

The Strait of Hormuz: Assessing and Neutralizing the Threat

Amos Yadlin and Yoel Guzanksy

“Iran will not repeat its warning ... the enemy’s carrier has been moved to the Sea of Oman because of our drill. I recommend and emphasize to the American carrier not to return to the Persian Gulf.”

Ataollah Salehi, Iran army chief, January 3, 2012

Introduction

In early January 2012, Iran completed one of the largest naval maneuvers in its history (“Velayat 90”) east of the Strait of Hormuz. This maneuver, like similar maneuvers in recent years, is part of the military preparations and propaganda campaign that includes explicit threats to close the Strait.¹ Iranian declarations that it will not hesitate to block the Strait have become more recurrent and intense, and aim to persuade the world that Iran has credible operational capabilities to realize its threat in any future conflict.² The maneuvers and the rhetoric alike are designed to deter the international community not only from a possible attack on Iran, but also from taking punitive steps short of war – such as crippling sanctions or a naval blockade – in order to magnify the potential cost of any possible confrontation.

The Strait of Hormuz is considered the most important maritime choke point in the world, and any interference with oil tankers passing through it would have an immediate effect on the global energy market. Ninety percent of oil exports from the Gulf pass through the Strait, which is under Omani and Iranian sovereignty. At its narrowest point,

Gen. (ret.) Amos Yadlin is the Director of INSS. Yoel Guzansky is a research associate at INSS.

the Strait is no more 33 km wide,³ and the width of the international shipping channel is only 10 km. Close to 17 million barrels of oil a day passed through the Strait in 2011, which translates into some 15 tankers a day traveling from Saudi Arabia, the UAE, Kuwait, Iran, and Iraq (as well as liquid gas from Qatar), destined for the most part for Asian markets. These figures, along with the fact that Iran controls a number of key islands near the Strait, allow it, at least in theory, to disrupt the area's oil transport with relative ease. This reality constitutes a fundamental consideration in any scenario of a future confrontation with Iran.

The purpose of this essay is to consider the chances that the Iranian threats will be realized, and assess the implications of a scenario in which naval traffic in the Strait, including some 40 percent of the world's oil trade, will be obstructed – a scenario that deters the international community from stepping up political pressure on Iran and applying force against its nuclear facilities. The essay contends that the Iranian ability to block the Strait hermetically over an extended period – an assertion raised from time to time⁴ – is doubtful, and the international community has better tools at its disposal than in the past to cope with any interference to traffic in the Strait. Moreover, even were Iran capable of blocking the Strait effectively and for a prolonged period, such a move is contrary to fundamental Iranian interests and is liable to threaten the regime's stability, as it would damage Iran's economy – the import of refined oil and the export of crude oil (representing some 80 percent of the regime's income) – and lead to a confrontation with the US and other navies, which enjoy clear operational advantages. It is also not inconceivable that an Iranian attack on the freedom of movement in the Strait would generate a United States response that could include, in addition to damage to most of Iran's naval assets, possible damage to Iranian strategic facilities, including nuclear sites.

The Iranian Threat

Analysis of the rationale for an Iranian action of this sort and the chances of its success – central questions in any discussion of the topic – must be based on an understanding of Iran's capabilities with regard to naval traffic in the Strait and the oil facilities of Saudi Arabia and other oil exporters in the Gulf. The Iranian threat relies on capabilities that may be divided into two types of military force, naval power and missile power.

The naval threat is a direct asymmetric threat that would be implemented primarily against naval traffic in the Gulf. Because of the weakness of the regular Iranian navy and US naval superiority in the Gulf arena, Iran has given priority to acquiring and building a large number of small, rapid vessels (some of which are unmanned) and midget submarines, and has retrofitted civilian ships for military missions. The Revolutionary Guards navy, which operates these crafts, assumed responsibility for the Gulf arena in 2007. Some of the Revolutionary Guard naval vessels are armed with anti-ship missiles, some have been adapted to lay naval mines, and others carry explosives. One of the motives for using these methods is to allow for deniability, such that a response to an attack by these means would be less severe, as it would be difficult to attribute unequivocal responsibility to Iran. The result is that for all intents and purposes the Iranian navy in the Gulf has adopted guerilla features, including midget submarines for landing commando forces and rapid boats designed for hit and run missions via “swarming,” i.e., stealth boats engaged in simultaneous attacks. Indeed, it is precisely the primitive nature of the Iranian tactic – quantity over quality – that is liable to present a challenge to the US navy in any possible confrontation and offset the advantage enjoyed by the Fifth Fleet. For example, while the United States has improved its capabilities of removing naval mines (including through the use of unmanned platforms), it will still need help from other nations in a confrontation with Iran with regard to mine removal (the US has “only” 4 minesweepers permanently stationed in the Gulf).

