

MNI: Iranian Crude Flows But Risks Grow on JCPOA Collapse

By Lawrence Toye (02/10/2025)

Executive Summary:

- The **return of snapback sanctions** on Iran in and of itself is **unlikely to impact its oil exports**.
- **Chinese buyers are likely to continue buying Iranian crude**, using circumvention methods to obtain it.
- The real risk to the collapse of the JCPOA is **worsening diplomatic relations** with Iran and the West.
- An even more **isolated Iran risks a renewed conflict with Israel**, putting **Persian Gulf oil flows in jeopardy**.

While the return of UN sanctions on Iran will likely do little to impact its oil exports, the failure of diplomacy raises the risks of Middle Eastern oil barrels becoming caught up in a new Israel-Iran conflict.

Background: The JCPOA Deal, Maximum Pressure, and the 12-Day Way

On Sep. 27, The UN reimposed economic and military sanctions on Iran after European powers failed to reach a deal that would re-engage Iran in diplomacy with the U.S. and allow IAEA inspectors access to the country's nuclear facilities.

- The new sanctions spell the death knell for the JCPOA deal signed in 2015. The agreement, signed by Iran and several world powers, including the US, Russia, and China, saw Tehran pledge to dismantle much of its nuclear programme and allow more extensive international monitoring in exchange for sanctions relief, including on oil exports.
- The USA had already unilaterally withdrawn from the JCPOA in 2018, implementing oil sanctions ever since.
- While former US President Biden vowed to return to the JCPOA during his term in office if Iran returned to compliance on uranium enrichment, no new deal was ever achieved.

Renewed Negotiation Push

Despite the “maximum pressure” campaign to force Iran to completely dismantle its nuclear programme during Trump’s first term, uranium enrichment continued.

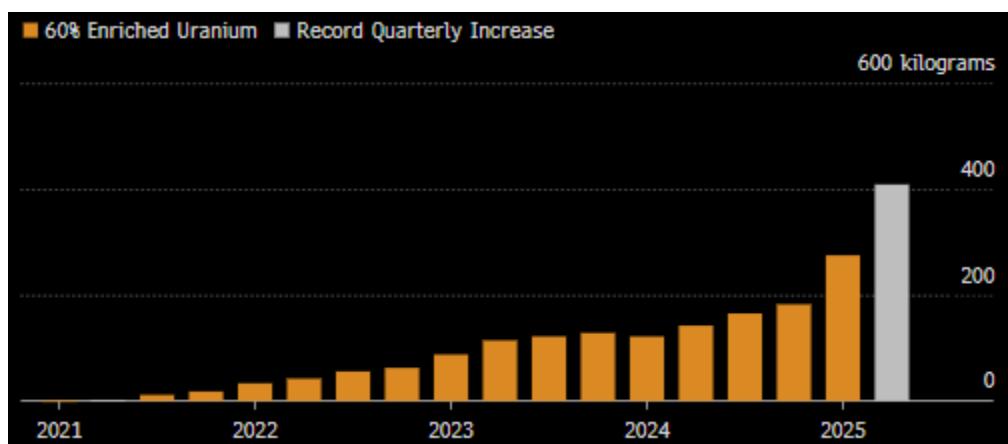
- Trump’s return to the presidency brought with it renewed rhetoric against Iran, while also engaging in new negotiations.
- However, on June 12, the IAEA found Iran non-compliant with its nuclear obligations for the first time in 20 years, citing over 400kg of enriched uranium at 60%, around 48 times over the limit set by the JCPOA.
- All hopes of diplomacy then collapsed when – with US-Iran negotiations still ongoing - Israel began a surprise attack June 13 on key Iranian military and nuclear sites.
- The 12-day Israel-Iran war culminated in the US striking Iranian enrichment facilities at Natanz and Fordow, causing severe damage.

Nuclear Programme Set Back, But Extent Unclear

Assessments on the extent to which US strikes have set back Iran’s nuclear programme differ, with timelines ranging from a few months to a few years. The IAEA has not had access to the targeted facilities since the war in June.

- Tehran has pledged to rebuild nuclear facilities damaged by Israeli-US airstrikes, although continues to maintain that it has no interest in developing a nuclear weapon. Government hardliners are also calling for changes to the country's nuclear doctrine and for a withdrawal from the non-proliferation treaty.
- The subsequent attack seriously undermined any will on the Iranian side to engage with western powers, accusing inspectors of providing intelligence to Israel. This led to the determination of Iranian non-compliance, despite opposition from China and Russia.
- New UN sanctions enact travel bans and asset freezes on Iranian entities and officials. They authorise cargo inspections on Iranian ships and planes. It also reinstates an arms embargo and prohibits uranium enrichment.

