

CLOSURE OF THE STRAIT OF HORMUZ: POSSIBILITIES AND CHALLENGES FOR INDIA

RHEA ABRAHAM

"Let us be master of the strait for six hours and we will be masters of the world."

— Napoleon Bonaparte (1908)

With the effectiveness and affordability of cost in terms of freight charges and staff, 80 percent of the world's trade and 60 percent of the world's oil is transported through the sea, through maritime highways called Sea Lanes of Communication (SLOCs) that help reduce time and aid economic and safe passage for ships and cargos. Current statistics report that the international trade passing through the Indian Ocean mainly through the Strait of Hormuz and the Strait of Malacca itself amounts for 1 trillion dollars.¹ The importance of these SLOCs is however attributed to the dependence of the countries on the crude oil from the Persian Gulf which is mainly exported through the Strait of Hormuz and to the east through the Strait of Malacca. These straits do not carry much of commercial or naval shipping but are considered as "chokepoints" due to their strategic and geographic location. These maritime bottlenecks are usually less than

Rhea Abraham is a Research Associate at the Centre for the Air Power Studies, New Delhi.

1. "International trade statistics 2011", World Trade Organisation, available at www.wto.org/english/res_e/statis_e/its2011_e/its11_toc_e.htm accessed on 12 Sep 12.

Increase in the dependency of energy resources by Asian countries also threatens to lead into a competition or resource war

40 miles wide at their narrowest point². Any threat or impact in the region thus threatens to affect the world economy to a great extent, and can impact the cost and timeliness of transportation of goods through the region. Also, crowded and constrained chokepoints expose shipping to greater risk and a closure may also threaten the sea routes carrying these oil tankers as it will force ships to use longer and more costly alternative passageways. Maritime transportation mainly through the chokepoints is also highly vulnerable to outside risks from state and non state actors including piracy and terrorism. Secondly, most of the strategically important SLOCs and choke points such as the Bab el Mandeb are located near failed states and regions without a strong governance system exposing them to further risks. Recently, the increase in the dependency of energy resources by Asian countries also threatens to lead into a competition or resource war that may restrict each other's maritime presence and ambition in the Indian Ocean Region.³

Thus in the midst of such drastic vulnerabilities and fluctuations, which also include an emerging nuclear Iran in the region of the Indian Ocean, an evaluation of the SLOCs in the Indian Ocean mainly the Strait of Hormuz becomes essential for a country like India as it is dependent on the route for a large part of its national security including its energy security and economy. This article has been written in the wake of naval exercises conducted by Iran in the light of fresh sanctions imposed by the European Union against its nuclear program and a possible gesturing of a closure of the Strait of Hormuz as retaliation in the near future. One can understand that though such a move may be improbable, it nevertheless becomes important to understand any congestion for oil importing countries like India, caused purely by mere expression of a closure of the Strait by regional powers

2. See Captain C. E. Soderholm, *"Indian Maritime Strategy and the Sea lines of communication"* National Defence College (USA: 2005).
3. See Chapman, D., & Khanna, N, " *The Persian Gulf, Global Oil Resources, and International Security*" SUNY (New York: 2004).

such as Iran which if unheeded can be disastrous; as was seen in the rise of world oil prices by 2% in the early month of January this year.⁴ Also, such an exercise helps to understand India's role in the region in terms of its existing capabilities; the extent of its engagement as a maritime regional power with the countries of the Persian Gulf, mainly Iran and its responses to any possible closure in future.

UNDERSTANDING THE STRAIT OF HORMUZ

Oil which is primarily produced in the region of West Asia is transported from the Persian Gulf to countries of Europe, North America, and Asia. These regions hold 62 percent of the world's proven liquid reserves and 31 percent of the available crude oil.⁵ In 2000, the Persian Gulf alone produced 28 percent of the world's oil which is expected to rise to 35 percent in 2020, and about 26 percent of the world's global natural gas reserves⁶. The countries of the Persian Gulf namely Bahrain, Iraq, Iran, Kuwait, Qatar, Saudi Arabia and the United Arab Emirates in total produce two-thirds of the world's proven oil reserves and 90 percent of the excess capacity⁷, which gives them the ability to meet future oil demands of the world. About 18 percent of U.S oil imports, 20 percent of Western Europe and 80 percent of Japan's total oil imports are imported from the Persian Gulf, out of which about 93 percent of oil is exported by tanker through the Strait of Hormuz⁸. In fact, the Strait of Hormuz remains the only waterway connecting the Ocean to the energy resources of the Persian Gulf and therefore, keeping the Strait open becomes vital not only to regional producers and Western energy consumers such as

4. Ashwath Komath, "The Crisis in The Strait of Hormuz and How It Affects India", Newsflavour, February 10, 2012, available at <http://newsflavor.com/politics/international-relations/the-crisis-in-the-strait-of-hormuz-and-how-it-affects-india/#ixzz24GgJdfvL> accessed on 15 Oct 12.