In recent years there have been many reports about Revolutionary Guards vessels provoking Western vessels in the Gulf. These events are more show than real in terms of tangible damage – Western ships have not actually been attacked – but these actions do say something about Iran’s intentions and capabilities. The frequent provocations are meant to send the message to the US that Iran sees the Gulf as its own backyard and will not hesitate to exact a heavy toll if and when it is attacked or, more recently, in response to the imposition of more severe sanctions. In 2011, the US expressed concern about the growing friction between the navies that has already resulted in an increasing number of incidents liable to escalate into a comprehensive confrontation.⁵ Such developments prompted the US to suggest to Iran that the navies maintain a hotline, but

the initiative was rejected by Iran, which claimed that the US presence in the Gulf is in any case illegitimate.⁶

Missile fire, which poses an indirect threat, is intended to threaten and/or target military and energy producing facilities on the western shores of the Gulf. Iran maintains the largest surface-to-surface missile arsenal in the Middle East. The assessment is that Iran has more than 1,000 missiles in the 150-2,000 km range.⁷ Most of the missiles – ineffective in damaging naval vessels in the Strait of Hormuz – have sufficient range to directly threaten critical oil facilities in the Gulf states. Action of this sort would not necessarily be linked to an initiated Iranian move in the Strait; nonetheless, Iran's threat is that any American reaction to Iranian activity in the Strait would be met with a counter-move, which might also include damage to oil infrastructures in the Gulf states.

Due to its aging air force and its difficulties in obtaining original spare parts in the West, Iran has chosen to focus on a gradual but methodical beefing up of its ballistic missile force. At the same time, it is also increasing the ranges and improving the accuracy level and destructive power of its missiles, and working to shorten the missiles' exposure times (by moving to reliance on solid fuel). As a result, there is a growing concern among the Gulf states that in a possible campaign against Iran, strategic installations on their soil would be exposed to more intensive and prolonged missile fire than what Iran was previously capable of.⁸ In a rare statement, Admiral Ali Shamkhani, former Defense Minister of Iran and military advisor to Supreme Ruler Ali Khamenei, described the nature of the Iranian response to the Gulf states should Iranian nuclear facilities come under attack: "Iran would launch a blitz of missiles at the Gulf states...and the missiles wouldn't only be directed against American bases in the region but also at strategic targets, such as refineries and power stations...The goal would be to stun the American missile defense system using dozens, perhaps even hundreds, of missiles that would be launched simultaneously at selected targets."⁹ An Iranian attack on Gulf state installations, whether American bases or key oil facilities, remains the most significant threat for those regimes. A representative of Saudi King Abdullah said the King "worries more about an Iranian missile launch against Saudi oil facilities than a terrorist attack....because he can take preventive measures against terrorism but not against Iranian missiles."¹⁰ Because Iran would find it difficult to seal the Strait of



Hormuz hermetically and this would almost certainly entail a confrontation with the superior US navy, the fear among the Gulf states is that Iran would be impelled to place a greater emphasis on missile attacks against the Gulf states.

Based on an assessment of its interest and capabilities, Iran might well consider taking steps against the Gulf states, the US navy, and naval traffic in the

Gulf in one of the three following systemic alternatives, which represent three different sets of strategic considerations.

