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THE IRANIAN DRONE PROGRAM: ROLE AND SCOPE OF ITS INFLUENCE IN IRAN'S FOREIGN POLICY

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Introduction

Iran is giving increasing attention to developing its drone program, employing it to achieve its foreign policy objectives. Iran's political moves have revealed its interest in developing drones. Several reports have proven that Iran supplied Moscow with drones to use in the Ukrainian theater. On November 5, 2022, Iranian Foreign Minister Hossein Amir-Abdollahian acknowledged that his country had supplied Moscow with a few drones, months before the war had started. Meanwhile, Iran announced on May 17, 2022, the inauguration of a plant for manufacturing drones in Tajikistan. On August 24, 2022, the Iranian army launched drone drills in the Arabian Gulf and the Sea of Oman to the south of Iran. These Iranian moves raised questions about the role and influence of the Iranian drone program on Tehran's foreign policy agenda and objectives. This study examines the progress in the Iranian drone program, the military and political motivations for developing it, to what extent it influences Iran's foreign policy and its implications for regional and global security.

Iran's Drone Program: Limits of Development and Impact

The Iranian drone program has been subject to several assessments by global and regional military and intelligence services. Some assessments assert that the program is advanced, classifying it as a major threat, while others suggest that there is an exaggeration of drone technology capabilities by Iran's propaganda machine. A CIA report in 2019 described the Iranian drone program as the fastest progressing part of Iran's air force.[1] Former Commander of the US Central Command General Kenneth McKenzie testified before the US Senate Armed Services Committee in April 2021 that the increasingly aggressive use of small and medium-sized drones by Iran and its proxies pose "a new and complex threat to our forces and the forces of our partners and allies." He added, "We are operating without complete air superiority for the first time since the Korean War. And until we manage to develop and establish a network capability to expose and defeat these drones, the attacker will continue to have an edge."[2]

The Iranian Drone Program's Evolutionary Stages

The program has progressed through three stages:

First stage (monitoring and reconnaissance drones): The IRGC has been building unmanned reconnaissance planes since the mid-1980s. It created the first Iranian drone, Mohajer 1, in 1986. It was fitted with cameras to provide intelligence data.[3] After the war with Iraq ended, Iran continued developing drones through the Quds Aviation Industry Company, an IRGC affiliate, under the supervision of the Ministry of Defense and the IRGC's Aerospace Force which continues to manage its own comprehensive drone research and development program under the auspices of Shahed Aviation Industries.[4] At this stage, Iran largely focused on examining the debris of US-made drones that had crashed in Iran.

Second stage (attack drones): In the mid-2000s, Iran took a bigger step by unveiling a large group of reconnaissance, attack and kamikaze drones. Iran also developed a newer generation of drones such as the HESA Shahed 136 and the Mohajer 6. According to the mentioned 2019 CIA report, Tehran has produced approximately 15 different drone models, with a focus on short-range (Ababil-S), medium-range (Ababil-2) and long-range (Ababil-T) drones.[5] In 2016, Tehran unveiled the first homegrown fighter jet HESA Azarakhsh, which represents in reality the new generation of Simorgh drones. It is a medium-altitude combat aircraft with a range of 2,000 kilometers. It can stay in the air for 24 hours and hit four targets with pinpoint accuracy at the same time. Iran also developed HESA Fotros, a remotely and automatically controlled drone by providing it with prior coordinates capable of capturing photos and transmitting information. It is used for the purposes of protecting maritime and land borders. It is an upgraded version of Shahed-129 (a reconnaissance and attack drone that has a vast flight capacity of up to 24 hours and a maximum payload of up to 400 kilograms), and it can fly for 30 hours at a speed of 300 kilometers per hour. [6]

Third stage; exporting drones abroad: At this stage, Tehran expressed increasing interest in transferring drone technology to both its allies and proxies. Thus, the possession of drones was not the exclusive right of governments, but non-state actors now had access, raising fears over drone proliferation. Since 2018, Iran transferred some of its drones to its proxies in Yemen, Lebanon, Syria and Iraq through the Quds Force. Iran also began exporting to countries outside the Middle East. Meanwhile, Washington, Kyiv and the European countries have accused Iran of selling drones to Russia since the start of the Russia-Ukraine war (in February 2022).[7] On May 17, 2022, Tehran confirmed the setting up of drone production lines in Tajikistan.[8] As a result, Tehran moved from the stage of manufacturing drones to a new stage of exporting them, hence competing with global and regional powers that also produce them.