5. See "Global Oil Choke Points: How Vulnerable Is the Global Oil Market?" Lehman Brothers(UK: 2008).

6. "Freedom to use the Seas: India's maritime military strategy" Ministry of Defence (New Delhi : May 2007).

7. Bernard D Cole, " Sea lanes and pipelines- Energy Security in Asia" (Praeger Security International, USA: 2008).

8. Mihir Roy, "Maritime Security in the Indian Ocean, Society for Indian Ocean Studies, (India: 2010), available at www.iips.org/Roy-paper.pdf.

Strait of Hormuz by far remains the world's most important oil choke point, with an estimated 15.5 million barrels of oil flowing through it per day

the United States, Europe, Japan and Australia, but to the world economy in general.

The Strait of Hormuz geographically is a narrow waterway between the Gulf of Oman in the southeast and the Persian Gulf in the southwest which forms a vital node in world energy trade. Contributing as a major waterway during the Second World War in terms of centrality of conflict and competition, the Strait of Hormuz continues to be the neck of geopolitics in the present security environment as its remains volatile, politically unstable and a major operational centre in military strategy. The Strait contains 8 major islands, 7 of which are mostly controlled by Iran namely Hormuz, Larak, Qeshm, Hengam, Abu Musa and the Tunb Islands. However, amongst the islands, the UAE and Iran continue to disagree over the Abu Musa Islands, Greater and lesser Tunb Islands for strategic reasons. Iran also has been promoting a military presence in the region since the 1970s and controls the Strait through the Bandar Abbas, Chahbahar and Bushehr ports.⁹

The Strait of Hormuz by far remains the world's most important oil choke point, with an estimated 15.5 million barrels of oil flowing through it per day,¹⁰ which is roughly 25 per cent of the world's daily oil production.¹¹ An additional 2 million barrels of oil products, including fuel oil, are exported through the passage daily as well as liquefied natural gas. Exports from the world's largest liquefied natural gas exporter Qatar also pass through the Strait to Asia and Europe. Oil exports through the Strait of Hormuz are said to double to 30 million barrels per day by 2020.¹² Most of the crude exported through the Strait travels long distances by Very Large Crude Carriers (VLCC) which can carry over two million barrels of oil per voyage.

9. See Dagobert Brito and Amy Myers Jaffe, "Reducing vulnerability of the Strait of Hormuz" in Henry Sokolski and Patrick Clawson, *Getting Ready for a nuclear Iran*, (Strategic Studies Institute, USA: 2005).

10. See A R Tandon, "India and the Indian Ocean" in K N Nayyar (ed.), *Maritime India*, (Rupa and Co, India : 2005).

11. See Vrushal Ghoble, "Maritime energy security and Hormuz & Malacca straits" *Think India Quarterly*, (Vichar Nyas foundation, India: 2009).

12. See "Gulf oil and gas- ensuring economic security" ECSSR (UAE: 2007).

In order to regulate the movement of large ships in these constrained waters, the United Nation's International Maritime Organization has recognised a Traffic Separation Scheme (TSS) for the region. The TSS consists of two-mile wide shipping lanes: one for incoming traffic and one for outgoing traffic. These two shipping lanes are separated by a two-mile buffer zone. It is therefore a complex network with the narrowest point being 21 miles wide. The two shipping lanes, separated by a buffer zone are located inside Omani territorial waters. Closure of the Strait of Hormuz would thus require use of alternate pipeline routes at increased transportation costs. However, much of the vulnerability for western consumers has been reduced in the present day, by two giant pipelines called the East West pipeline constructed to Yanbu, in Saudi Arabia, which provides an outlet in the Red Sea.¹³ Also, other alternate routes available for oil exports from the Strait of Hormuz which are feasible include routes via Iraq that take oil to the Mediterranean Sea and via UAE to the Persian Gulf.

CHALLENGES IN THE REGION

Maritime rivalries in the Indian Ocean are an early indicator of the return of great-power politics to the limelight of the international arena. The Indian Ocean is fast becoming a region for great-power relations between the US, China and India. Even as China and India harbour ambitions to expand their forward naval presence in the Indian Ocean, and encourage their strategic interests, there seems a threat of a potential source of future conflict; but it also implies that these emerging powers are starting to come together and shoulder some of the responsibilities for maintaining the safety of the Ocean's SLOCs.¹⁴

US-Iran competition

The biggest challenge in the region continues to be the ongoing American-Iranian rivalry that has its roots embedded in history and one that promises everlasting consequences, despite the enormous geo-economic and

13. See Gal Luft, "Choke point", *Foreign Policy*, (Taylor&Francis,USA: 2012).

14. Gulshan Dietl, "New Threats to Oil and Gas in West Asia:Issues in India's energy security" *Strategic Analysis* , (IDSA, Delhi: 2004).