The first alternative is prolonged low intensity harassment, based on the rationale of reducing the risk and minimizing the damage to its oil exports. Iran would likely prefer to focus on regular low intensity harassment of international ships for as long as possible, while leaving the Gulf open to its oil exports and attempting to avoid taking responsibility for the episodes. In this scenario, it may be that, inter alia, Iran would use “civilian” ships that have been retrofitted, pursue terrorism by proxy, and/or go beyond its territorial waters in an effort to try and blur its own fingerprint. Iran would thereby both reduce the probability of a comprehensive confrontation with the US navy, which enjoys clear superiority, and also exact a steep toll of the global energy markets, if only because of rising insurance premiums. This approach would create a crisis atmosphere and affect the oil markets adversely. At the same time, Iran would likely find it difficult to maintain deniability over time, especially given the high sensitivity to the situation in the Gulf and the intensified international campaign against its nuclear program. Thus even in an “optimistic” scenario – a partial, brief blockage of the Strait countered by efficient, rapid international action to open it – the significance of a limited campaign on the global energy market is liable to resonate beyond the direct effect of the events themselves, because of the concern about an ongoing shortage of Gulf oil.

The second alternative is a “noisy” attempt to block the Strait, based on the rationale of a regional power realizing its threats and brandishing an iron fist at its enemies.¹¹ Certainly in response to an attack on its nuclear facilities and other strategic sites on its soil, but also in case sanctions grow ever harsher and it is pushed to the wall, Iran is liable to mine central shipping channels and try to attack oil tankers and cargo ships entering and leaving the Gulf with shore-to-sea missiles. Still, given the basic weakness of the Iranian air force, the high US capability of crippling shore-to-sea missile batteries, and its vastly improved capability of clearing a lane through Iranian mine fields relatively quickly, the United States would likely be able to open the Strait at a tolerable cost. “Optimistic” assessments say that the US Fifth Fleet can open the Strait within two weeks, though there are more pessimistic assessments that speak of up to a two month period.¹²

The third alternative is expanding the campaign beyond the Strait of Hormuz, based on the rationale of taking the campaign to the enemy’s soft underbelly in response to aggression against Iran. Because of the centrality of the Strait, it would be very difficult to limit a confrontation, once launched in connection with the passageway, in time and place. For example, the US may want to punish Iran by pushing the confrontation onto Iranian territory, while Iran is liable to choose to attack with surface-to-surface missiles or terrorist cells, targeting oil terminals, processing facilities, and oil refineries in the Gulf.

Most of the research on the effect of a confrontation with Iran on the energy market has thus far dealt with the effect of disruption to free shipping in the Strait. Little if any attention has been paid to the possibility that Iran might choose to attack oil installations using surface-to-surface missiles.¹³ However, since an attempt to block the Strait of Hormuz would succeed only in part, it is important to examine the possibility of surface-to-surface missile fire at oil facilities on the west side of the Gulf – as threatened by senior Iranian officials. Indeed, an Iranian surface-to-surface missile attack against the oil facilities of the Gulf states (should the facilities in fact be damaged) is liable to have a more severe impact on the global energy market than even a successful blockage of the Strait, because of the damage to oil production over time.

In light of Iranian threats to attack strategic oil facilities in the neighboring states, the Gulf states have in recent years labored to improve

their missile defense capabilities, in part by purchasing PAC-3 Patriot systems (and intending to purchase Aegis and THAAD systems in the future), though apparently these are not yet fully operational. Because Saudi Arabia has the world's largest proven oil reserves and is the world's largest oil producer and exporter, it is liable to be the central target for Iranian attack. A successful Iranian attack on key oil installations in the Kingdom, such as Ras Tanura or Abqaiq (an installation that stretches over 3 sq km, processing two-thirds of all Saudi oil), located within a 300 km range of Iran, would be devastating to the global energy market.

However, the first (publicly available) study of its type, published in 2011, suggests that this Iranian capability is limited and the Iranian missile threat against oil infrastructures in the Gulf is usually exaggerated.¹⁴ Moreover, Iran would presumably seek to prevent a more extreme punitive retaliation on the part of the US and would be concerned about expanding a confrontation that would hurt US allies. Therefore, the Iranian threat against deterrence targets before a possible attack would not be identical to an Iranian cost-benefit analysis of realizing the threat after an attack. At the same time, Iran is quite liable to engage in selective air, land, and sea attacks against critical installations. Furthermore, the assessments about the size of the Iranian stockpile and the level of precision of its missiles are not up to date and likely underestimate the arsenal. Finally, the psychological impact of an attack on a key Saudi oil installation is also apt to sow panic in the markets, without any direct relation to the actual damage caused.