Iran's Drone Development Program — Scope and Influence

As for the extent of progress, reports indicate that the Iranian drone program has passed several armament stages. Most Iranian drones can carry guided bombs and Tehran seeks to equip them with missiles capable of hitting targets within a range of 8 kilometers. Iranian companies affiliated with the IRGC have succeeded in developing solar-powered drones, as well as other sophisticated models equipped with navigation guiding devices (gyroscopic navigation). For example, two classes of Iranian drones — Shahed-149 and Fotros — were equipped with satellite antennas, expanding the drones' operational range to 500 kilometers or more. According to reports, the latest generation of Iranian drones has a range of 1,000 kilometers and a flight time of up to 24 hours. According to Iranian officials, the Shahed 129 can fly for 24 hours and carry up to eight air-to-surface missiles.[9] Furthermore, the launch of the IRGC's first military satellite is likely to accelerate the development of Iran's drone program, particularly of models that have previously been tested, such as the Mohajer 6 and Shahed 129, as well as the IRGC's largest and most capable Fotros drone.[10]

There is no doubt that Iran's drone industry has witnessed progress; at the same time, there has been Iranian media amplification about the extent of the progress that has been made. However, these drones have proven that they have a limited impact on ongoing disputes. They have been used in carrying out cross-border attacks on Saudi military and oil sites. Saudi air defense systems managed to shoot down several of them. The Iranian drones have failed to enable Russia to make any strategic gains or shifts in the war on the Ukrainian battlefield so far. Though the Russian army focuses on targeting Ukrainian infrastructure and civilian targets with drones,[11] the Ukrainian army succeeded in downing more than 70% of the Shahed-136 drones using sophisticated air defense systems, particularly the anti-drone systems that the United States and NATO supplied it with.[12]

In any case, several experts indicate that the unique advantage that Tehran enjoys when producing its drones is the low production cost compared to the United States, Turkey or Israel. For example, the Shahed-136 drone production cost reach-

es $20,000. Former CIA officials say that several of the Iranian drone models are originally upgraded versions of US drones. For example, the Iranian drone HESA Karrar is modeled on the US drone Predator and the Iranian drone Simorgh is an Iranian-made variant of the Lockheed Martin RQ-170 Sentinel which Iran downed in 2011.[13] According to some reports, despite the Iranian drone industry's progress, it is now facing advanced US defense systems capable of remotely destroying drones. The United States previously installed such systems on its aircraft carriers in the Gulf. Many regional powers, like Israel, have powerful defense systems like the Iron Dome that can take down many of Iran's drones. The Arab Gulf states want to improve their defense capabilities and acquire cutting-edge defense systems from overseas.

Iran's Drone Development and Export: Motivations and Points of Deployment

The IRGC has played a significant and pivotal role in the development of Iran's drone program. Commander of the IRGC Ground Force's Drone Division Colonel Akbar Karimloo stressed the importance of this new weapon in strengthening Iran's military capabilities in a press interview with Tasnim News Agency in 2020. He said, "The drones are expected to be the best weapons and systems in the future for serving the armed forces of our beloved homeland."[14] Nonetheless, there are some indications that Iran is employing its drone capabilities to achieve foreign policy objectives. The military and geopolitical motives behind Iran's development of its drone program will be discussed in the following lines:

Military Motives

Iran seeks, first, to enhance its capabilities through its drone program, which is critical to Tehran's military strategy, particularly in terms of improving information gathering, reconnaissance and attack capabilities, compensating for traditional shortcomings. This is especially related to long-range shooting platforms and increasing Iran's dependence on unconventional weapons as an alternative to unavailable conventional ones.[15]

Iran also seeks to expose weaknesses in enemy-state air defense systems. By exporting drones abroad, Iran aims to test their effectiveness and impact in the face of enemy-state air defense systems.[16] Iran sought to expose the weaknesses in Saudi air defense systems by providing the Houthi militia with Shahed-136 long-range drones that first appeared in Yemen in September 2020.[17] Similarly, Iran exported weapons to Russia, which is waging war on Ukraine, to identify the weaknesses in the West's air defense systems, which the latter had supplied Ukraine with.