Iran's Uranium Stockpiles - Source (Bloomberg Finance L.P.)



Overview of Iran's Oil Export Flows

Within a year of the JCPOA, Iran's oil production rose by 1.3m b/d with exports rising by 1m b/d.

- However, after Trump pulled out of the JCPOA in 2018 and reinstated sanctions, Iranian oil production began to collapse, hitting a 40 year low in 2020. Exports dropped below 500k b/d, compared to the pre-sanctions peak of 2.7m b/d.
- After the 2020 nadir, Iranian oil exports were then able to steadily recover, ticking up to current levels of around 1.3m b/d, with 90% of the barrels flowing to China.
- While the "maximum pressure" campaign initially crippled Iran's oil industry, it created strong incentives to develop circumvention strategies.

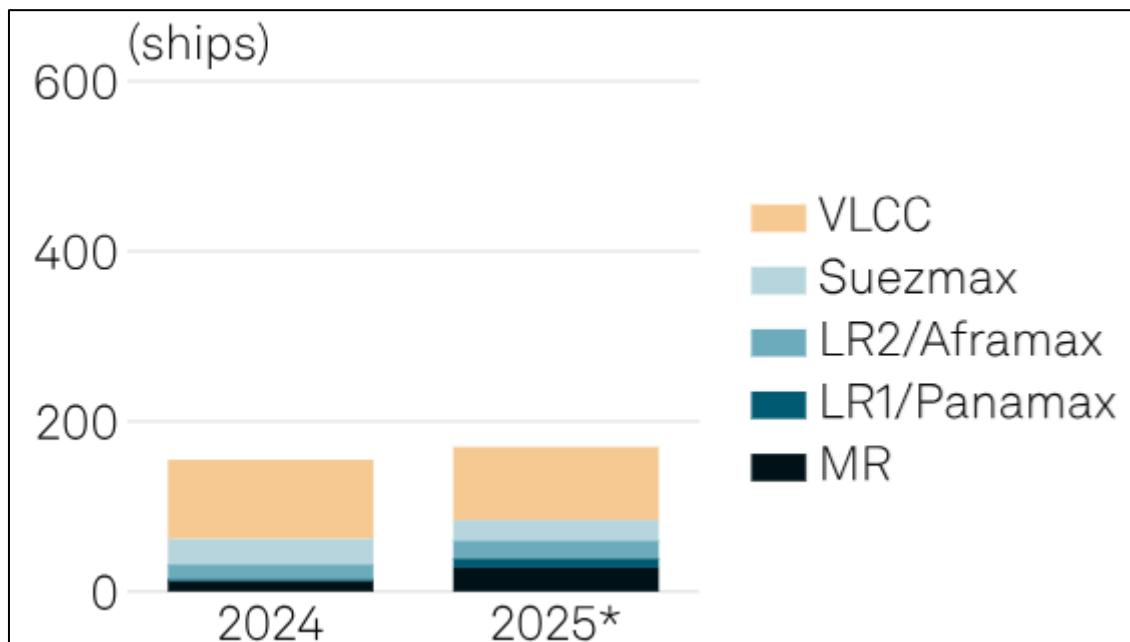
Sanctions Circumvention Intensifies

The sanctions pushed Iranian crude out of international markets, driving them into steep discounts. However, this created a network of parties willing to capitalise on bargain barrels. Such conditions were ripe for a global smuggling network of ghost fleet tankers to emerge.

- Iran's shadow fleet consists of 170 ships with 34.2m dwt, including 86 VLCCs that are often active in the Persian Gulf, Southeast Asia and even the Gulf of Guinea, Platts said.

