and Japan, and by the newly-independent states of the region as they took to the path of industrialization as a means of rapid economic development. More recently, China, India and Brazil have joined the bandwagon of industrial nations and hence their hanger for oil from the Persian Gulf region (Takashi, 1991: 257-273; Malik, 1991: 44-46).

As a consequence of the (a), the hegemonism of the old, colonial powers was steadily marginalized, and their role in the region was transformed and reduced to that of self-proclaimed helpers of modernization. The region could not entirely escape the impact and influence of the global cold war, even though the appeal of the new credo of non-alignment did prove irresistible to the Indian Ocean countries as they regained political independence from one colonial power or the other. The two superpowers ('cold warriors'), in time, deemed it necessary to make their presence felt in the Indian Ocean region, at first indirectly through pacts and understandings and then directly through their navies, military bases and RDFs etc. (Sabonis-Chafee, 1989: 713). More recently through direct military invasion and occupation (Iraq and Afghanistan, for instance) (Micklethwait, John, 2005: 510-511). The natural,

normal interaction among the countries of the region was willy nilly affected in various degrees by the over-arching cold war politics and phenomena. These developments on the vast spread of the Indian Ocean were echoed, reflected and indeed quite replicated in the Persian Gulf; the more so under the impact and the aftermath of the 'energy crisis' precipitated in 1973 and later invasion of Iraq by US forces (Lieber, 1992: 155-176; Stein, 1989: 142-167).

A cursory look at the dependence of world's major oil consumers on the oil from Persian Gulf, which has to reach them through Indian Ocean, would shed light on the importance of symbiosis between the two regions (Table 1).

Table 1: Petroleum Production and Consumption of Select Areas and Countries. 2011 (Thousand Barrels Per Day)

Country/Area	Production	Consumption	Dependence on oil imports (2009) %
USA	10071.4	18835.47	51.30
China	4269.631	8924	53.20
Japan	0	4479.589	100
Europe	4269.854	15085	67.83
India	942.7536	3426	72.21
Persian Gulf	25484.93	-	-
World	86944.35	87276	-

Sources: Statistical Review of World Energy, 2013, BP Statistical Review (available at bp.com), pp. 8-15.

It is obvious from Table 1 that the major oil consumers of the world are heavily dependent on imported oil to keep the pace of their industrial development. Table 2 shows the oil imports to meet the gap by these countries.

In this distribution, the Persian Gulf's production as well as contribution of oil to the consumers is given in Table 2 below.

Table 2: Oil Imports of Select Countries from the Persian Gulf. 2012 (Thousand barrels per day)

Country/area	Total imports	imports from Persian Gulf	Imports from Persian Gulf as % of total imports
USA	10587	2163	20.4
China	7162	2900	40.4
Japan	4743	3543	74.6
Europe	12488	2174	17
India	3871	1349	34.8
World	55314	-	-

Sources: Statistical Review of World Energy, 2013, BP Statistical Review (available at bp.com), pp. 28-30.

In terms of world oil production, the Persian Gulf's share was 36% in 1973 and 23.8% in 1983 and 32% in 2012, i.e. 28210 thousand barrels of oil perday compared to the the world's total daily prodcution of 86152 thousand barrels (Statistical Review of World Energy, 2013).

In short, according to the Statistical Review of World Energy, 2013, in 2012 Japan depended for its oil imports from the Persian Gulf area to the extent of 74.6 % of its needs and consumption; Europe 17 %; the United States 20.4; India 34.8 and China 40.4. It shows that the major consumers of oil in the world depend for 37.44% of their needs on the Persian Gulf oil(Table 2).

The future prospects of these countries dependence on oil shows that their dependence will increase and thereby the economic-strategic significance of Persian Gulf will increase for them and for international community (Table 3).

Table 3: Oil consumption, actual and projected, selected countries (Million barrels per day) (per cent)

	1990	2002	2025	Projected growth 2002–2025
United States	17.0	19.7	27.3	38.5
Japan	5.3	5.3	5.3	0
Western Europe	12.5	13.8	14.9	8.0
China	2.3	5.2	14.2	173.1
India	1.2	2.2	4.9	122.7
World	66.5	78.2	119.2	52.4

Source: EIA (2012):

http://www.eia.gov/pub/oil_gas/petroleum/data_publications/company_level_imports/current/summary.html, retrieved on June 23, 2012.