In addition, Iran aims to change the regional balance of power equation. This is in the context of regional rivals, particularly Turkey and Israel, embarking on developing their capabilities in drone production. Israel occupies an advanced position among drone producers. Until 2014, Israel continued to stand as the world's main drone exporter, having a 61% share in global drone exports.[18] Turkey's swift

emergence as a leading drone manufacturer has been quite remarkable. This was achieved when Baykar Technologies Company launched its drone program in 2015 and achieved a series of breakthroughs in terms of developing Turkey's Bayraktar drone. Turkey has exported drones to nearly 16 nations, including Ukraine, Azerbaijan, Morocco, Tunisia, Qatar and Turkmenistan.[19] Other regional powers such as Egypt, Saudi Arabia and the UAE have embarked on developing their own capabilities,[20] which in turn has made the Iranians more adamant about further developing their drone program to ensure that the regional balance of power equation remains unchanged.

Finally, Iran aims to increase its military sales to friendly countries. This is to boost Tehran's capabilities in confronting common enemies and to gain revenues to support the national budget, which is affected by sanctions, with hard currency. Since Iranian President Ebrahim Raisi took office in August 2021, Tehran has pushed to export its drones to new buyers other than to its traditional regional partners and proxies. Tehran's establishment of a plant in Tajikistan points to its interest in increasing its military exports to Tajikistan and other countries. Chief of Staff of the Iranian Armed Forces Mohammad Bagheri stated at the manufacturing plant's opening ceremony in Tajikistan, "We are in a position that, in addition to meeting our domestic needs, enables us to export military equipment to allied and friendly countries to help enhance security and sustainable peace."[21]

Geopolitical Motives

One of the objectives of Iran's drone program is propaganda and deterrence. The drone program plays a propaganda role for the Iranian government, assisting it in polishing its image and prestige as well as strengthening its nationalist rhetoric. In this context, we can shed light on the message that Tehran wanted to deliver by conducting drone drills on August 24, 2022, in the Arabian Gulf and the Sea of Oman.[22] By conducting the drills at this time, Iran aimed to deflect attention from the growing protests at home. Through these drills, Iran also sent messages to regional rivals that it is capable of displaying its strength throughout the region, using the most sophisticated military technology — even under the international sanctions imposed on it as well as the arms embargo.[23]

Iran aims to instrumentalize its drone program geopolitically to boost its clout in the Middle East by providing its aligned proxies with the technical expertise to manufacture drones and training on their use. The same applies to supplying its drones to friendly countries such as Venezuela through which Iran seeks to expand its clout in Latin America.[24] According to observers, Iran uses drones as a lever against regional adversaries, particularly Saudi Arabia, by expanding Houthi drone attacks on its oil sites.[25] Iran also employs drones to exert pressure and possess bargaining points against the United States and Europe that it can use at the negotiating table in the context of its nuclear program. In addition, crowding out the Turkish, Israeli and Arab presence in strategic hotspots: Iran's building of a drone manufacturing plant in Tajikistan points to an Iranian interest in countering the Turkish and Israeli pres-

ence in Central Asia. Several reports and studies have pointed to the role of Turkish drones in the Second Nagorno-Karabakh War which broke out between Azerbaijan and Armenia on September 27, 2020, not to mention Israel's role. According to reports, Israel supplies Azerbaijan with 70% of its drones.[26] Furthermore, establishing a drone manufacturing plant in Tajikistan enables Iran to counter Saudi clout since growing relations between Riyadh and Dushanbe caused tensions between Tehran and Dushanbe during Rouhani's tenure. On May 30, 2022, over two weeks after the plant's launch, President Raisi met with his Tajik counterpart in Tehran to discuss strengthening cooperation in several areas.[27]

Major Hotbeds of Iranian Drone Deployment

Tehran deploys drones to various hotbeds to achieve its foreign policy objectives, particularly to boost its strategic clout and presence. In this context, we can shed light on the following case studies.