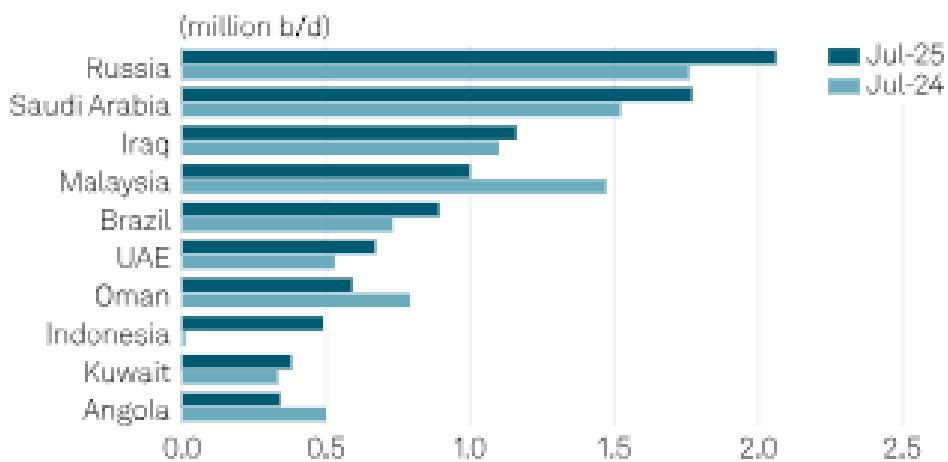
- As Iran's state-owned National Iranian Tanker Company is under heavy scrutiny, most of the shadow fleet tankers are operated by opaque, little-known companies linked to Tehran.
- Tankers carrying with Iranian oil often engage in STS activity in the Riau Archipelago near Singapore, subsequently remarking the barrels as Malaysian before continuing onward to the final destination: primarily independent refineries in China's Shandong Province.

Tankers Servicing Iranian Oil - Source (Platts)



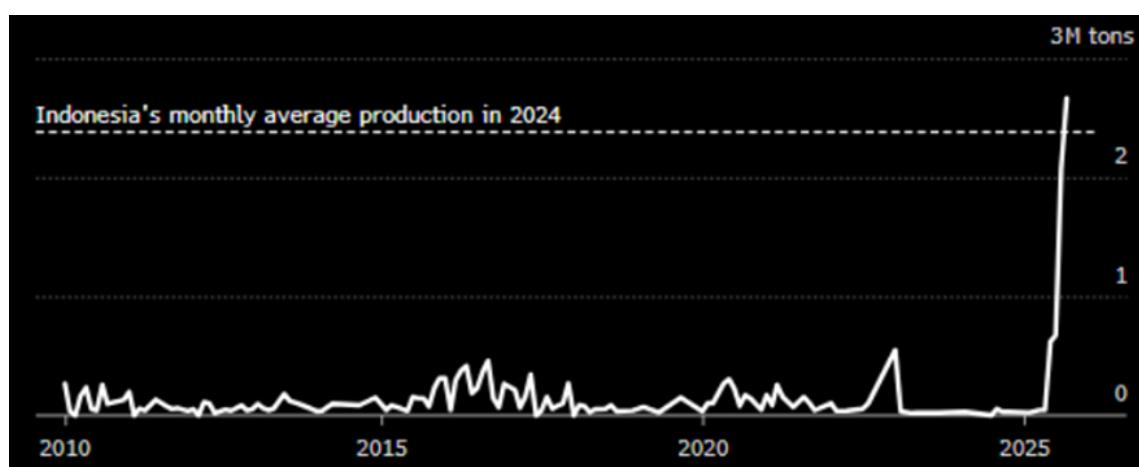
- Given that the Iranian crude flows mainly to the smaller independent facilities concentrated in Shandong province, the government in Beijing is always at least one step removed from any illicit trading, helping to obscure its role in the practice.
- By allowing Iranian crudes to flow into the Shandong's independent refineries – which take around 20% of China's oil imports – Beijing can overlook the practice while also shielding larger state-owned firms.
- China has not officially imported Iranian oil since mid-2022 while its Malaysian crude imports have climbed.
- China imported around 1.12m b/d of crude from Malaysia in August. By comparison, crude output in Malaysia in Q3 2024 was only around 454,000 b/d.

China's Top Crude Oil Suppliers - Source (Platts)



- China has also reported an unexpected spike in crude imports labelled as Indonesian, indicating that it yet another avenue may be opening to relabel Iranian crudes.
- Flows from Indonesia to China tripled to around 630kb/d, in August, a level at or exceeding Indonesian output of roughly 600kb/d.

China's Crude Imports Labelled as Indonesian Origin - Source (Bloomberg Finance L.P.)