geostrategic stakes that the United States has in the region. For the US; Iran, terrorism and terrorist-related smuggling are big problems in the Gulf region as US forces struggle to contain growing violence in regions of Iraq and Afghanistan¹⁵. Iran's rise as a regional power led by a militant Shiite theocracy has been challenging long established Sunni-Arab regimes in and around the Gulf. Meanwhile, the US and its ally, Israel, are determined to try to stop Iran from following North Korea and developing nuclear weapons at any cost including the strengthening of its presence in the Strait of Hormuz. US officials, along with the European Union have been tightening financial sanctions on Iran and have been openly accusing Iran of dangerous ambitions in the region. Two US aircraft carriers including USS Abraham Lincoln and USS Enterprise, and associated warships have been deployed in or close to the Persian Gulf, raising concerns that tensions with Iran could result in a military conflict between the two long-time adversaries. In the same region, Oman and the UAE are among the key U.S. allies. The United States supplies both countries with most of their arms purchases, including advanced fighter aircrafts such as the F-15 and F-16¹⁶. In addition, the United States has maintained a naval carrier task force in the Persian Gulf area, mainly the fifth fleet in Bahrain, thereby increasing US-Iran tensions in the current context.

In retaliation to such great power politics, Iran aims to impede traffic through the strategic waterway if the United States resorts to military action and further sanctions against the Islamic Republic over its disputed nuclear programme, which includes measures such as closure of the Strait, deployment of naval capabilities, mines and overall strategic posturing. Iran has promised to respond to an attack by disrupting oil flows and closing the Strait through its military capabilities, which would increase the price of oil. The Iranians have bought surface to surface missiles from the Chinese and small submarines¹⁷ from North Korea that can sink tankers in the Strait. In November 2011, Iran conducted exercises that saw the testing of air defence

15. n. 1.

16. n. 5.

17. Bassam Fattouh, *"How secure are middle east supplies"* Oxford Institute for Energy studies (UK: 2007).

missile systems. Naval capabilities termed Velayat 90 showcased Iran's shore launched anti- shipping missiles such as Qader and Nour, minelayers and Special Forces¹⁸.

Understanding the situation, the Iranians move to close the strait in the midst of existing nuclear tensions in the region would have a very huge impact on the oil trade and a possible re-flagging of the tanker traffic by the United States. Western naval power could provoke an Iranian naval attack on the oil traffic in the region affecting both the tanker traffic and may even engage in a submarine warfare that could block the strait's physical access. Oil tankers could still be forced to use high-risk SLOCs, which would result in very high insurance premiums, levying an additional surcharge of up to 0.10 percent of the total value of their cargo, while the baseline insurance premium imposed on seaborne freight will be 0.05 percent¹⁹. During the Iran-Iraq war of 1980-88, there were attacks on tankers that resulted in a reduction in tanker traffic through the Gulf. In this never ending contention, Iran has opened new naval facilities east of the Strait of Hormuz, the narrow entrance to the Gulf which is the key to oil supplies and would enable Iran to block the entry of anyone into the Gulf. The navigable tanker lanes are only six miles wide and any disruption could severely hit the oil supplies from the Gulf. Iran, Oil Producing and Exporting Countries' (OPEC) second largest crude oil producer, also threatened shipping in the Persian Gulf on a number of occasions and used mines in their operations. During the "Tanker War" phase of the Iran-Iraq War, Iran laid a number of naval mines in the Persian Gulf, one of which struck the USS 'Samuel B. Roberts', a patrolling United States guided missile frigate, resulting in the death of over 30 crewmembers. While the incident did not sink the vessel, it demonstrated the vulnerability of shipping to mine damage. In January 2008, Iranian Revolutionary Guard boats²⁰ provoked three US Navy ships in the Strait of Hormuz. In March 2007 there were concerns of an Iranian

18. David Michel and Russell Sticklor, " Indian Ocean rising : maritime security and policy challenges" Stimson Center (USA : July 2012).

19. Leighton G. Luke, "Closing the Strait of Hormuz – An Ace up the Sleeve or an Own Goal?" Indian Ocean Research Programme Report (Future Directions International, Australia: 2009).

20. Barbara Starr, " Iranian boats harass US Navy, officials say", CNN , January 7, 2008.

attack on a U.S. vessel or vice versa and thus in the falling month; the United States undertook the largest naval exercises in the Persian Gulf. Also, recently, the US announced that it would send more warships and US navy minesweepers for exercise in the Gulf, which will be joined by around 20 US allied countries²¹ in September, 2012. The US Navy has also brought in a converted amphibious transport and docking ship named the Ponce, into the Persian Gulf to serve as the first floating staging base for any kind of operations including military and non-military such as mine clearing.²²