Drones in the Maghreb

It is one of the most significant regions where Iran seeks to enhance its cultural, religious, political and military clout and presence. However, Iran has faced stiff competition from Israel and the Gulf states, which have succeeded in strengthening ties with Morocco; a country that stands as a stumbling block to Iran's policies in the region. This comes particularly after Morocco severed diplomatic ties with Iran in 2015, signed — along with the UAE, Bahrain and other countries — the Abraham Accords and joined the Negev Forum which comprises the signatories to the accord. As a result, Tehran has taken advantage of the growing tensions between Algeria and Morocco and the Gulf states, boosting its ties with Algeria and the Polisario Front, especially given Algeria's interest in maintaining the balance of power equation in the face of Morocco, which is exponentially building up its military arsenal after strengthening political and military ties with Israel and the United States. The military cooperation between Rabat and Tel Aviv has increased, enabling the former to obtain the most sophisticated weapons from Israel, including drones.[28] This could lead to Algerian-Iranian military cooperation that encompasses the manufacturing of drones and their usage.

Drones in the Horn of Africa

Iran is seeking to boost its footprint and clout in the region due to its location close to the Red Sea's entrance and the Bab al-Mandab Strait. Thus, Iran decided to take advantage of the dispute between the Ethiopian government and the Tigray Front before a peace deal was reached last November. This was against the backdrop of tensions between the United States and Ethiopia over the Tigray War, which created a good opportunity for Iran to seek overtures with Addis Ababa, supplying it with drones. By doing so, Iran aimed to support the Ethiopian policy which pushed back against US pressures during the Tigray War and prevent the Tigray Front from winning on the battlefield and securing a political triumph that would have enhanced Washington's political gains, thus advancing its clout in Ethiopia.

Meanwhile, Iranian interests converge with those of China and Russia in Ethiopia. China and Russia have continued their political and military support for Addis Ababa in the face of US pressures, which also provided Iran room for maneuver in the region. However, Iranian policies and moves in the region continue to face the growing clout of the Gulf states and the return of relative calm in US-Ethiopian relations after the conclusion of the peace deal between the Ethiopian government and the Tigray Front.

Drones in Central Asia

It is one of the strategically important regions where Iran wants to expand its presence, especially following the Taliban's ascent to power in Afghanistan and the presence of Saudi Arabia, Turkey and Israel in the region. Ankara helped Azerbaijan by supplying it with drones in its war against Armenia, while Israel also delivered drones to Azerbaijan and other countries in the region. Thus, several observers indicate that Iran's building of the drone manufacturing plant in Tajikistan enables it to achieve several objectives, mostly creating a haven shielding it from Israeli military strikes which could target its drone manufacturing plants in Tehran. Others believe that Iran's establishment of a drone manufacturing plant in Tajikistan was achieved as a result of Iran capitalizing on Russia's preoccupation in Ukraine. Moscow enjoys extensive clout, possesses military bases in several of the region's countries and works to protect its clout in the region against infiltration attempts by the United States and the West. However, it did not mind or object to Tehran building the manufacturing plant, not to mention the understandings between the two countries in relation to Western policies. Russia's acceptance of the Iranian drone manufacturing plant in Tajikistan comes in the context of Russia-West tensions following Moscow's military intervention in Ukraine in February 2022. Tehran, meanwhile, in the context of its shift eastwards, views Russia as one of the main global poles, along with China.[29]

On the other side, Iranian infiltration into the region could allow Tehran to engage in a compromise with Moscow as well as lend it space for political maneuvering in the context of its tensions with the United States and the West. The region offers immense political, economic and strategic partnership opportunities that could ease the international isolation imposed by the West on Tehran. Since Russia is an important guardian of clout in the region, Iran could reach a compromise with it whereby it obtains a strong position in the region. At the same time, Iran could make some gains in case it manages to push forward the nuclear talks and boost chances of rapprochement with the EU (through establishing the proposed international transport route, also known as the Black Sea Corridor, which starts from the Arabian Gulf and southern Iran and heads north to the Black Sea). The Turkish presence in the region, meanwhile, pushes Iran and Russia toward further cooperation, particularly if Turkey decides to realign its policies with Western objectives in a way that pushes Russia to support Iran-Tajik cooperation to counter Turkish policies in the region.[30]