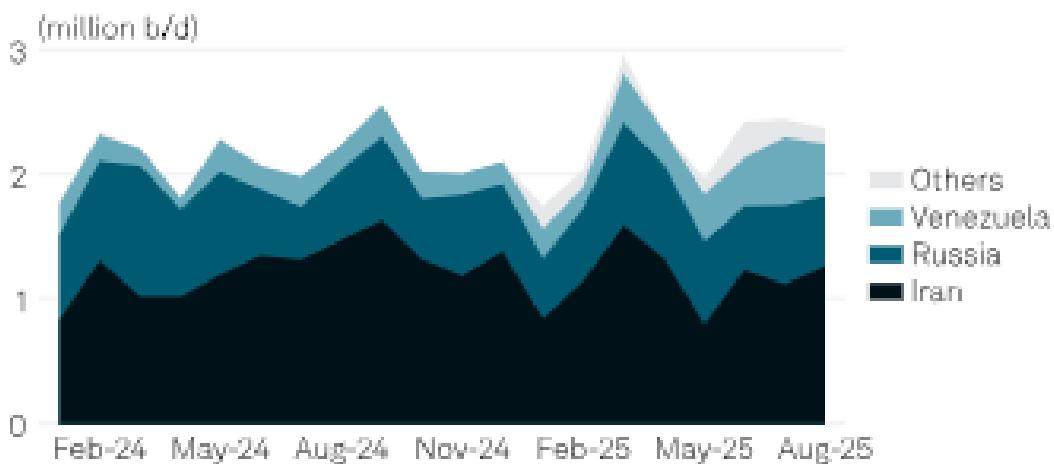


New Sanctions Unlikely to Hit Oil Balances

While additional sanctions will likely exacerbate Iran's already dire economic situation, its oil exports should remain stable, given Iran's prior experience in evading restrictions.

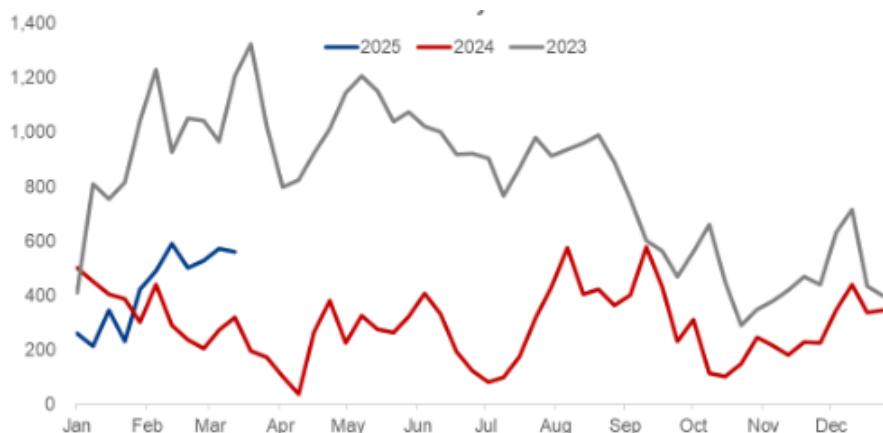
- With China and Russia - Iran's main patrons - opposed to the slap-back sanctions, the former is very likely to remain the main outlet for crude exports, capitalising on the steeper discounts for black-market barrels.

Chinese Independent Refineries' Feedstock Suppliers - Source (Platts)



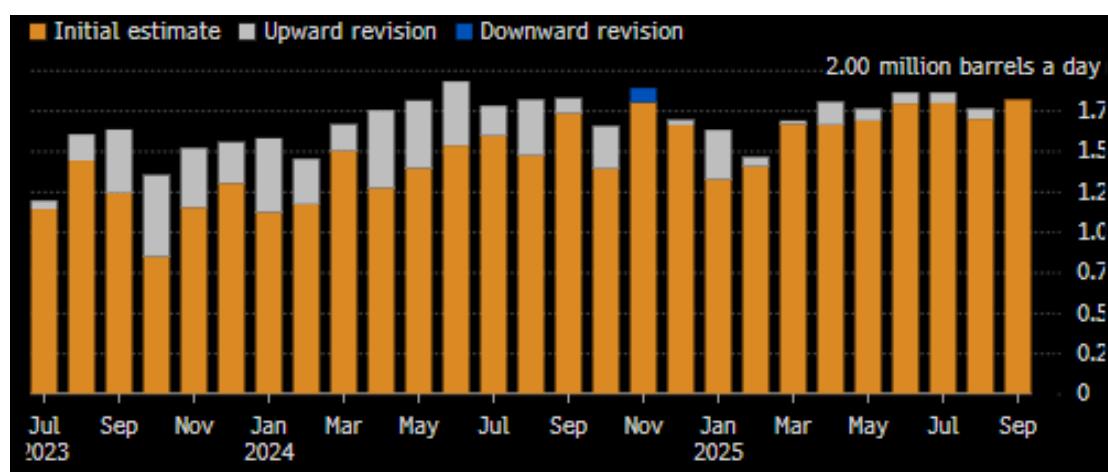
- Furthermore, Shandong's independent refiners - who often buy Iranian crude at a \$2-\$5/b discount to Dated Brent - already operate with very tight profit margins. This leaves them with the choice between sanctioned barrels or shutting down.
- While Iran has refined its sanctions busting, so too have its customers. Although some independent Chinese refineries and facilities have been sanctioned in the past, they often find ways to get around restrictions, for example by finding new methods of payment.
- For example. The transactions are often settled through yuan-based contracts or barter deals, reducing dependence on the US dollar for trades.