However, such measures taken by Iran, would affect the global consumers at large, the worst hit would be the Gulf States, unable to export their oil and their main source of income would come to an end. For Saudi Arabia, the losses would amount to 70 per cent to 80 per cent of its revenues²³ Qatar would lose 60 per cent of its revenues and Oman, 40 per cent of its Gross Domestic Product. For Iraq, the losses would represent 40 per cent of the State's income. The Iranians themselves would be the worst affected as they would be unable to import the refined petrol they need. Iran consumes a good fraction of its own production, so it exports only amount to a few million barrels a day. The type of crude that Iran exports, is substitutable with the capacity from elsewhere in the world, mainly Saudi Arabia; but, in case the Strait is closed and the access to the world's markets for Saudi Arabia's oil ports are hindered due to an attack, some six to nine million barrels per day will be taken off the global market, leading to an overnight oil price hike. Within weeks the country would see food shortages, mass unemployment and an internal conflict.²⁴

UAE-Iran competition

Also, there exists the ongoing dispute between Iran and UAE over ownership of three islands near the tanker routes to the Strait of Hormuz, i.e. Abu Musa, Greater and Lesser Tunb Islands. In case of a disruption in these

21. Michael Casey, "USS Porter damaged in collision with oil tanker near Strait of Hormuz", National Post August 13, 2012.

22. Thom Shanker, Eric Schmitt and David E Sanger, "U.S. Adds Forces in Persian Gulf, a Signal to Iran", the New York Times, July 3, 2012.

23. See Kenneth M. Pollack, "Securing The Gulf," *Foreign Affairs*, July 2003.

24. Ibid.

islands, the oil prices would hike up. Bander Abbas, a military port just off the Strait and its military bases surrounds Abu Musa and the two Tunb islands. Abu Musa contains a large deposit of oil and thereby remains of vital importance to both the countries. The island is also located at the mouth of the Strait of Hormuz²⁵ and thereby forms a centre point for control of the strait. Control of Abu Musa provides Iran with protection for its port of Bandar Abbas. The Tunb Islands on the other hand, though inhabitable provide strong defensive bases for the Strait and are apt for conducting any sort of military operations from sea. The islands are also located in the center of the navigation route of the TSS and thereby remain strategic for their control over maritime traffic passing through the Strait of Hormuz. Most importantly, the deep waters around the Islands are suitable for submarine operations and super tankers and thereby can become an excellent base for any future manoeuvre. No substantial official agreement however exists between Iran with UAE over the islands and thereby can instigate a further crisis that may involve international intervention. In retaliation, Iran can always threaten to close the strait. Also the visit of Iranian President to Abu Musa islands recently has flared up issues between the two countries.

In response to this, UAE is studying plans to build a \$200 billion mega-canal that would allow oil tankers to bypass the Strait of Hormuz, in order to reduce Iran's influence on the flow of oil from the region.²⁶ There is a construction of a 112-mile canal to the Dubai Government.²⁷ Abu Dhabi has recently inaugurated a pipeline to Fujairah so its oil can avoid Hormuz and will be able to carry about 1.5 million barrels a day of Murban crude from Habshan, a collection point for Abu Dhabi's onshore oil fields, across a desert and mountains to Fujairah. It has been inaugurated with the first export cargo being shipped to a refinery in Pakistan.²⁸ This pipeline however will only import oil from UAE and not other countries such as Qatar and Iraq that are beyond the Strait's entrance.

25. Ashraf Ashrafpour, "Persian Gulf: Geopolitics and Wars" (Kaveri books, India : 2012).

26. Dagobert L Brito, "Revisiting Alternatives to the Strait of Hormuz", James A Baker III institute for public policy (USA: January 2012).

27. n. 2.

28. See Anthony DiPaola and Ayesha Daya, "Abu Dhabi exports first pipeline oil bypassing Hormuz strait", Bloomberg Business Week, July 16, 2012.

Escalating conflict in the Strait of Hormuz and the Gulf Region would be very complex with consequences impacting all the states in the region

Other existing challenges

Therefore, it is important to understand that an escalating conflict in the Strait of Hormuz and the Gulf Region would be very complex with consequences impacting all the states in the region. Thus four critical vulnerabilities would emerge by an escalating conflict in the Strait- The vulnerability of operating International tanker and freight traffic in the Strait of Hormuz region will increase the economy of the world; The vulnerability due to chances of war and possible fall in the International expatriate community in the Gulf region; The vulnerability of collapsing Gulf economies and the rise of oil prices that would increase the remittance economy of the International workforce from the Gulf and the vulnerability that the navies would have to face in order to maintain peace and tranquillity in the Indian Ocean Region (IOR) and the trouble it would need to take to evacuate all expats from the region, in case of a war. A threat on the naval bases and oil facilities will also put the world at risk.²⁹

The growing strategic importance and economic significance of the Strait of Hormuz, combined with its vulnerable position adjacent to failed states, makes it also an attractive target for terrorist groups looking to disrupt global trade. The sinking of only a few ships could seriously affect traffic through the narrow Straits of Hormuz, making them particularly vulnerable to potential actions undertaken by groups such as the Al Qaeda. The Indian Ocean trade routes are also used for the trafficking of drugs, smuggling of people and small arms by international criminal organisations and has emerged as an important transit route for the narcotic trade from the Golden Crescent (Afghanistan, Pakistan, and Iran) to the West and Far East. Regional instability, non-state violence, and potentially armed maritime conflict mainly from Yemen and Pakistan, can threaten to affect the safety of commercial shipping across the Strait of Hormuz. Maritime attacks or closure would cause a relocation of the affected trade flows and

29. n. 21.

reroute sea trade which will make transportation expensive.