An alternative threat is Iran's recourse to terrorism and sabotage. In the last decade there have been several attacks against oil facilities and tankers in or near the Strait. In 2002, the French tanker *Limburg* was attacked outside the Strait by a racing boat loaded with explosives. In the attack, attributed to al-Qaeda, one person was killed and 90,000 barrels of oil were spilled into the sea. A similar method was adopted during the failed 2010 attempt to sink the Japanese tanker *M-Star* in the Strait by the Abdullah Azzam Brigades, also an organization affiliated with al-Qaeda. Iran is liable to adopt this type of *modus operandi*. In April 2011 there was an incident between a British vessel anchored in Bahrain and a ship, apparently Iranian, loaded with explosives that tried, according to British sources, to collide with it in a fashion similar to the 2000 attack against the *USS Cole* in the port of Aden, Yemen.¹⁵

Previous incidents have shown how difficult it is to sink oil tankers given their size and internal structure and oil combustibility. Consequently, they are even more resistant to shore-to-sea missiles and mines than combat ships.¹⁶ Thus alongside attempts to attack tankers, Iran is liable to attack oil facilities on the west shore of the Gulf, first and foremost the eastern province of Saudi Arabia where Iran enjoys some support from the Shiite population, which constitutes the majority there. In recent years Saudi Arabia channeled significant resources to this threat, and with the help of the US established a 30,000-strong force whose sole objective is to defend the strategic installations in the Kingdom, first and foremost its oil facilities. This force was established as part of the lessons learned from al-Qaeda's failed attempt to damage the Abqaiq facility in 2006. In late 2011 there was an increasing rise in the scope of violent events among Shiites in the oil regions, which could have implications for the security of the energy facilities in the region.

Thus Iran can disrupt the flow of oil from the Gulf by interfering with international shipping in the Strait for only short periods of time, if only because of the firm United States commitment to maintain the free flow of oil through the Gulf. In response to the explicit Iranian threats to block the Strait, the US has declared that any disruption to shipping there "will not be tolerated," with the US Navy "always ready to counter malevolent actions to ensure freedom of navigation."¹⁷ In January 2012 it

Iran's principal "oil weapon" is not a reduction in the amount of its oil on the market, rather the possibility of damaging the Gulf states' oil exports.

was reported that the Obama administration even transmitted a direct message in the same spirit to Iranian Supreme Leader Khamenei, saying that every disruption of international shipping in the Strait represents the crossing of a red line and will incur an American response.¹⁸ Despite Iranian threats, the US, Britain, and France have continued to navigate warships to and from the Gulf through the Strait of Hormuz.¹⁹

At the end of the Iran-Iraq War, during what became known as the "tanker war," an Iranian attack on naval vessels resulted in the US escorting Kuwaiti oil tankers (Operation Earnest Will) to and from the Gulf, and in one case, after an American frigate hit an Iranian mine, the United States damaged a major portion of Iran's viable naval force in the Gulf (Operation Praying Mantis). In response to current

Iranian threats, Secretary of Defense Leon Panetta coupled the severity of this issue with Iran's development of nuclear arms: "We made very clear that the United States will not tolerate the blocking of the Straits of Hormuz... That's another red line for us [in addition to the nuclear issue] and...we will respond to them."²⁰ While Chairman of the Joint Chiefs of Staff Martin Dempsey acknowledged Iran's ability to "close the Strait for a period of time," he emphasized that the United States would act to open it: "We are investing in capabilities to make sure that, if that happens, the US will be able to beat them."²¹ The United States maintains a significant naval and aerial presence in the Gulf and has military bases in most Arab Gulf States, first and foremost the Regional Command of the United States CENTCOM in Qatar and the US Navy's Fifth Fleet base in Bahrain.