Chinese Independent Refineries' Refining Profits (Yuan/mt) - Source (OilChem)



- While the Chinese government could intervene and ultimately shut down this practice, it also has little incentive to do so.
- Ignoring the flow of sanctioned barrels not only benefits its local refineries but also helps maintain diplomatic and geopolitical influence on Iran, without having to make any security commitments.
- While the US spends significant resources placing its forces in Gulf countries, patrolling the seas and air to shore up influence in the Middle East, China can do so in Iran without such expensive commitments, all the while receiving key resources at below the market rate.

Iranian Monthly Crude & Condensate Exports - Source (Bloomberg Finance L.P.)



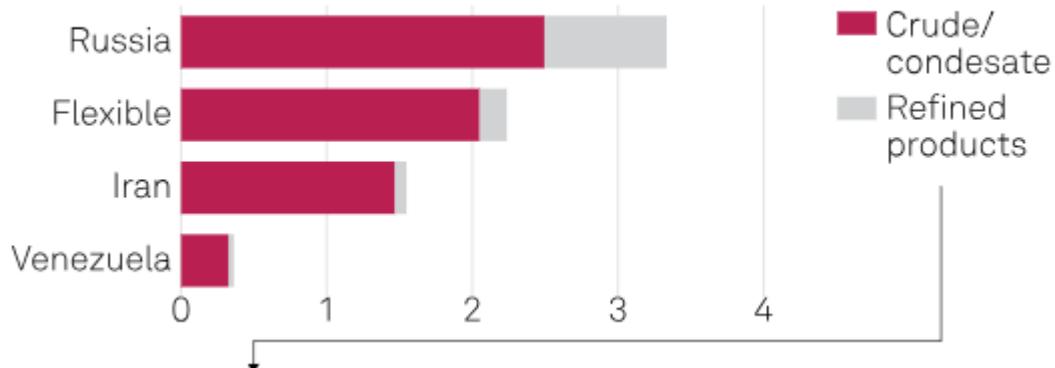
Limited Options to Counter Chinese Buying

Western nations possess limited options to force China into sanctions enforcement. The expansion of oil market's shadow tanker fleet complicates enforcement,

- With Russian, Venezuelan, and Iranian oil all blacklisted, the market for moving these crudes has evolved. Platts now estimates that around 18.5% of the global oil tanker fleet are part of the shadow vessels moving sanctioned cargoes.
- This leaves nations playing an impossible 'whack-a-mole' strategy to cut off illicit trade routes.
- China's economic might also affords it power to respond to any measures placed against it. The recent tariff war with Trump saw the US largely back down from its maximalist positions after China responded with its own levies and limited exports of key minerals critical for Washington's defence industry.
- The US has resisted putting tariffs on China for importing Russian crudes, neither have they pressed the executive order in March allowing 25% tariffs on importers of Venezuelan crude.
- While the US had called for joint US-European/Nato sanctions (via tariffs) against China for buying Russian oil, the suggestion was dead on arrival.
- Given the already precarious economic conditions in the EU, there is no political or economic will to alienate Beijing, one of its largest trading partners. Consequently, any subsequent sanctions will likely be targeted to individuals, isolated refineries, and tanker operators, stifling their effectiveness.

Shadow Fleet Transport Volumes for Sanctioned Oil - Source (Platts)

(million b/d, oil shipments in H1 2025)



Real Risk for Oil Markets – Renewed Military Escalation

A continued flow of Iranian crude does not mean there are no new risks for the oil market, with the snapback likely to increase regional insecurity and raise the possibility for military conflict.

- As the Persian Gulf is a key chokepoint for over 20% of global oil flows, any concerns over regional insecurity – whether warranted or not – translate into a geopolitical risk premium for oil prices.
- The key factors to watch are the Iranian government's rhetoric and actions vis a vis its nuclear programme, and any Israeli response.
- Iran's foreign ministry It warned of "an appropriate and decisive response" to any move aimed at harming the country's interests (such as further sanctions), without divulging what a response would entail.
- The extent and speed at which Iran could resume its nuclear programme remains open for debate. It is also unclear if Iran may seek a 'dash for the bomb' - despite publicly stating it has no intention to develop nuclear weapons - or whether it will double down on trying to show it is developing civilian nuclear infrastructure.
- IAEA Director Rafael Grossi warned it would take weeks rather than months or years to enrich Iran's uranium stockpiles to 90% weapons-grade purity. It is believed that most of Iran's enriched uranium was moved prior to US strikes, leaving stockpiles largely intact.
- Possessing a nuclear weapon would provide the Iranian government with leverage that it currently does not hold, but would be unacceptable for the US, Saudi Arabia, and in particular Israel. Consequently, any additional steps that indicate that intention could be met with military actions.