Such being the preeminent position of the Persian Gulf as a producer and supplier of oil to different parts of the world, and thus supporting – if not sustaining – their economies, it is obvious how vital it is to maintain the flow of oil to these parts. The Figure I vividly shows world's most important chokepoints which also indicates the routes along which oil supplies flow to reach the final destination in Europe, Africa, South Asia and Southeast Asia; those from the Persian Gulf over Indian Ocean waters dwarf the other routes for these are so massive.

A major chunk of this petroleum is transported through the sea lanes of the Indian Ocean. The ships traveling the sea routes of the Indian Ocean finally pass through the Strait of Hormuz, Babel Mandeb, and Malacca, through the Suez Canal and around the Cape of Good Hope to reach the final destinations. Twenty percent of oil traded worldwide moves by tanker through the Strait of Hormuz, the world's most important petroleum transit choke point.

Figure 1: World Chokepoints

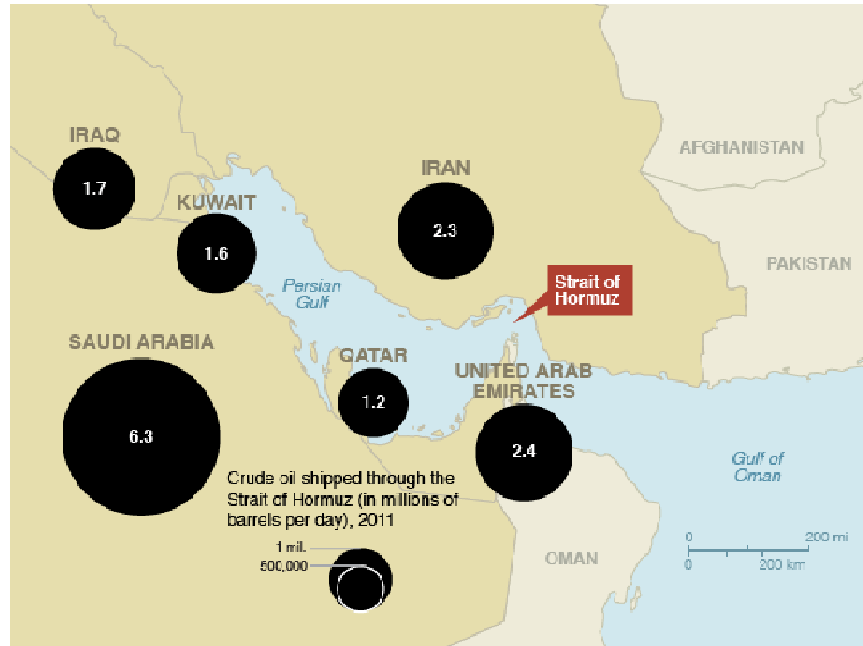


Source: EIA estimates based on APEX Tanker Data (Lloyd's Maritime Intelligence Unit). Panama Canal Authority and Suez Canal Authority, converted with EIA conversion factors.

In this complex web of international trade and commerce, Indian Ocean waters form a unified field where politics is interwoven intimately at every stage, and are the platform for transportation of carriers and tankers.

The Persian Gulf oil export is about one-third of the world's total supplies. Every day, super tankers move 17 million barrels of oil through the Strait of Hormuz (APEX Tanker Data). Tankers loaded in the Persian Gulf must come out on to the waters of the Indian Ocean (Figure 2). As long as there is oil in the Persian Gulf and the rest of the world wants it, the Strait of Hormuz will remain an important highway of seaborne oil.

Figure 2: Strait of Hormuz: The World's Key Oil Choke Point



Source: U.S. Energy Information Administration; Graphic by Stephen Rountree and Sam Forman.

Table 4: Volume of Crude Oil and Petroleum Products Transported Through World Chokepoints, 2007-2011 (million barrels per day)

Location	2007	2008	2009	2010	2011
Bab el Mandab	4.6	4.5	2.9	2.7	3.4
Turkish Straits	2.7	2.7	2.8	2.9	N/A
Danish Straits	3.2	2.8	3.0	3.0	N/A
Strait of Hormuz	16.7	17.5	15.7	15.9	17.0
Panama Canal	0.7	0.7	0.8	0.7	0.8
Crude Oil	0.1	0.2	0.2	0.1	0.1
Petroleum Products	0.6	0.6	0.6	0.6	0.6
Suez Canal and SUMED Pipeline	4.7	4.6	3.0	3.1	3.8
Suez Crude Oil	1.3	1.2	0.6	0.7	0.8
Suez Petroleum Products	1.1	1.3	1.3	1.3	1.4
SUMED Crude Oil	2.4	2.1	1.2	1.1	1.7

Notes: · All estimates are in million barrels per day. · "N/A" is not available. · The table does not include a breakout of crude oil and petroleum products for most chokepoints because only the Panama Canal and Suez Canal have official data to confirm breakout numbers. · Adding crude oil

and petroleum products may be different than the total because of rounding. Data for Panama Canal is by fiscal years.