Feasibility of Closure

However despite all these challenges, there exists the fact that the possible closure of the strait remains impossible or calamitous due to its vulnerable location. According to the United Nations Convention on the Law of the Seas, the monitoring of warships in the Strait is entitled to unimpeded transit. Therefore according to international law, no country can impose blockage or cause a closure of the Strait of Hormuz.

However the difficulty of stopping Iran relates to the United States not having ratified the UNCLOS and thereby accuses of American presence and control of the region beyond any legal regulations.³⁰ Closure of the strait by sinking vessels would be unfeasible as the depth of the strait is 70-100 m and thereby remains physically ineffective. Also the depth in the Persian Gulf is not suitable for submarine operations.³¹ It is important to note that sea mining in the region has been considerably contained due to latest technological advancements and counter mine vessels. The environment for radar also is not possible due to massive clutter, missed detections and possibility of false targets in the strait. There also exists poor propagation environment for infrared missiles leading to insecure submarines.³² Therefore mostly, closure of the Strait limits itself as part of Iran's defensive deterrence strategy that allows it to control situations in the region and avoid any sort of persecution from rivals.³³ Iran is aware that it will suffer maximum with closure of the strait as the other Persian Gulf countries can divert or deviate their oil export routes. Its heavy

Economic significance of the Strait of Hormuz, combined with its vulnerable position adjacent to failed states, makes it also an attractive target for terrorist groups looking to disrupt global trade

30. Susan Simpson "Is the Strait of Hormuz governed by treaty or by customary international law?", January 7, 2012, available at www.viewfromll2.com accessed on 15 Oct 12.

31. n. 26.

32. Anthony H Cordesman, "Iran. Oil and the Strait of Hormuz" CSIS (USA: 2007).

33. Kayhan Barzegar, "Iran's Strategy in the Strait of Hormuz", *The Diplomat*, July 24, 2012.

India emphasised that Sea Lanes of Communication mainly the Strait of Hormuz, are critical to the country's future economic prosperity

dependence on imported refined products such as gasoline will also be congested with the closure. Also, the military bases around Bandar Abbas will get occupied and damaged in case of air strikes by US and will thereby lead to mismanagement of Iranian imports. Most importantly, any decision on the closure of the Strait can only be issued by the Supreme Commander, Ayatollah Khamenei and not military commanders,³⁴ thereby restricting the effectiveness of the rhetoric. Also, the Strait of Hormuz is partly controlled by Oman which can implement decisions in regard to the issue if necessary.

However, oil crisis in the future can be caused in the region by overconsumption, ageing infrastructure, disruption of freight traffic, impediments at oil refineries and port facilities, restricting fuel supply, pipeline failures and accidents and also changing political events. Also there exist chances of increase in the consequences and participation of a war in the region which will lead to a possible closure of the Strait and its subsequent impact on the people in the region.

INDIA'S HORMUZ DILEMMA AND THE PERSIAN GULF

While understanding the importance of the Strait of Hormuz for the world in general, it is interesting to note that in its 2004 Maritime Doctrine, India named the area between the Persian Gulf and the Strait of Hormuz as a legitimate area of interest. Also, in its 2007 maritime strategy titled 'Freedom to Use the Seas', India emphasised that Sea Lanes of Communication mainly the Strait of Hormuz, are critical to the country's future economic prosperity and that nations around the world depend on the waters of the Indian Ocean for their trade and energy supplies.³⁵ It is also interesting to note that the growing need and dependence of the Indian Ocean has increased the

34. "Iran has plans to close Strait of Hormuz if in trouble", The Times of India, July 7, 2012.

35. Tim Sweijjs, Willem Cleven, Mira Levi, Joelle Tabak, Zinzi Speear and Jeroen de Jonge, "The Maritime Future of the Indian Ocean Authors", The Hague Centre for Strategic Studies (Netherlands : April 2011).

role of the Indian Navy in the region, which is expected to ensure stability and tranquillity in the waters around India's shores.