Sooner Rather Than Later

The risk for Iran not only lies in any push to rebuild nuclear capabilities, but also its military capabilities. Trita Parsi, the Quincy Institute's Executive Vice President said in an article for Foreign Policy in August that Israel is likely to launch another war with Iran before December to prevent Iran from replenishing its offensive or defensive capabilities.

- Israeli leadership have also failed to rule out further action. Israeli Prime Minister Benjamin Netanyahu told UNGA on Sep. 26, "We must not allow Iran to rebuild its military nuclear capacities. Iran's stockpile of enriched uranium, these stockpiles must be eliminated."

- Netanyahu's comments back up previous statements from the IDF Chief of Staff and Israel's Defence Minister who warned that we are in a "new chapter" of the conflict and there is a high likelihood of renewed fighting.
- The previous taboo surrounding a direct Iran-Israel/US military confrontation was shattered by the 12-day war, the risk of future conflict is now higher.
- RBC said recently that there is a "growing likelihood" of further Israeli strikes on Iranian military and nuclear sites as well as key personnel before the end of the year or in early 2026.
- Looking at the betting odds, Polymarket currently has the probability of another Israeli strike on Iran in 2025 hovering around 40-45%.

Likelihood of Israel Striking Iran Before 2026 - Source (Polymarket)



Conflict Scenarios for Oil

According to Parsi, Iran is also expecting another attack and taking preparatory steps. Unlike its attempts to deescalate in June, "Iran is likely to strike decisively from the outset, aiming to dispel any notion that it can be subdued under Israeli military dominance," he said.

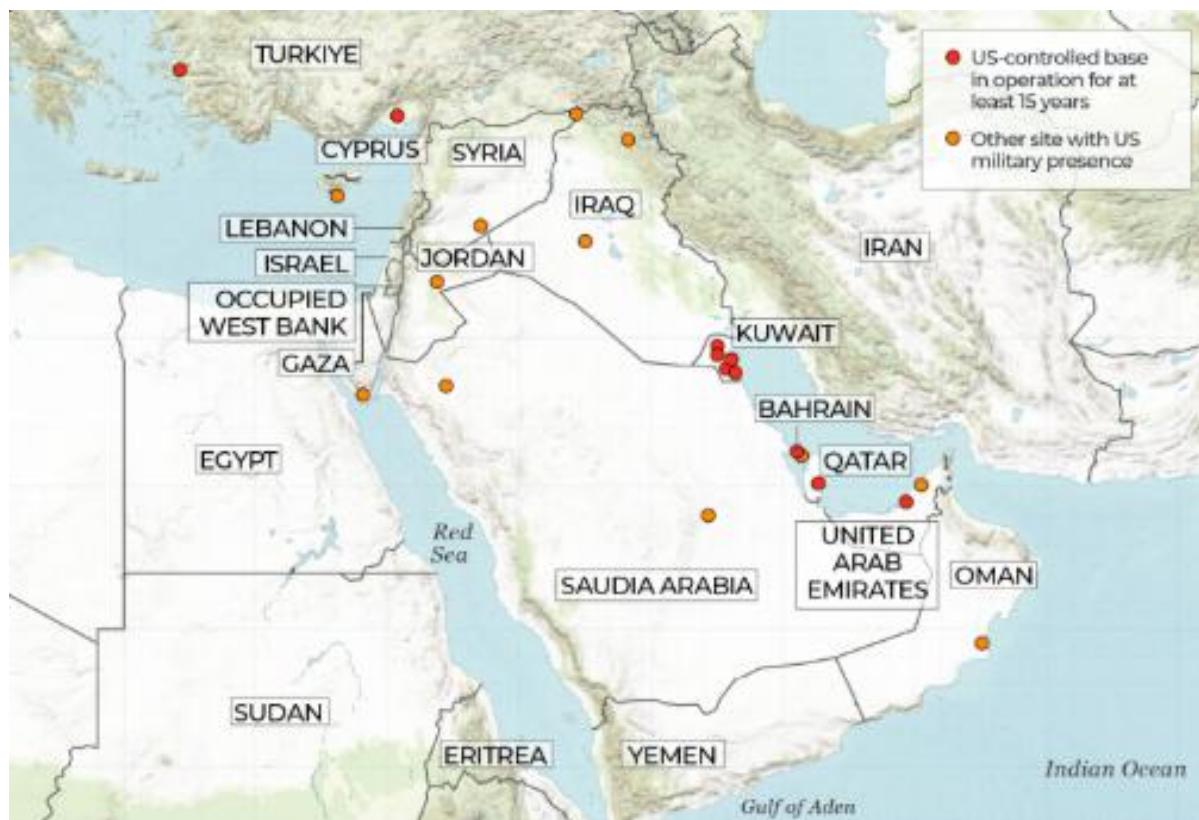
- Parsi added that the next war would be far bloodier than the first and if the US were to be involved again, could result in a full-blown war.
- Likewise, Iran may feel even more isolated in a future conflict, with limited support from its key allies China and Russia, pushing it into more aggressive action.
- While Beijing has no interest in seeing the Iranian regime collapse, it also does not want to upset its relations with Iran's neighbours, namely the Gulf States, by providing overt support. This may limit Beijing's ability to aid Tehran if a conflict arises in the near term. However, this may also hamper China's influence in restraining Iran from action jeopardising Persian Gulf oil flows.