Source: EIA estimates based on APEX Tanker Data (Lloyd's Maritime Intelligence Unit), 2013. Panama Canal Authority and Suez Canal Authority, converted with EIA conversion factors.

In 2011, about 3.4 million barrels of oil passed through Bab el-Mandeb every day, 17 million barrel per day from Strait of Hormuz and 3.8 million barrels of oil from Suez Canal (APEX Tanker Data), also see Table 4.

The tankers from the Persian Gulf traverse an extra 3,700 miles (5,953 km) to reach European ports via the Cape of Good Hope (Table 5). For exports from Europe to the ports of Arabian Sea a saving of 20 days on a round-trip voyage could be achieved if passage were made via the Canal instead of round the Cape of Good Hope which is the time of one more voyage.

Table 5: Distance between Indian Ocean Ports and London via Suez and Cape of Good Hope (nautical miles)

Port	via Suez	via Cape
Fremantle	9,532 (1)	10,813
Melbourne	11,063(2)	11,953
Singapore	8,248	11,810
Bombay	6,273	10,712
Calcutta	7,923	11,593
Aden	7,887	11,566
Mombassa	6,200	8,648
Beira	7,203	7,593

(1) 1 nautical mile == 1.152 land miles.

(2) Not calling at Colombo or Indian ports.

Source : Keith Trace (1972); "International Trade and Commercial Relations", in Cottrell, Alvin J. and Burrell, R M (eds).THE INDIAN OCEAN: Its Political, Economic and Military Importance, New York, p.39.

The astronomical earnings from oil could fund and fuel the socio-economic and political regeneration of the Persian Gulf, as, indeed, of many of the Indian Ocean countries. A relatively small percentage of these petrodollars are used for economic development, but a far greater percentage of those goes into heavy arms purchases (Table 6).

Table 6: Persian Gulf Military expenditure by country as percentage of gross domestic product, 2001-2010

Country	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Bahrain	4.0	4.7	4.8	4.3	3.6	3.4	3.2	3.0	3.9	3.4
Iran	3.9	2.3	2.7	2.9	3.3	3.4	2.5	1.8	..	
Iraq	1.7	2.2	1.9	2.2	2.2	2.5	2.4
Kuwait	7.7	7.4	6.5	5.8	4.3	3.6	3.6	3.0	3.9	3.6
Oman	12.5	12.4	12.2	12.1	11.8	11.0	10.3	7.6	9.6	9.6
Qatar	..	4.7	4.0	2.9	2.5	2.1	2.2	2.3	..	
Saudi Arabia	11.5	9.8	8.7	8.4	8.0	8.3	9.2	8.0	11.0	11
UAE	9.8	8.6	7.9	7.4	5.6	5.1	5.0	5.5	7.6	4.0

“..” = data unavailable.

Source: SIPRI YEAR BOOK 2011, *World Armaments and Disarmaments* (London), 2011, pp. 166-167.

For consumer, industrial, arms and other items too the Persian Gulf depends heavily on the outside world. None of the Persian Gulf countries, except Iran, has even a modest capability for developing indigenous technology. Consequently, their dependence on the outside world for import of all manner and level of technology is total. Again the lion's share of these commodities and arms have to move through the Indian Ocean to reach these countries.

A pattern of mutual interdependence between the Persian Gulf and the rest of the world is thus discernible. But for this interdependence even to materialize and survive, the Indian Ocean forms the very foundation: without the Ocean, the Persian Gulf would be reduced to the level of an inland waterbody cut-off from the world. In other words, the Ocean gives an identity and life to the Persian Gulf; the former may do without the latter, but the latter will be reduced to insignificance without the former.

This may, however, be valid as a purely geographic-physical proposition. But both the Persian Gulf and the Ocean are much more than merely morphological/topographical features. Their peoples, histories, the radiation and absorption of cultural and other impulses and movements between them, the constant traffic of intercourse enveloping them through the ages – all these and more – are the eternal preventatives against the threat of the said

insignificance.