Some of the tools currently available to the international community also include growing additional international military presence near the Strait.²² In 2009 France opened a naval and aerial base in the UAE and there are several international task forces operating in Bahrain, such as CTF-152, designated to ensure freedom of shipping in the area. In early 2012 it was reported that in light of the tension with Iran, the US increased the ORBAT stationed permanently in the Gulf in order to be better equipped to handle any possible development.²³

Nonetheless, the effect of oil exports on the Gulf should Iran choose to interfere with shipping in the Strait of Hormuz in one of the methods described herein is far from negligible. A possible blockade of the Strait would affect a significant portion of Gulf oil exports, first of all that of Saudi Arabia. For the sake of comparison, the start of the 2003 Iraq War (March-December 2003) resulted in a drop of 2.3 million barrels a day, and the invasion of Kuwait by Iraq (August 1990-January 1991) resulted in a drop of 4.3 million barrels of oil a day from the markets.²⁴

Interference with traffic in the Strait will likely have economic and political implications for Iran itself, given the regime's overwhelming dependence on the export of crude oil (with expected revenues for 2012 reaching \$100 billion). Unlike the Arab Gulf states and Iraq, Iran exports most of its oil via the Strait. About 90 percent of Iran's imports and 99 percent of its exports occur via maritime routes, and primarily through the Strait of Hormuz.²⁵ Iran produces about 3.5 million barrels and exports about 2 million barrels of oil per day (the assessment is that because of the aging of existing oil fields and the sanctions, Iran, according to an

annual calculation, loses some 300,000 barrels of oil per day). Reducing Iran's oil exports will likely create an immediate demand for additional oil. Nonetheless, Iran's principal "oil weapon" is not reducing the volume of its oil on the market, rather the possibility of damaging the Gulf states' oil exports.²⁶

Reducing the Iranian Damage to the Global Energy Market

If nonetheless Iran decides to block the Strait of Hormuz (the first two alternatives), the United States and its allies have better tools than in the past to offset some of the disruption to the flow of oil through the Strait. First is the use of strategic reserves: today most of the world's oil reserves are located in the United States and China, and are sufficient for 45-90 days, according to varying estimate (1.5 billion barrels). These reserves can reach the international market and fairly rapidly increase the available oil supply and moderate the heightened cost. Using these reserves could prevent an immediate paralysis to routine global economic activity caused by oil shock.²⁷ Releasing oil from the strategic reserves is an irregular step (oil was released from the reserves after Saddam Hussein's invasion of Kuwait in 1991 and after the damage inflicted by Hurricane Katrina in 2005), but on June 23, 2011, the International Energy Agency (IEA) announced the release of 60 million barrels from the strategic oil reserves starting in July (some 2 million barrels per day). Oil prices reacted by dropping but within a few days rose again. The unusual step was explained as being the result of interruption in the supply of oil from Libya and the global economic situation. Another measure tried with some success in the early 1990s when Kuwait was invaded was storing (unsold) oil in tankers near the markets. The bottom line is that allowing the reserves of all IEA countries to flow at maximum capacity would compensate for the loss of 14 million barrels a day for one month (out of the 17 million barrels of oil moving through the Strait every day).²⁸

A second available measure involves alternate routes. Saudi Arabia has an east-west pipeline that stretches some 1,400 km from Abqaiq in the eastern part of the Kingdom to Yanbu on the Red Sea, with the capacity of transporting 5 million barrels of oil a day (this pipeline currently seems to be working at half capacity because most of the Saudi oil goes to markets in the Far East). Were it in fact possible to add another 50 percent to its capacity, plus the release of oil from strategic reserves, this would cover

the loss of oil from the Gulf for 90 days. In addition to this pipeline, there is a natural gas line (with a capacity for moving 0.5 million cubic m a day).

There are other pipelines in Saudi Arabia, such as the Basra-Riyadh-Red Sea line (IPSA) used to export Iraqi oil during the Iran-Iraq War. Refitting part of the pipeline (for natural gas) on Saudi territory also in favor of Kuwaiti oil is possible in the long term in case the Strait is blocked (Kuwait is the only significant oil exporter without a port outside the Strait). There is also the Dhahran-Tyre pipeline (the Tapline) that runs through Jordan. Use of it was discontinued because of Jordan's support for Saddam Hussein during the 1991 Gulf War. The two pipelines together have a capacity of 2.15 million barrels of oil a day. In addition, Iraq produces 2.5 million barrels a day, and some of this can be transported in existing pipelines to Turkey and Syria (because only half of Iraq's oil exports go through the Strait, although these pipelines have been targeted for sabotage and terrorism in recent years). Finally, there is a pipeline inside UAE territory completed in late 2011 that bypasses the Strait, running from Abu Dhabi to Fujairah. It was scheduled to begin transporting oil in January 2012, but because of delays it is expected to go into operation in mid 2012.²⁹ The pipeline, whose cost thus far is estimated at some \$3.3 billion, will be able to transport up to 2.5 million barrels a day, an amount that approaches the total UAE production capacity.