INDIA AND THE PERSIAN GULF

Reiterating the significance, India, the world's fourth largest energy consumer, after the United States, China, and Japan depends on oil for about 31 percent of its energy needs, out of which it imports about 68 percent.³⁶ India's entire development process depends on the availability of energy resources and, therefore, energy availability and affordability becomes absolutely vital to the country. Ninety per cent of our oil comes either from offshore fields or from across the sea, mainly from the Persian Gulf, disruption of which could critically affect the country's interests.³⁷ India's oil consumption is also said to increase to 10 percent per year reaching 3.2 million barrels per day by 2014.³⁸

Apart from energy supply, India's export of goods has also increased to the Persian Gulf countries with increasing engagement in trade of petrochemicals, plastics and raw materials and enhancement of investments in both regions. The Strait of Hormuz has been a critical link in India's trade with the Arab countries of the Persian Gulf, as well as Iran which has also facilitated close economic and cultural ties. The United Arab Emirates remains India's largest non-oil trading partner and continues to expand its partnership with the country on all fronts including education, tourism and healthcare. Most importantly, approximately 6 million Indians work in the six Arab states of the Gulf Cooperation Council and send home more than 9.5 billion dollars in remittances annually,³⁹ making India one of the largest FOREX recipient countries.

Iran remains a strategic rear base for India and an important energy partner. In 2005, India and Iran signed a multibillion dollar deal under which Iran supplies India with 7.5 million tons of Liquefied Natural Gas

36. n. 7.

37. Robert D. Kaplan, "Center Stage for the Twenty-first Century Power Plays in the Indian Ocean", *Foreign Affairs* (USA: 2009), v. 88, n. 2.

38. Saideh Loftian, "Maritime security in Persian Gulf", in Ravi Vohra and Derbrat Chakra, *Maritime Dimensions of a New World Order*, (India: Anamaya Publishers, 2007).

39. "Migrant Labour in the Gulf", CIRS,(Qatar: 2011).

annually for 25 years,⁴⁰ which began in 2009. Iran sees India as a strong partner that can help Tehran avoid strategic isolation. In addition, economic cooperation with India helps Iran's policy of oil and gas trade as it reduces its market dependence on the West. For India, the relationship is part of a broader long-term effort, both strategic and diplomatic. India also regards the Iranian connection as helping with its own energy needs. Deepening ties have been reflected in the growth of trade and particularly the January 2005 deal. An Indian company gets a 20 percent share in the development of Iran's biggest onshore oil field, Yadavaran, which is operated by China's state oil company, as well as 100 percent rights in the Juefeir oil field.⁴¹

India and Iran also have been cooperating on the North-South Transportation Corridor, a project to link Mumbai, via Bandar Abbas with Europe. Security ties with Iran have also been advancing. India has agreed to provide Iran with training in military science and technology⁴². Other developments include the first Indo-Iranian combined naval exercises and an Indian effort to upgrade the Iranian port of Chahbahar, on the Gulf of Oman, which serves as a forward base for the Iranian Navy. The Indo-Iranian relationship is however not without problems. Iran, of course, has never been happy about India's close ties with Israel and in the light of the Iranian nuclear ambitions; pressure from the United States has influenced India to reduce its oil imports from Iran to a minimum level. However, in the midst of the insurance embargo on Iranian shipments put forward by the European Union, the Indian Shipping Ministry has allowed State run oil refiners to import Iranian crude oil through ships arranged by Iran.

India also has access and naval support facilities in Qatar. It includes naval security guarantee that would help secure the offshore assets of Qatar and provide joint ventures in production of weapons and military equipment. The maritime cooperation agreement provides India with a strategic naval base in the Gulf region. The India-Qatar maritime security initiative provides a convergence of Indian naval power with Qatari naval forces in order to

40. Donald L. Berlin, "India in the Indian Ocean", *Naval War College Review* (USA: 2006), v. 59, n. 2.

41. Ibid.

42. See S. Joshi, "India and Iran : A pragmatic alliance", RUSI Brief, January 2011, available at <http://www.rusi.org/publications/newsbrief/ref:A4B5ECBACB14AB> accessed on 13 oct 12.

combat the variety of maritime threats of terrorism, piracy and securing the offshore oil installations.⁴³

In 2007, India sent two flotillas to make port calls in the countries of the Persian Gulf and to engage with them in joint naval exercises.⁴⁴ India, however has recently tried to reduce its dependencies in the oil-rich but unstable Persian Gulf by moving beyond Iran and attempting to cultivate a broader and more diverse set of relationships with other countries.

The most significant recent development has been

India's ties with Saudi Arabia, India's largest source of petroleum imports. Since Oman, Iran, and the United Arab Emirates share the border around the Straits, relationship with these three countries also remains crucial in fostering a secure environment in the Strait of Hormuz.