Drones in the Russia-Ukraine War

Several reports confirmed Tehran's involvement in exporting drones to Russia for its military operations in Ukraine. Though Iran dismisses such reports, it appears there is Iranian interest in boosting ties with Russia, particularly at this time. Both aim to prevent the United States and its allies from achieving a military and political triumph in the war. It is also apparent that Tehran benefits from the continuation of this war since it means Russia's ongoing support at a time when it needs its political support at the UN Security Council in the face of Western pressures. As a result, Tehran's delivery of drones to Moscow during the Russia-Ukraine war aided in strengthening relations with Moscow in the face of Washington while at the same time countering Turkish clout, particularly after Ankara started exporting Bayraktar drones to Ukraine. However, Israel's involvement in the war adds further challenges to Iranian policy. Washington may increase its support to Israel and persuade it to provide the Iron Dome to Ukraine. The extension of Israel's involvement in this war appears to be subject to its calculations, the most important of which is its relationship with Moscow and developments in the Syrian arena. Ukraine is depending on Tel Aviv as the former has accused the latter of inaction or even attempting to support Russia, as Israel relies on Russia in the Syrian arena, which is of priority for Tel Aviv compared to Ukraine. Yet, it is not in the interest of Israel to sacrifice its interests in Ukraine either.[31]

The Challenges Facing the Iranian Drone Program

The Iranian drone program is facing several challenges, particularly US sanctions and Israeli military strikes. These challenges will be discussed below:

Israeli Military Strikes

On January 28, 2023, Iran was subjected to a series of bombings that targeted sensitive military installations in Isfahan, 350 kilometers away from the capital Tehran. One of the struck facilities was the Tohid defense industry facility for the manufacture of weapons and ammunition and a laboratory for energy and material at a research center affiliated with the Iranian Ministry of Defense. The second attack targeted a facility for manufacturing and storing Iranian drones. The third is believed to have targeted nuclear sites. The bombings were carried out using drones allegedly launched by Israel. The Iranian Ministry of Defense claimed it intercepted one of the three drones. Observers said Israel wanted to send a message to Iran that its drone industry is now within the range of Israeli fire. The right-wing Netanyahu government wants to curb Iran and its growing drone program.[32]

US Sanctions

On February 3, 2023, the US State Department sanctioned eight Iranian citizens who occupy key positions at Paravar Pars, an Iranian facility that manufactures

drones for the IRGC Aerospace Force. This is in addition to individuals and entities linked to Iran's drone industry program on November 15, 2022, December 8, 2022 and January 6, 2022. The Iranian Foreign Ministry considered Iran's supply of drones to Russia as valuable in extending Russia's military operations in Ukraine. In doing so, Iran also violated UN Security Council Resolution 2231, which prevents it from supplying military drones to Russia.[33]

However, some experts still question the effectiveness of US sanctions as a tool to thwart Iran from developing its drone capabilities. Despite US sanctions on entities such as the Quds Aviation Industry Company, Iran Aircraft Manufacturing Industries (HESA), Fajr Aviation & Composites Industry and Iran Helicopter and Renewal Industries, the Iranian aviation sector and drone industry continue to expand, with Iran passing drone designs, components and training to its partners and proxies in Iraq, Lebanon and Yemen as well as to other countries, particularly after the UN arms embargo imposed on the country expired in October 2020. Thus, it is unlikely that more export controls and pressure on Iranian entities will lead to significantly curbing Iran's access to parts, technology and disrupt its well-established supply chain. However, the United States could punish those companies that sell dual or multi-use technology to Iran. Additionally, Iran takes advantage of Iranians working at foreign universities to spy and pass information about sophisticated technologies.[34]

Technical and Financial Challenges

According to certain studies, Iran's capabilities remain limited, preventing it from producing versions that are completely comparable to the original model. So far, no evidence has emerged indicating that Iran has obtained radar evasion technology. The Iranian drone program requires a large expenditure to obtain this technology at a time when the United States and China allocate military budgets that are much more significant than Iran's military budget. So far, there is no indication that Iran is attempting to obtain or replicate radar evasion technology from countries that already possess it.[35] Some political analysts believe that Russia's use of Iranian drones in its war on Ukraine has exposed flaws in the Iranian drone program, such as the loud sounds that the drones emit when moving, which makes them easier to track. In addition, sophisticated air defense systems are capable of tracking Iranian drones and downing them. These systems include the Israeli Iron Dome, Barrack 8, and the effective jamming system against Shahed-136 drones which depend on GPS technology, given Israel's expertise in countering the violations of its airspace by Iranian drones.[36]