Energy Infrastructure in the Firing Line

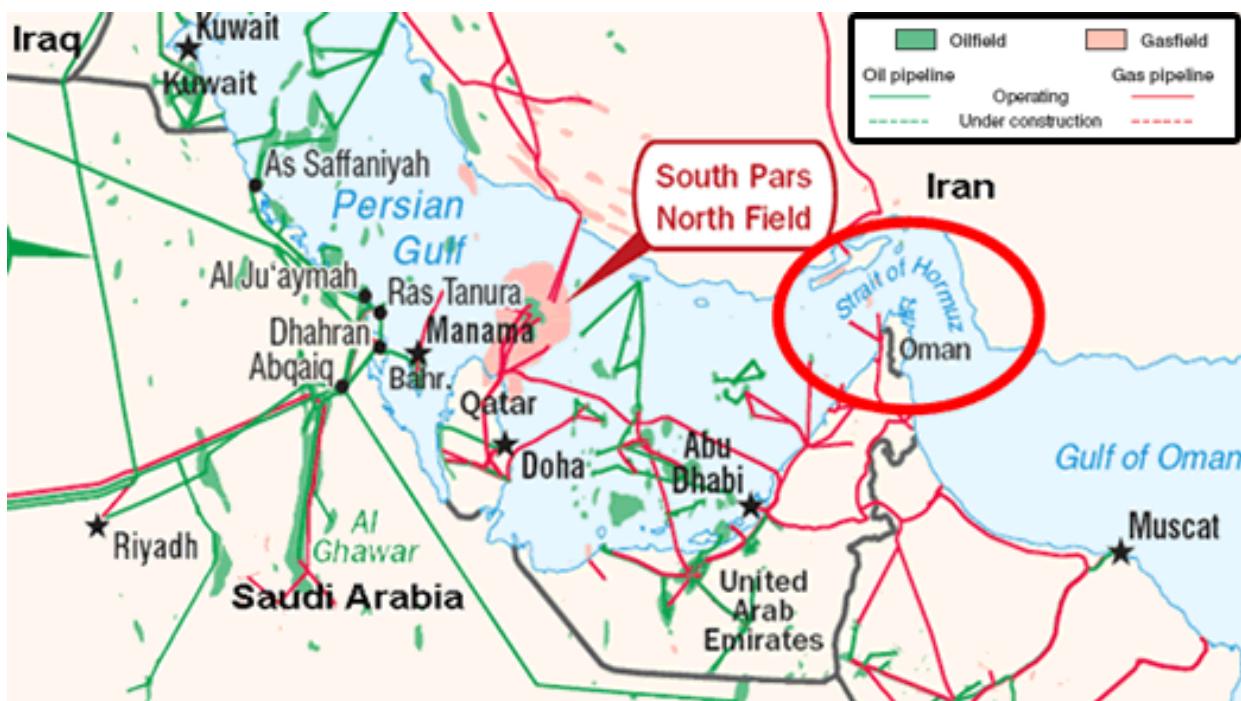
During the previous conflict, Iran's response was more limited to Israel and a 'symbolic' strike on the US base in Qatar, a future conflict is likely to be seen as more existential for Tehran. This could mean more widespread strikes across the region.