Accordingly, the politics of the Indian Ocean, as a unified field of Stephen Jones' conception, represents a symbiosis whereby policies and patterns emerging in one sub-region (the Persian Gulf) are dovetailed with and become inextricable from what is happening in the whole of the Ocean and other sub-regions.

The symbiotic relationship between the Persian Gulf and Indian Ocean are clearly manifest in US policies in the Persian Gulf. The US interests as well as its maritime activities in the Indian Ocean region, got a fillip when US companies obtained concessions for oil exploration in the Persian Gulf during the 1920s (MERIP,1997: 17-28). Because of a variety of reasons, the US chose to avoid her military presence in the Indian Ocean until late 1960s. These reasons included the British presence in the Indian Ocean; the US bilateral security pacts with the countries of Northern Tier – Iran, Pakistan and Turkey – through CENTO and SEATO; and the US commitment to the containment of communism in Europe and Southeast Asia, etc.

Undoubtedly, the British withdrawal from the East of Suez (1968-71), the entry of the Soviet naval forces into the Indian Ocean in March 1968, and the Soviet activities in the periphery of the Indian Ocean, influenced the US attitude and policy regarding the Indian Ocean (The Indian Ocean, Political and Strategic Future, 1971: 162-165). But the growing economic importance of the Indian Ocean region in the world economy, has been the main reason for the formulation of a comprehensive US Indian Ocean policy. The American strategists considered the Indian Ocean as "the area with the potential to produce major shift in the global power balance" in the future. This is why they thought that they "must have the ability to influence events in that area and the capacity to deploy military power there" (Peiris, 1974: 162-165).

In fact, the US tried to make capital out of the Soviet entry into the Indian Ocean. Although the US was concerned about the entry of a militant ideology, at one level, at a deeper level, she was worried about her own economic stakes in the region – raw materials, oil and the security of the oil

routes. The US resistance to any Soviet attempt at penetration, let alone domination, in the Indian Ocean region was described as containment. "In more practical terms, it may be described as depriving the Soviet Union of the ability to directly or by proxy take control of any nation controlling vital minerals or a vital waterway" (Cordesman, 1984: 154-155).

The US economic stakes in the Indian Ocean region increased tremendously during the 1970s. Indian Ocean is a giant mine of raw materials for US industries. The US acquires 40 out of 54 imported raw materials used in its industries from the Indian Ocean region. There are several vital and strategic minerals amongst these apart from oil: uranium, lithium, and some others. The US military allies and economic partners too, depend on the region's raw materials and minerals (US Department of Interior, 1986).

Oil has been the pivot element in the US Indian Ocean policy, particularly since 1971. In that year, the United States for the first time imported a part of its oil requirements from the Persian Gulf area. In 1975, the US had to rely on imported oil for as much as 40% of its total oil requirements. In 2012 the United States had to import 20.4 percent of its oil imports from the Persian Gulf area (Table 2). Moreover, as mentioned above, the US allies are more seriously dependent on the oil from the Indian Ocean region. Seymour Weiss, Director, Bureau of Politico-Military Affairs, in a statement before a Subcommittee of the House of Representatives stated: "... the oil resources of the area, primarily in the Persian Gulf, are vital to our allies and are of significant interest to us... Western Europe and Japan, the two areas of the free world of greatest importance to the US security, are absolutely dependent upon oil supplies from the Middle East, and that fact alone makes it of interest to US (Weiss, 1974: 373).

The 'dependence' of the US and its allies on the Persian Gulf oil brought to the fore the question of security of the sea-lanes. Seymour Weiss had this to say in this regard: "The world economy is by now so integrated that freedom of navigation on the high seas and non-interference with sea-lines of communication is the matter of vital importance to all members of the world community – even those not directly involved (Weiss, 1974: 373).

Thus the maintenance of the regular and uninterrupted flow of oil to the US and its allies became the prime objective in the US Indian Ocean policy (The Indian Ocean, Political and Strategic Future 1971: 180). Accordingly, a security equation prevailed and Washington considered the security of its allies as an inseparable part of its own security.

Thus, in the aftermath of the British withdrawal from the Indian Ocean region, the Persian Gulf emerged as the centerpiece of the US interests and policies in the Indian Ocean region (Renner, 2006: 56-60). After the oil embargo of 1973, especially by the end of the decade, the US interests in the Indian Ocean exclusively focused on the Persian Gulf (Braun, 1972: 58).