In addition, natural gas has been transported from Qatar to the UAE to Oman since 2007 in smaller quantities and usually for local consumption through the Dolphin line, which moves gas at low yield, partly because of disagreements among the Gulf states. In addition to laying pipelines that bypass Hormuz, it is possible by means of various methods, such as with the enhancement of chemicals, to increase the yield of existing pipelines. It is estimated that the use of these additives in the east-west pipeline would increase its yield by 6 percent to more than 8 million barrels a day (this would obviate transport through the Strait but raise the cost of oil transport, with Asia the primary destination).³⁰ In the long term, it will be possible to connect Saudi Arabia's pipeline system with that of Oman and thereby avoid the need to go through the Strait altogether. Thus far the potential

While the rhetoric of recent years has often led to the assumption that Iran intends to block the Strait of Hormuz, this intention seems far from self-evident, as it is not in keeping with Iran's true interests.

is not being realized because of territorial disputes and the desire of various countries not to move their only source of income elsewhere. In a future crisis and lacking the naval transportation alternative, there may be a change in this system of oil pipelines.

A third measure involves exploiting the Saudi capacity for over-production. Saudi Arabia is the only country with significant so-called swing capacity. According to Saudi statements, its swing capacity stands at 4 million barrels a day, which exceeds the entire Iranian production capacity.³¹ True, some estimates posit the Saudi production capacity to be no greater than 12.5 million barrels a day. However, assuming the Saudis produce 10 million barrels daily (January 2012), the margin available is currently 2.5 million barrels a day, which still exceeds the total amount of Iranian exports.³² Saudi Arabia, together with the members of the Gulf Cooperation Council, have in recent months accelerated the rate of oil production in order to moderate possible price increases (they did so unilaterally because of the refusal by Iran, Iraq, and Venezuela to increase OPEC's production quota). Therefore, with the yield of current pipelines, it will be possible to transport the rest of the Saudi production capacity, 2.5 million barrels a day, using the current system of pipelines. Moreover, it was reported that Saudi Arabia has agreed to increase its rate of production in order to offset the possibility that Iranian oil will go off the markets because of sanctions against Iran or because of Iranian punitive measures.³³

Conclusion

Iran will likely try to avoid a comprehensive campaign in the Gulf that could well cost it dearly in military, political, and economic terms. However, it will continue to threaten to close the Strait of Hormuz, a threat that serves its strategic deterrence well, while taking advantage of the unique geographical conditions of the Strait and the global sensitivity to every tremor in the world's energy market. As evidence that Iran will likely actually not block the passageway, consider that even at the height of the tanker war (1984-1987) the Strait remained open. Moreover, blocking the Strait violates international law and may justifiably be considered grounds for going to war against Iran.³⁴ Thus while discussion of this issue in recent years has often assumed that Iran intends to block

the Strait, this intention seems far from self-evident, as it is not in keeping with Iran's true interests.

Furthermore, Iran's ability to block the Strait effectively over a long period of time is not assured, because any such attempt would immediately generate US military intervention designed to open the international shipping lane to oil and gas tankers. Within the limitations of uncertainty regarding any forecast of a military confrontation, one could say that in light of its superior military capabilities, the US could open a blockade at a tolerable cost. While the importance of the Strait and its relative vulnerability, as well as the global economic state and the sensitive energy market (especially in the northern hemisphere in the winter), are liable to amplify any event, the global energy market is in the long run affected primarily by supply and demand, certainly more than by psychological factors alone.