India's responses have been in tune with the regional consumers of oil from the region, echoing in unison the intensity of a price rise in the region

INDIA'S ROLE AND PROBABLE RESPONSES

In connection to statements emphasised by Iran on the closure of the Strait, India's responses have been in tune with the regional consumers of oil from the region, echoing in unison the intensity of a price rise in the region. The cost of re routing the oil would be far high for India, which is already suffering economic crunches and may in turn increase cost of living and related commodities in the country. Any new routes via the Gulf of Aden might involve tighter security measures for India in order to avoid pirates in the region and may involve more involvement of the Indian Navy. Also, India has fallen victim to the ongoing US-Iranian spat in the Persian Gulf with the killing of an Indian fishermen off the coast of Dubai, by the a American Naval ship.⁴⁵ Though the killing was condemned, it raised security threats for neighbouring countries like India and their national interests in the region.

43. Lawrence Prabhakar William, "Peril Awaits at the Strait of Hormuz", July 22, 2010, www.freerepublic.com.

44. Narender Kumar, "Challenges in the Indian Ocean Region- Response options", (New Delhi: Knowledge World Publishers, 2011).

45. Atul Aneja, " Indian fishermen killed in US firing", The Hindu, July 12, 2012.

THE INDIAN NAVY AND RESPONSES

It is relevant to note that the Indian presence has been consistent in the Arabian Sea and the Strait of Hormuz, apart from being one of the largest regional navies, compatible with conventional and nuclear powered submarines, surface combatants and air power. The Indian Navy has also been involved in a number of multilateral exercises, and disaster and humanitarian relief operations in the region. The Indian Navy currently houses an aircraft carrier Viraat, frigates, offshore patrol vessels, minesweepers and amphibious ships and possesses corvettes, maritime patrol aircraft and anti ship missiles.⁴⁶ It has also been engaging with other countries to increase and enlarge its current naval capabilities. Therefore in regard to its dependence on the Strait of Hormuz for its energy resources, Indian Navy has been keeping a check on regional navies and any asymmetric threats in the region. Also, it has been expanding its maritime domain awareness and strengthening naval capabilities, both operational and diplomatic.

However, with respect to closure or congestion on chokepoints and immediate responses by India, it is important that the capabilities of its navy and maritime power must be further expanded to meet up with its vast energy requirements and trade. India should engage in pre positioning of its ships near chokepoints such as the Strait of Hormuz that can help in taking quick responsive action in case of an emergency or conflict in the region and can help guide and guard Indian interests including its ships and tankers. Surveillance and tracking must be given more emphasis including a national maritime surveillance policy that helps to keep alert of the SLOCs at all times by the Indian Navy and the Coast Guard.⁴⁷ The Indian Navy must also possess integral air capability in fleet operations for surveillance purposes that can help monitor crisis situations in the region.⁴⁸ Also, more mine counter measure vessels must be included in the navy's stockpile that can help avoid any adverse situations in the chokepoint at any given point of time. It is to be noted that during the Iran- Iraq war of 1980-88, around ten

46. n. 5.

47. See Sangram Singh, "Maritime Strategy for India", in K N Nayyar(ed.), *Maritime India* (Delhi: Rupa and Co., 2005).

48. Ibid.

Indian flagged vessels became targets of sea mines, aerial bombs, anti missiles and rockets while passing through the Strait. India must therefore invest in more satellite based coastal sensors that help in collection of timely data and analysis. Also, in terms of escort of Indian tankers and vessels, there have been debates among strategists that they must be equipped with naval ships that provide air defence, frontline surveillance aircraft and anti submarine capabilities to avert any sort of collision or obstruction in the region.⁴⁹

India cannot jeopardise its relations with all the countries of the Persian Gulf which are consistently cordial and friendly

Also, in the midst of such crisis, India cannot jeopardise its relations with all the countries of the Persian Gulf which are consistently cordial and friendly. Most importantly, India must engage with naval powers around the world in multilateral exercises and forums constantly. Although India has been modernising and improving its naval capabilities since the late 1990s, it currently lacks the capability to deploy forces on a permanent basis beyond the reach of its bases. Nevertheless, India's geographical position provides it with considerable strategic leverage, as it is located along the major transit route and it possesses several smaller islands across the ocean. This could enhance India's potential to become a maritime power in the long run.

ALTERNATE PIPELINES

The strategic location of India allows it to play an important role in the maintenance of the SLOCs in the India Ocean region. However with the emerging demands, India should be able to have a change in its policy making and strategic planning mainly to protect the SLOCs mainly the Strait of Hormuz to establish governance frameworks that will facilitate the integration of rising powers and maintain an open world economy. Global production chains are vulnerable to supply disruption originating from the Persian Gulf therefore business initiatives should re-assess their policies

49. Gurpreet S Khurana, "Maritime forces in pursuit of National Security- policy imperatives for India" (Delhi: Shipra publishers, 2008).

Global production chains are vulnerable to supply disruption originating from the Persian Gulf therefore business initiatives should re-assess their policies regarding risk management

regarding risk management.⁵⁰ Investments that involve alternate pipelines from the region into India must be sought after, including the UAE pipeline that can help India import oil via Oman. Understanding the evolving geopolitics of energy security, India has been currently pursuing active talks with Oman to build a 2000 km deep underwater pipeline via Oman from the gas producing countries such as Qatar and UAE.