The Consequences of the Iranian Drone Program on Regional Security and Stability

Despite the challenges facing the Iranian drone program, Tehran continues to develop its capabilities. Therefore, it is expected that Iran's drone development strategy will have implications for regional and global security. The implications include the following:

Fueling a Drone Race in the Middle East

Iran's launching of a military satellite is expected to enhance its capabilities, hence impacting drone development programs in the region. Iran will achieve independence via its satellite and a wider geographical range for its drones, addressing the logistical weaknesses it suffers from. This will make Iran a major actor in the drone industry in the region. Other countries, however, will not stand idly by for a long time. Riyadh, for example, is modernizing its drone fleet, including the Saqr drone, which can operate completely out of sight thanks to a satellite-linked system.[37] Abu Dhabi, meanwhile, seeks to enhance its drone industry via the Yabhon drone class.[38]

Fanning Regional Disputes

This is because Iran, Israel and Turkey are engaged in competition with one another in vital spheres and each back respective regional allies. Three countries out of five in Central Asia — Kazakhstan, Kyrgyzstan and Turkmenistan — have obtained Turkish drones. Uzbekistan also announced that it has started producing drones. It is expected that Tehran's establishment of a manufacturing plant in Tajikistan will fuel the Tajikistan- Kyrgyzstan dispute. It is likely that the aforementioned factors pushed Tajikistan to welcome Iran's decision to build a drone manufacturing plant in the country since it will allow it to expand its military capabilities and defend its interests in case of any potential attack.[39] This is in addition to the Turkish role in fueling the dispute between Armenia and Azerbaijan, with the latter acquiring the Turkish Bayraktar drones to deploy in the Nagorno-Karabakh conflict. [40]

Expanding Proxy Wars

This is in the context of Tehran embarking on providing its aligned proxy actors with drones such as the Lebanese Hezbollah and Yemen's Houthis. According to reports, the Lebanese Hezbollah and the Houthis have obtained ISR equipment comparable to that used by other governments in the region. Meanwhile, other reports indicate that Hezbollah has a fleet of over 200 unmanned aerial vehicles, including Iranian-made drones like the Ababil-2 and Mohajer-4, which were used in a number of locations in Syria to support Hezbollah's military operations. The Houthis, for their part, have used the Qasef-2K drone, an upgraded version of Ababil to launch attacks against civilian and economic facilities and targets. Therefore, it is expected that the proxy wars in the region will escalate due to the low cost of these drones and their easy deployment.[41]

Growing Drone Warfare Between Iran and Israel

Iran's ongoing development of its drone program has added to the "shadow war" between Tehran and Tel Aviv. Former Mossad Chief Amos Yadlin spoke of the threat posed to Israel by Iran-aligned militias in Yemen, Iraq and Lebanon. He indicated that the "shadow war" between Israel and Iran is evident on all fronts: at sea, in the air, in virtual space and sometimes on the ground. This war, however,

remains limited to a specific scope. Though both parties deal blows to each other, they do not claim responsibility.[42]

Conclusion

Iran instrumentalizes its drone program to further its military objectives, particularly enhancing its capabilities in the field of monitoring and reconnaissance and achieving strategic deterrence with rivals in the region. More importantly, Iran has employed the program to achieve foreign policy objectives, particularly disseminating political propaganda for the Iranian government and reasserting its political prestige in the external arena. Iran also uses the program to end the isolation imposed on it, gain new friends and allies, entrench its political clout in strategic spheres and compete head-to-head with rivals like Israel, Turkey and the Gulf states.

Iranian drones have proved effective in enhancing Iran's presence and clout in strategic regions, particularly in Central Asia and the Maghreb. However, Iranian drones have failed to achieve any strategic accomplishment when tested on several battlefields and war theaters. Their role remains confined to a subversive one that focuses on disrupting or destroying economic and oil sites.

Several obstacles stand in the way of Iran's ability to develop its drone program, most notably Israeli strikes and US sanctions targeting Iranian individuals and entities linked to the program. However, Iran is expected to continue developing its capabilities in this field, especially given the escalating regional and global drone armament race. This is in addition to the rising proxy wars between Iran and regional rivals, as well as the region's escalating "shadow war" between Israel and Iran.

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