Use of alternate land-based pipelines can compensate for the loss of a significant portion of the oil exported from the Gulf through the Strait. This capability will grow if flow-enhancing additives are used and existing pipelines are rehabilitated and put into action. Together with the oil that can be released and transported from the strategic reserves, and taking advantage of Saudi Arabia's swing capacity, this amount may compensate for the amount of oil normally moving through the Strait of Hormuz and significantly mitigate the ramifications of a blocked passageway. However, the effectiveness of these steps, especially the use of the strategic reserves, is limited to 45-90 days, and would decrease the longer such a crisis lasts.

There is also a possibility, though of lower probability, that Iran would choose to attack critical oil facilities in Gulf states with surface-to-surface missiles or through terrorist cells. In such an event, the negative effect on the ability to export oil from the Gulf is liable to be far more severe. However, because of its high cost, Iran would presumably be deterred from taking such a step of its own volition and would do so more in response to a military attack against it. Yet alongside its rhetoric, Iran has in the recent year also significantly increased its acts of provocation against Fifth Fleet and British Royal Navy vessels in the Gulf.³⁵ US attempts, even in the last year, to establish a hotline between the sides were met with Iranian refusals, increasing the concern that Iran and the United States are liable to be dragged into an involuntary escalation over

the Strait, where every tactical incident could develop into an event with far reaching ramifications for the global economy and regional stability.

Overall, the international community has better tools than in the past to deal with a possible blockade of the Strait of Hormuz. Nevertheless, it is important to continue to develop the ability to cope with the possible ramifications of an event in the Strait as described above: in the short term to increase the oil capacity of existing pipelines and reactivate others, and in the mid and long terms to lay alternate pipelines that bypass the Strait according to the model currently in use in the UAE. Because of Iran's frequent threats and maneuvers in the region and the growing discussion of the possibility of attacking Iran's nuclear facilities, a certain sense of urgency in the Gulf states has been created in this context.³⁶ Likewise, China – the nation that would be hit hardest should there be a disruption to the flow of oil from the Gulf – would do well to assume a more significant role in keeping the shipping lanes open and make clear to Iran the heavy price it would have to pay should it decide on taking extreme steps. Because of the difficulty of the Gulf states to cope with Iran's asymmetrical capabilities by themselves and the doubts that arise from time to time about United States willingness to come to their defense, a more aggressive and internationally-backed American response than what was demonstrated in the past is now necessary, including maintenance of a continuous military presence and a credible military option to the Iranian threat.

Notes

- 1 "Foreign Warships Will Need Iran's Permission to Pass through Strait of Hormuz," *Fars News Agency*, January 4, 2012.
- 2 Najmeh Bozorgmehr and Javier Blas, "Oil Price Climbs Amid Iranian Threat," *Financial Times*, December 27, 2011.
- 3 Energy Information Administration, "World Oil Transit Chokepoints," US Department of Energy, December 30, 2011.
- 4 See for example "BBC Discussion with George Galloway and Mehrdad Khonsari," January 7, 2012.
- 5 Yoel Guzansky, Gallia Lindenstrauss, and Jonathan Schachter, "Power, Pirates, and Petroleum: Maritime Choke Points in the Middle East," *Strategic Assessment* 14, no. 2 (2011): 85-98, [http://www.inss.org.il/upload/\(FILE\)1311767315.pdf](http://www.inss.org.il/upload/(FILE)1311767315.pdf).
- 6 Jay Salomon, "Iran Rejects Proposed U.S. Military Hot Line," *Wall Street Journal*, October 4, 2011.