In regard to alternate pipelines for India, the Iran-Pakistan-India pipeline has been in the negotiating tray for a long time. Pakistan can interfere with India's maritime route to the Persian Gulf and considering and, therefore, capable of disrupting India's oil supply. The IPI pipeline has also been under tension from both neighbours which bases itself on lack of trust and security issues. The \$ 7 billion project involves two 2,000 kilometres pipelines from Iran's South Pars fields to India's west coast of Gujarat, via Pakistan and mainly remains stalled due to economic and political reasons. India fears a security guarantee from Pakistan; and disagreement on the pricing of natural gas by Iran remains a major irritant⁵¹. Also, US pressure on India to abandon the project keeps playing around into the success of the pipeline. However India has signed the Turkmenistan-Afghanistan-Pakistan-India pipeline recently that aims to help India in terms of crisis management and diversion from conflict ridden Persian Gulf. The pipeline which is about 1,800 km long will have a capacity of 90 million metric standard cubic metres a day of gas for a period of 30 years and is likely to become operational by 2018.⁵²

PAKISTAN AND INDIA

In regard to the Strait of Hormuz and maritime interests, it is important to note that Pakistan has also been building up its naval capabilities

50. n. 1.

51. Rahul Roy Choudary, "India's maritime security" (Knowledge World, India: 2000).

52. "TAPI pipeline gas sale agreement signed", The Hindu, May 23, 2012.

such as missile armed fast attack aircraft and air independent propulsion submarines,⁵³ to meet up with any challenges in the region, apart from being a large recipient of crude oil from Saudi Arabia. Pakistan is an energy deficient country and exports a large part of its energy resources from the Persian Gulf. The Gwadar port, facilitated by China aims to strengthen Pakistan's energy routes and also aid a build up against conflicts and crises in the Strait of Hormuz. In regards to its energy security, Pakistan has been trying to activate bilateral talks with Iran for constructing a pipeline, despite contentions between the two countries and has been voicing to resolve US-Iran issues through peaceful means. Also, Pakistan has tied up with Qatar to construct a pipeline from its North Dome field to Pakistan via an ocean bottom pipeline from Oman.

Pakistan can interfere with India's maritime route to the Persian Gulf and considering and, therefore, capable of disrupting India's oil supply

In case of a closure of the Strait, Pakistan as an adversarial neighbouring country becomes important for India's entry into the Persian Gulf. Also, during any crisis situations, Pakistan may construct exclusive zones in the Arabian Sea, using its Gwadar port as base and thereby may hinder or threaten India's maritime trade in the region.

CONCLUSION

It also becomes important to note that in connection with India's responses to a possible closure or disruption in the region, India should also be prepared for any crisis situation in the region that requires re-routing and rescue of labour migrants from the gulf countries. India's defence forces must be prepared for any kind of humanitarian intervention. A classic example of the need of airpower capabilities for maritime related issues was demonstrated by the successful airlift that India had conducted during the Gulf War of 1990-91 where it pulled out a large number of its Diaspora from the countries of the Gulf⁵⁴. There is also a need for India to develop

53. n. 48.

54. See Jasjit Singh, "Air Power in the Foreign Policy of Nations" Defence and Diplomacy 2011, vol. 1, no. 1.

a vigorous strategy of oil diplomacy due to the increase in demands for energy, around the world. Also, it is to be noted that pipelines which are being ambitiously followed by India have a long way to go and may be subjected to pressure of funding, geographical limitations and construction.

Therefore, understanding the current existing confrontations in the Strait of Hormuz, we can state that the Indian Ocean and its Rim are very likely to become a stage for the most important global challenges in the 21st century. Persistent conflicts in West Asia will be a continuing source of instability in the Strait of Hormuz and will pose a major security challenge to the international community in general. The Strait of Hormuz and the oil from the Persian Gulf will definitely see an increase in future and with vulnerable moments like the Arab Revolution of 2011 and the constant rhetoric by Iran, little can be said about the situation in West Asia and the price of oil. Therefore it is important that countries dependent on the oil of the Persian Gulf continue to foster good diplomatic and friendly ties with the region. As a developing country that needs to continuously supply its energy needs, India must be prepared to face all challenges in the Persian Gulf and the Strait of Hormuz. India's navy must modernise itself to the vulnerabilities in the region and must try for naval superiority in the region. Also, any future choking of the Strait can impair the energy and security requirements of the country and make it dependent on more costlier and harder forms of energy. Whatever happens in the Strait of Hormuz can affect our national security and thus is of great interest to us. India's foreign policy should adapt to the demands of the rapidly changing global, regional and domestic environments because the Strait of Hormuz in the India Ocean remains a potential hub of crises and conflicts, due to a number of eroding territorial disputes, while at the same time, it also constitutes a major centre for countries that aim at economic development.