In a response to the altered circumstances of the late 1970s and early 1980s, the US took three initiatives: (1) upgrading the Diego Garcia; (ii) formulation of Rapid Deployment Force (Stroke, Wenger, 1991, pp. 22-26); and (iii) gaining base facilities in the periphery of the Indian Ocean (Banett, 1997, pp. 597-618). After the invasion of US forces of Iraq, in fact the US presence in the region became highly palpable and tangible (Joslyn, 2003: 440-452).

6. Conclusion

The Indian Ocean is connected to the Pacific and Atlantic Oceans through its gateways, which are crucial to the transportation of oil from the Ocean's periphery to the hub of the world market. These gateways have a width of more than 6 nautical miles, and as such they are international waterways; that is to say, all countries of the world have the right to free passage and overhead flight through them.

The Hormuz Strait with a width of about 30 miles (48 km.) and a depth of 235 feet (72 meters) is the only gateways connecting the Persian Gulf and the Indian Ocean.

In fact, it should be considered as the world's single most important strait economically because it is marked by a vital global interests in the passage of goods, services, arms, resource, and technology, with oil shipments the heart of its economic importance. The Persian Gulf, a semi-enclosed sea, and its

adjacent lands sit on the top of the world's single largest oil reserve.

This oil has to move through the Indian Ocean sea-lanes to reach the international markets. The importance of the linkage between the Persian Gulf and the Indian Ocean enhances if we take into account the gargantuan practical problems (environmental, physical, economic, political and strategic) for transporting oil through pipelines or other means.

First of all, the geographical obstacles pose problems that hamper the ambitious but not very economical or even feasible projects of laying pipelines. The costs involved in laying pipelines are very high compared to those of freighting oil by tankers. Then, when laid, the pipelines have to cross the jurisdiction of third parties – land and/or territorial waters, coastal zones, etc. – whose accommodation or friendship cannot be taken for granted, or as constant. Obtaining consent of the third parties also involves negotiations, give and take, that inevitably add to economic or political costs of the project.

The tripartite agreements by their very nature are rather complicated procedures where the uncertainty factors are high indeed, especially when it is impossible to see into the future of existing relationships.

Under the circumstances, it is not surprising that transportation of oil through pipelines throughout the world has found rather limited use, and that too, for short distances only. Iraq's Kirkuk oilfield, for instance, was pumping 650,000 barrels per day in 1980 through a 980 km-long pipeline over the Turkish territory to the port of Dortyol on the Turkish coast in the Gulf of Iskenderun in the Mediterranean. But suspected sabotage by Kurdish guerrillas, and the Iranian bombing of parts of the Kirkuk oilfield during the Iran-Iraq war rendered the pipeline inoperative. Then, Syria shut down the Iraqi Petroleum Company's 1.2 million bpd-pipeline after the outbreak of Iran-Iraq war in support of Iran.

The only other alternative which is economical, reliable and eminently manageable left for oil transportation, therefore, is the time-tested shipments through tankers. This automatically, renders not only the Persian Gulf-Indian Ocean waters vitally crucial, but also the various chokepoints; especially the latter. Effective control of the chokepoints gave the concerned European

powers mastery of the Indian Ocean. A similar exercise today too could enable a power pre-eminence in the unified field of the Persian Gulf-Indian Ocean.

The USA has made concerted efforts to control the Persian Gulf's chokepoint – the Strait of Hormuz – and not merely by their formidable presence in the Indian Ocean waters. By the same token, underscoring the symbiotic linkage of the Persian Gulf and the Ocean, Iran has tended to extend the perimeters of its security to the heart of the Indian Ocean.

The Hormuz Strait is closely linked to the other Indian Ocean gateways. Any ship leaving the Hormuz Strait must pass through the other gateways before reaching its final destination. It is, therefore, clearly impossible to dissociate the Persian Gulf from the rest of the Ocean, economically, politically, militarily or in any other way. A look at the positioning of these gateways explains and emphasizes the interwoven nature of the connection between the Persian Gulf and the Indian Ocean.

In nutshell, the Indian Ocean and Persian Gulf are symbiotically interconnected, not only geographically and morphologically, but also geopolitically to the extent that they constitute a unified field compatible with that of Stephen Jones. Therefore, any development in one would affect the other.

7. Acknowledgment

The author would like to express his appreciation to the Research Deputy of the Faculty of World Studies, University of Tehran, for providing the possibility of doing this research.

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