- 7 Defense Intelligence Agency, "Unclassified Report to Congress on the Military Power of Iran," April 2010.
- 8 "Iran's Ballistic Missile Capabilities: A Net Assessment," International Institute for Strategic Studies (IISS), May 2010.
- 9 Yossi Melman, "Iranian Senior Official: If we are attacked, we will launch a blitz of missiles at the Gulf states," *Haaretz*, June 11, 2007.
- 10 Joshua R. Itzkowitz Shiffrinson and Miranda Priebe, "A Crude Threat: The Limits of an Iranian Missile Campaign against Saudi Arabian Oil," *International Security* 36, no. 1 (summer 2011): 168.
- 11 David Sanger and Annie Lowrey, "Iran Threatens to Block Oil Shipments, as U.S. Prepares Sanctions," *New York Times*, December 27, 2011.
- 12 Caitlin Talmadge, "Closing Time: Assessing the Iranian Threat to the Strait of Hormuz," *International Security* 33, no. 1 (summer 2008).
- 13 Shiffrinson and Priebe, "A Crude Threat," p. 169.
- 14 Shiffrinson and Priebe, "A Crude Threat," p. 170.
- 15 "Drama off Bahrain," *Gulf Daily News*, August 20, 2011.
- 16 Talmadge, "Closing Time," pp. 84-85.
- 17 "U.S. Navy: Hormuz Disruption won't be Tolerated," *CBS News*, December 28, 2011.
- 18 "US Warns Iran on Hormuz through Secret Channel," *Jerusalem Post*, January 13, 2012.
- 19 "US Carrier on Gulf after Passing Strait of Hormuz," *AFP*, January 23, 2012.
- 20 Jim Mannion, "US will Respond if Iran blocks Strait: Panetta," *AFP*, January 9, 2012.
- 21 "The US: We Can Destroy the Iranian Nuclear Program," *NRG Maariv*, January 8, 2012.
- 22 See, e.g., "Britain Sending Its Strongest Destroyer to the Gulf," *Haaretz*, January 7, 2012.
- 23 David S. Cloud, "U.S. Boosts its Military Presence in Persian Gulf," *Los Angeles Times*, January 12, 2012.
- 24 Simon Henderson, "Energy in Danger: Iran, Oil, and the West," *Policy Focus* 83, Washington Institute for Near East Policy, June 2008.
- 25 "Iran's Naval Force: From Guerilla Warfare to a Modern Naval Strategy," US Navy, Office of Naval Intelligence, fall 2009.
- 26 Iran too is very vulnerable to an attack on its oil facilities, though damaging them counters the interests of the international community seeking to moderate the rise of oil on the energy market. The largest share of Iranian oil exports goes through Kharg Island, located some 25 km from the Iranian shore and 483 km northwest of the Strait in the Bushehr Province (the facility on the island can store 20 million barrels of oil). Another facility of secondary importance is located on Lavan Island, also in the Gulf. Other facilities are located on Kish Island and in Abadan. In addition, Iran imports benzine in large quantities for domestic use, and some of this activity takes

- place via terminals in the Caspian Sea. Some of the transactions are barter, i.e., in return Iran exports crude oil through Gulf ports.
- 27 Nizan Feldman, "How Powerful Is the Iranian 'Oil Weapon'?" *Strategic Assessment* 10, no. 2 (2007): 82-91, <http://www.inss.org.il/publications.php?cat=21&incat=&read=570>.
- 28 "West Plans to Tap Oil Reserves if Iran Blocks Strait of Hormuz," *Reuters*, January 7, 2012.
- 29 Bruce Stanley, Ayesha Daya, and Anthony DiPaola, "Hormuz Bypass Oil Pipeline is Delayed," *Bloomberg*, January 9, 2012.
- 30 Henderson, "Energy in Danger," p. 16.
- 31 The internal Saudi consumption of oil and natural gas has grown by an average of 7 percent annually, a rate that is liable to threaten the Kingdom's future ability to serve as a production regulator. (Today the Kingdom consumes some 2.8 million barrels a day, about one-fourth of its production. At this rate, by 2038 it will not be able to export any oil at all.)
- 32 Glada Lahn and Paul Stevens, "Burning Oil to Keep Cool: The Hidden Energy Crisis in Saudi Arabia," Chatham House, December 2011.
- 33 Keith Bradsher and Clifford Krauss, "Pressed by U.S., Asian Countries Look for Ways to Reduce Purchases of Iranian Oil," *New York Times*, January 6, 2012.
- 34 Jonathan Schroden, "A Strait Comparison: Lessons Learned from the 1915 Dardanelles Campaign in the Context of a Strait of Hormuz Closure Event," Center for Naval Analysis, September 2011.
- 35 "U.S. Considers Emergency Hotline with Iran as Close Encounters Bring Fear of Conflict," *al-Arabiya*, September 19, 2011.
- 36 Summer Said and Benoit Faucon, "Gulf Ministers Float Talks on Countering a Blockade," *Wall Street Journal*, December 25, 2011.