- The International Institute for Strategic Studies suggested during the 12-day war that a course of escalatory action for Iran could be for it to use short-range ballistic missiles against petrochemical facilities or US military bases in the Gulf.
- Striking energy infrastructure remains a taboo for Iran, given that it would alienate any good will amongst Gulf Arab neighbours.
- Nonetheless, Tehran may conclude that decisive action is needed if the regime feels under threat, and a significant escalation could be needed to deter future Israeli action.
- US military installations are scattered across Gulf States, intermixed with key energy infrastructure. Targeting US bases alone puts Persian Gulf production and exports in the firing line.
- This could disrupt production and loadings, while some operations may be suspended as a precautionary step even without being attacked. This would squeeze global supply and drive-up crude prices for alternative grades.

US Military Presence in the Middle East – Source (Al Jazeera)



Key Energy Infrastructure in Persian Gulf – Source (EIA)



Kharg Island Remains a Target

During the 12-day war, Israel refrained from attacking key energy infrastructure within Iran, namely its key domestic refineries and the Kharg Island terminal which loads 90% of its oil exports.

- However, if it aims to further destabilise Iran's government, hitting Kharg and cutting off Iran's 1.8m b/d of crude and condensate exports could be a tactic.
- While the direct consequence of lost Iranian exports would be felt almost exclusively in China, it would drive up demand for alternative crudes to replace lost Iranian cargoes, adding support to prices.
- It would also raise the risk of Iranian escalation to the market's worst-case scenario – a closure to the Straits of Hormuz.
- Even concerns of such a scenario would likely add an additional geopolitical risk premium to oil prices.

Worst Case Scenario – Blockage in the Straits of Hormuz

The continued worst-case scenario for oil markets is a closure to the Straits of Hormuz, the key chokepoint which 20% of oil supplies pass through.

- Reuters reported in July that The Iranian military loaded naval mines onto vessels in the Persian Gulf during the 12-day war, a move that intensified concerns in Washington that Tehran was gearing up to blockade the waterway.
- “The loading of the mines - which have not been deployed in the strait - suggests that Tehran may have been serious about closing one of the world's busiest shipping lanes, a move that would have escalated an already-spiralling conflict and severely hobbled global commerce,” Reuters said.

- On June 22, shortly after the U.S. bombed three of Iran's key nuclear sites in a bid to cripple Tehran's nuclear program, Iran's parliament also backed a non-binding measure to block the strait.
- Blocking the Straits of Hormuz would also shut in Iran's exports, but that would be a moot point if Israel had already struck Kharg Island. It may also be a price to pay if regime survival is on the line and a gambling strategy is required to shift the balance of a conflict.
- It is assumed that while Iranian oil exports continue unabated, there is no incentive for Iran to block the Strait. It would also draw the ire from China, an Iranian ally who would lose out on not only Iranian oil, but also Saudi crudes and Qatari LNG.
- However, were the regime to find itself threatened and with no Chinese assistance arriving, Tehran may be forced to take unorthodox action.
- Polymarket still have this scenario at considerably lower odds than an Israeli strike, putting the percentage chance of Iran moving to close the Straits of Hormuz in 2025 at just 8%. That could rise in the event of a renewed military confrontation.

Headache for Freight

While Iran could attempt to close the Straits of Hormuz in a future conflict scenario, it would struggle to do so logically without assistance from Oman, which it is almost inconceivable.

- It would also provoke a response from the US the US fifth fleet stationed in Bahrain which could help escort vessels through the Gulf.
- While a full closure might be unrealistic, Iran could still create significant disruption by attacking vessels, stoking concerns for the freight market.
- This may force some tankers to refrain from entering the region, while those that do would see surging insurance costs, a situation that has already played out within on the other side of the region in the Gulf of Aden.
- Attacks by the Houthis in the Red Sea have caused diversions for the majority of oil cargoes for the last two years, and a pledged US military operation to assist vessels has not sparked any return to normal shipping operations.

Risk of Conflict Likely to Linger

Although UN sanctions are now in place, Iranian oil continues to flow.

- While China continues to buy Iranian oil, Tehran will view the limited support from its Far Eastern ally as a sign of its isolation.
- With a worsening economic crisis at home, this gives it difficult choices to ensure its own stability.
- The key unknowns are how quickly it can rebuild its nuclear and military capabilities sufficiently to stave off another conflict.
- Diplomatic avenues are appearing to worsen, Israel is refusing to rule out future strikes, and a gulf remains between the red-line stances of the US and Iran on a future nuclear deal. If tensions ramp up, there may be no potential off to stave off a conflict, meaning the threat of renewed fighting in a key chokepoint for the oil market may linger for some time to come.